MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGICAL
DEVELOPMENT OF THE REPUBLIC OF SERBIA

ARCHIBALD

DAYS

University of Criminal Investigation and Police Studies

INTERNATIONAL SCIENTIFIC CONFERENCE

“ARCHIBALD REISS DAYS”

Belgrade, 18-19 November 2020

THEMATIC CONFERENCE PROCEEDINGS OF INTERNATIONAL SIGNIFICANCE

University of Criminal Investigation and Police Studies
Belgrade, 2020

Publisher
UNIVERSITY OF CRIMINAL INVESTIGATION AND POLICE STUDIES
Belgrade, 196 Cara Dušana Street (Zemun)

Editor-in-Chief
STEVO JAĆIMOVSKI, PhD
University of Criminal Investigation and Police Studies

Editors
DARKO SIMOVIĆ, PhD
University of Criminal Investigation and Police Studies
DRAGAN MLAĐAN, PhD
University of Criminal Investigation and Police Studies
NENAD RADOVIĆ, PhD
University of Criminal Investigation and Police Studies
PETAR ČISAR, PhD
University of Criminal Investigation and Police Studies
NENAD KOROPANOVSKI, PhD
University of Criminal Investigation and Police Studies
ANA BRANKOVIĆ, PhD
University of Criminal Investigation and Police Studies
ZORICA VUKAŠINOVIĆ RADOJIČIĆ, PhD
University of Criminal Investigation and Police Studies
IVANA BODROŽIĆ, PhD
University of Criminal Investigation and Police Studies
BOŽIDAR OTAŠEVIĆ, PhD
University of Criminal Investigation and Police Studies
MILADIN NEŠIĆ, PhD
University of Criminal Investigation and Police Studies
DRAGOSLAVA MIĆOVIĆ, PhD
University of Criminal Investigation and Police Studies

Thematic Proceedings Reviewers
NORBERT LEITNER, PhD, Association of European Police Colleges
JOZEF METENKO, PhD, Academy of the Police Force, Bratislava, Slovak Republic
NIKOLA DUJOVSKI, PhD, Faculty of Security, Skopje,
"St. Kliment Ohridski" University, Bitola, North Macedonia
PREDRAG ĆERANIĆ, PhD, Faculty of Security Science, University of Banja Luka, B&H

Computer Design
JOVAN PAVLOVIĆ
MILOŠ IVOVIĆ

THE CONFERENCE AND THE PUBLISHING OF PROCEEDINGS WERE SUPPORTED
BY THE MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGICAL
DEVELOPMENT OF THE REPUBLIC OF SERBIA

© 2020 University of Criminal Investigation and Police Studies, Belgrade

ISBN 978-86-7020-453-9
ISBN 978-86-7020-190-3

HONORARY COMMITTEE

Dane Subošić, PhD, Rector of the University of Criminal Investigation and Police Studies, Belgrade, **President**
Zoran Mirković, LLD, Dean of the Faculty of Law, University of Belgrade
Lieutenant General **Goran Radovanović**, PhD, Rector of the University of Defence, Belgrade
Commissioner **Cao Shiquan**, PhD, President of the People's Public Security University Of China, Beijing
Hao Hongkui, PhD, President of the National Police University of China, Shenyang
Lieutenant-General of Police **Igor Alexandrovich Kalinichenko**, PhD, Head of the Moscow University of the Ministry of Internal Affairs of the Russian Federation named after V. Y. Kikot
Lieutenant-General of Police **Alexander Viktorovich Simonenko**, PhD, Head of the Krasnodar University of the Ministry of Internal Affairs of the Russian Federation
Major-General **Alexander Vladimirovich Travnikov**, PhD, Head of the St. Petersburg University of the Ministry of Internal Affairs of the Russian Federation
Major-General **Vladimir Ivanovich Tretyakov**, PhD, Chief of the Volgograd Academy of the Ministry of Internal Affairs of the Russian Federation
Police Colonel **Roman Blahuta**, PhD, Rector of the Lviv State University of Internal Affairs, Ukraine
Major-general of the Militia **Sergey Doroshko**, PhD, Head of the Academy of the Ministry of Internal Affairs of the Republic of Belarus
Olivier Ribaux, PhD, Director of the School of Criminal Justice, Faculty of Law, Criminal Justice and Public Administration, University of Laussane, Switzerland
José García Molina, PhD, Director of the National Police Academy, Ávila, Spain
Iwona Klonowska, PhD, Commandant-Rector of the Police Academy, Szczytno, Poland
Lucia Kurilovská, PhD, Rector of the Academy of the Police Force, Bratislava, Slovakia
Yilmaz Çolak, PhD, President of the Turkish National Police Academy, Ankara
Stoica Veronica, PhD, Rector of the Police Academy "Alexandru Ioan Cuza", Bucharest, Romania
Dinu Ostavciuc, PhD, Rector of the Academy "Stefan cel Mare", Ministry of the Interior of the Republic of Moldova, Kishinev
Zoltán Rajnai, PhD, Dean of the Donát Bánki Faculty of Mechanical and Safety Engineering, Óbuda University, Budapest, Hungary
Andrej Sotlar, PhD, Dean of the Faculty of Criminal Justice and Security, Ljubljana, Slovenia

PROGRAMME COMMITTEE

Stevo Jaćimovski, PhD, University of Criminal Investigation and Police Studies, Belgrade, **President**
Goran Vučković, PhD, University of Criminal Investigation and Police Studies, Belgrade
Sreten Jugović, PhD, University of Criminal Investigation and Police Studies, Belgrade
Saša Mijalković, PhD, University of Criminal Investigation and Police Studies, Belgrade
Radovan Radovanović, PhD, University of Criminal Investigation and Police Studies, Belgrade
Dušan Joksimović, PhD, University of Criminal Investigation and Police Studies, Belgrade
Zoran Đurđević, PhD, University of Criminal Investigation and Police Studies, Belgrade
Norbert Leitner, PhD, Association of European Police Colleges
Predrag Ćeranić, PhD, Faculty of Security Science, University of Banja Luka, Republic of Srpska, BiH
Nikola Dujovski, PhD, Faculty of Security, Skopje, "St. Kliment Ohridski" University, Bitola, North Macedonia

ORGANIZING COMMITTEE

Darko Simović, PhD, University of Criminal Investigation and Police Studies, Belgrade, **President**
Dragan Mlađan, PhD, University of Criminal Investigation and Police Studies, Belgrade
Nenad Radović, PhD, University of Criminal Investigation and Police Studies, Belgrade
Petar Čisar, PhD, University of Criminal Investigation and Police Studies, Belgrade
Nenad Koropanovski, PhD, University of Criminal Investigation and Police Studies, Belgrade
Ana Branković, PhD, University of Criminal Investigation and Police Studies, Belgrade
Zorica Vukašinović Radojičić, PhD, University of Criminal Investigation and Police Studies, Belgrade
Ivana Bodrožić, PhD, University of Criminal Investigation and Police Studies, Belgrade
Božidar Otašević, PhD, University of Criminal Investigation and Police Studies, Belgrade, **President**
Miladin Nešić. PhD, University of Criminal Investigation and Police Studies, Belgrade
Dragoslava Mićović, PhD, University of Criminal Investigation and Police Studies, Belgrade

TABLE OF CONTENTS

Topic I
CRIMINALISTIC AND CRIMINAL JUSTICE ASPECTS IN SOLVING AND PROVING OF CRIMINAL OFFENCES

Miloš Dankovič, Miriam Meteňkova, Jan Mikloš
THEORETICAL AND PRACTICAL INFLUENCES
ON THE KNOWLEDGE OF THE CRIMINALISTIC METHOD
VERIFYING THE TESTIMONY ON THE SPOT 3

Katerina Krstevska Savovska, Ice Ilijevski
THE PRINCIPLE OF EQUALITY OF ARMS – CASES VERSUS MACEDONIA
IN FRONT OF THE EUROPEAN COURT OF HUMAN RIGHTS 25

Olga Jović-Prlainović
PROTECTION OF THE RIGHTS OF THE CHILD WITHIN
THE HUMAN RIGHTS SYSTEM AND THE NATIONAL FRAMEWORK 35

Vladimir Đurić
THE LEGAL FRAMEWORK FOR CRIMINAL PROSECUTION
OF THE PROHIBITION OF INCITEMENT AND INSTIGATION
OF INEQUITY, HATRED AND INTOLERANCE IN THE REPUBLIC OF SERBIA 47

Dejan Vuk Stanković
ARCHIBALD REISS'S CRITIQUE OF SERBIAN POLITICAL ELITES:
MORAL DECAY AND INSTITUTIONAL DEFICIENCIES OF POLITICAL
ORDER AND ITS PRACTICE IN SERBIA AFTER THE GREAT WAR 55

Miloš Stanić, Stefan Andonović
POLICE DETENTION OF FOOTBAL FANS AS MEASURE OF PREVENTING VIOLENCE IN CASE LAW OF
THE EUROPEAN COURT OF HUMAN RIGHTS 65

Željko Mirkov
ON THE RIGHT OF THE DEFENDANT TO REMAIN SILENT 77

Mojca Rep
PROTESTS – PART OF FUNDAMENTAL HUMAN FREEDOMS 89

David Janoši
COMPLIANCE OF HUNGARIAN REGULATIONS ELATING TO TRANSIT
ZONES WITH THE UROPEAN CONVENTION ON HUMAN RIGHTS
AND THE LAW OF THE EUROPEAN UNION 97

Aleksandra Vasiljević
DEVELOPMENT OF ADMINISTRATIVE PROCEDURE IN DOMESTIC
AND COMPARATIVE LAW AND ITS SIGNIFICANCE FOR POLICE ACTIVITIES 109

Peter Ruzsonyi
CRISIS-MANAGEMENT AND CRIMINAL-PEDAGOGY IN PRISONS 119

Árpád Budaházi
THE FUTURE OF POLYGRAPH IN HUNGARY 131

Miodrag Simović, Amna Hrustić
INTERNATIONAL LAW AS FRAMEWORK OF JUDICIAL COOPERATION
IN CRIMINAL MATTERS 139

Dragana Kolarić, Saša Marković
TWO DECADES OF CRIMINAL JUSTICE REFORMS
IN THE FIELD OF COMBATTING ILLEGAL DRUGS 149

Dijana Janković
ENGAGING THE PROBATION SERVICE IN CRIMINAL PROCEEDINGS
IN THE REPUBLIC OF SERBIA BEFORE THE IMPOSITION OF
ALTERNATIVE SANCTION 163

Danijela Petrović
ROLE OF THE POLICE AND THE JUDICIARY
IN INCREASING EXPENSES OF CRIME 175

Marina M. Simović, Sadmir Karović
UNIVERSAL WARRANTIES OF THE SUSPECT OR ACCUSED
IN CRIMINAL PROCEEDINGS IN BOSNIA AND HERZEGOVINA 185

Jelena Ćeranić Perišić
THE SALE OF CONTERFEIT GOODS VIA THE INTERNET
AS A CONTEMPORARY SECURITY CHALLENGE – LEGAL ASPECTS 195

Gordana Nikolić
THE RELATIONSHIP BETWEEN LOAN SHARK AND EXTORTION –
CONCEPT OF CRIMINAL OFFENSES, SIMILARITIES, DIFFERENCES,
SOLVING AND PROVING 205

Vanja Pavićević, Mihajlo Vučić
THE FIGHT AGAINST ILLEGAL TRAFFICKING OF CULTURAL PROPERTY
IN THE REPUBLIC OF SERBIA – THE ROLE OF POLICE AUTHORITIES 215

Emina Radosavljević
REDEFINING THE ROLE OF THE EUROPEAN ANTI-FRAUD OFFICE
(OLAF) IN THE FIGHT AGAINST CORRUPTION 223

Topic II

POLICE ORGANIZATION – STRUCTURE AND FUNCTIONING

Gabor Kovacs
THE BEST PRACTICE OF THE BASIC TRAINING OF THE POLICE CADETS
AT THE UPS FACULTY OF LAW ENFORCEMENT IN HUNGARY 235

Richárd Nagy, Vince Vári
NEW WAYS IN ASSET RECOVERY 245

Željko Nikač, Božidar Forca
INTERNATIONAL POLICE COOPERATION BETWEEN SERBIA
AND THE COUNTRIES OF THE REGION IN COMBATING
THE MOST SERIOUS EMERGING FORMS OF CRIME 255

Zoran Kesić, Radomir Zekavica
NEUTRALIZATION TECHNIQUES AS A FORM OF RATIONALIZATION
OF DEVIANCE IN THE WORK OF THE POLICE 263

Slaviša Vuković
PREVENTIVE WORK OF THE POLICE
IN THE PROCESS OF DERADICALIZATION 273

Dalibor Kekić, Miloš Milenković
ROLE OF THE SERBIAN POLICE IN MAINTAINING SECURITY
IN THE CONDITIONS OF THE EPIDEMIC OF INFECTIOUS DISEASES 281

Vesna Stefanovska
POLICE CRIME RECORDING PRACTICES:
EVIDENCE FROM SKOPJE CITY'S POLICE STATIONS 291

Dragomir Jovičić, Gojko Šetka
ORGANIZATIONAL ASPECTS OF THE POLICE SYSTEM
IN THE FIGHT AGAINST TERRORISM ... 301

Zoran Đurđević, Nenad Milić
THE ESTABLISHMENT AND DEVELOPMENT OF A NATIONAL
CRIMINAL INTELLIGENCE SYSTEM IN THE REPUBLIC OF SERBIA ... 309

Danijela Spasić, Ksenija Butorac
PREDICTIVE POLICING: ONE STEP FURTHER TO A SAFE COMMUNITY ... 321

Svetlana Ristović
REALIZATION OF SOCIAL SELF-PROTECTION –
EXPERIENCES OF IMPORTANCE FOR COMMUNITY POLICING ... 331

Topic III
CONTEMPORARY SECURITY CHALLENGES

Andrej Iliev, Ferdinand Odžakov, Jugoslav Ackoski
HISTORICAL RETROSPECTIVE AND PREVENTION
FROM MIGRATION FLOWS IN EUROPE ... 343

Saša Mijalković, Marija Popović Mančević
NATIONAL SECURITY STRATEGY OF THE REPUBLIC OF SERBIA
AND ITS IMPLICATIONS FOR HUMAN SECURITY ... 355

Gyöngyi Major, Aleksandar Čudan
SECURITY CHALLENGES AND POSSIBLE RESPONSES
TO THEM IN THE 21ST CENTURY ... 365

Duško Dimitrijević
THE INTERNATIONAL LEGAL FRAMEWORK OF MIGRATION ... 375

Milan Miljković, Vangel Milkovski
CHALLENGES FACING INFORMATION ENVIRONMENT
IN CONTEMPORARY CONFLICTS ... 383

Hatidža Beriša, Katarina Jonev Ćiraković, Aleksandar Ćiraković
HYBRID WAR – THEORY AND PRACTICE ... 395

Nenad Kovačević, Nenad Komazec, Mitar Kovač
LEADERSHIP IN EXTRAORDINARY SITUATIONS ... 407

Marjan Marjanović, Milan Milošević
MODEL OF PUBLIC-PRIVATE PARTNERSHIP IN THE CRITICAL
INFRASTRUCTURE PROTECTION OF MONTENEGRO ... 417

Topic IV
SOCIAL, ECONOMIC AND POLITICAL FLOWS OF CRIME

Svetlana Nikoloska, Marija Gjosheva
OPERATIVE COMBINATIONS IN THE CRIMINALISTIC AND
FINANCIAL INVESTIGATIONS OF ECONOMIC AND FINANCIAL
CRIMINALITY IN THE REPUBLIC OF NORTH MACEDONIA ... 429

Szabolcs Mátyás, Endre Nyitrai, László Frigyer, László Bói
THE IMPACT OF SETTLEMENT STRUCTURE ON CRIME ... 441

Zorica Mršević, Svetlana Janković
GENDER ASPECTS OF SECURITY RISKS DURING THE COVID-19 PANDEMIC ... 449

Vladimir Veković, Violeta Ćulafić, Mihailo Veković
ADAPTATION TO CLIMATE CHANGE – SERBIAN SCENARIO ... 459

Natalija Lukić
JUVENILE CRIME TRENDS IN SERBIA AND PENAL POLICY –
IS THERE A RELATION? 467

Dragan Blagić, Zdravko Grujić
THE PURPOSE OF PUNISHMENT AS A CRITERION
FOR IMPOSING A SENTENCE OF JUVENILE IMPRISONMENT 479

Ana Čović
DOMESTIC VIOLENCE IN THE AGE OF COVID-19 PANDEMIC 489

Aleksandra Rabrenović
SALARY SYSTEM OF THE POLICE OFFICERS IN MONTENEGRO 501

Topic V
FORENSIC LINGUISTICS AND
LANGUAGE FOR SPECIFIC PURPOSES

Svetlana Zdravković, Slobodan T. Jovičić
THE IMPORTANCE OF SPEECH PAUSES FOR
PSYCHOTHERAPEUTIC AND FORENSIC OBSERVATIONS 513

Vesna Trajkovska, Saše Gerasimoski
SEMANTIC ANALYSIS OF ***CYBERSTALKING***
AND ITS MACEDONIAN LEXICAL EQUIVALENTS 525

Topic VI
INFORMATICS AND APPLIED MATHEMATICS IN FORENSIC,
CYBERCRIME AND SECURITY SCIENCES

Jovana Vujošević, Božidar Banović
ESTABLISHING FORENSIC EVIDENCE VALUE THROUGH
THE BAYESIAN FRAMEWORK AND THE LIKELIHOOD RATIO 535

Milan Gnjatović, Vojkan Nikolić, Dušan Joksimović,
Nemanja Maček, Nebojša Budimirović
AN APPROACH TO HUMAN ACTIVITY CLUSTERING
USING INERTIAL MEASUREMENT DATA 547

Igor Vuković, Brankica Popović, Petar Čisar
APPLICATION OF ARTIFICIAL INTELLIGENCE
IN DETECTION OF DDoS ATTACKS 557

Aleksandar Miljković, Slobodan Nedeljković, Milan Čabarkapa,
Marko Vuković, Dragan Ranđelović, Vladica Stojanović
APPLICATION OF ARTIFICIAL INTELLIGENCE
AND MACHINE LEARNING IN PYTHON PROGRAM LANGUAGE 567

Zoran Jekić, Goran Šimić
CONSTRUCTIVE SIMULATIONS AS A COLLABORATIVE
E-LEARNING TOOL FOR TRAINING OF EMERGENCY TEAMS 581

Milan Gligorijević, Marija Pećanac, Olgica Vulević, Aleksandar Maksimović
ANALYSIS OF ASPECTS OF PERSONAL DATA PROTECTION
RISK ASSESSMENT USING MODERN TECHNOLOGIES
IN THE MINISTRY OF INTERNAL AFFAIRS 593

Stefan Kartunov, Petar Milić, Kristijan Kuk, Uroš Dinić
PROTECTION OF USER CREDENTIALS IN WEB APPLICATION 603

Milana Pisarić
ENCRYPTION AS A CHALLENGE FOR EUROPEAN
LAW ENFORCEMENT AGENCIES 611

Ivana Luknar
CYBERCRIME – EMERGING ISSUE 621

Vladimir Jovanović
APPLICATION OF FREE TOOLS IN THE PROCESS
OF PROTECTION OF WIRELESS NETWORKS 629

Topic VII

INNOVATIVE TECHNIQUES AND EQUIPMENT IN FORENSIC ENGINEERING

Ľuboš Cehlárik, Jozef Meteňko
DOPING – SUBSTANCES WITH HORMONAL AND BIOLOGICAL EFFECTS 645

Ivana Mladenović, Jovana Djorović Amanović, Nebojša Nikolić, Dana Vasiljević Radović, Vesna Radojević, Jelena Lamovec
ANALYSIS AND INTERPRETATION OF THE MICROMECHANICAL
PROPERTIES MEASUREMENTS OF ELECTRODEPOSITED
NICKEL COATINGS ON DIFFERENT SUBSTRATES 655

Snežana Stojičić, Nataša Petrović, Radovan Radovanović
TOWARDS THE DEVELOPMENT OF READINESS FOR THE
APPLICATION OF THE PRINCIPLES OF ELECTRONIC BUSINESS FOR
THE EXCHANGE OF BIOMETRIC DATA KEPT IN AUTOMATED SYSTEMS
AS A BASIS FOR ESTABLISHING THE IDENTITY OF PERSONS 667

Venezija Ilijazi, Slobodan Miladinović
THE ROLE OF SOFTWARE TOOLS IN RISK ASSESSMENT GOT FROM
AN ACCIDENT AND EMISSIONS OF HAZARDOUS MATERIALS 679

Nemanja Vučković, Stefan Dimitrijević, Nikola Milašinović
DETECTION AND ENHANCEMENT OF LATENT FINGERPRINTS
USING DEXTRAN-BASED BIOPOLYMER POWDERS OBTAINED
FROM LIQUID ANTHOCYANIN EXTRACT 691

Anja Zlatanović, Ana Branković
OPTIMIZATION OF THE POLLEN EXTRACTION PROCESS
FOR IMPROVEMENT OF IDENTIFICATION 703

Marija Pejić, Milica Janković, Snežana Djordjević, Biljana Koturević
EXTRACTION AND IDENTIFICATION OF ATROPINE
FROM “LEGAL HIGH” PLANT SPECIES........ 713

Gordana Damjanović
FINANCING AND PROTECTION OF STEM CELLS RESEARCH RESULTS
IN EUROPE AND THE USA........ 721

Topic VIII

EFFECTS OF PHYSICAL ACTIVITY ON ANTHROPOLOGICAL STATUS IN SECURITY AGENCY PERSONNEL

Raša Dimitrijević, Goran Žigić, Goran Vučković
INITIAL STATE OF POLICE STUDENTS SWIMMING SKILLS AND
EFFECT OF SWIMMING COURSE ON SWIMMING PERFORMANCE 731

Radivoje Janković, Nenad Koropanovski
GENDER DIFFERENCES IN SHORT SPRINT PERFORMANCE
WITH AND WITHOUT OCCUPATIONAL LOAD 741

Robin Orr, Filip Kukić, Eduardo Marins, Cheryl Lim, Jay Dawes, Robert Lockie
THE IMPACT OF LOAD CARRIAGE ON LOWER-BODY POWER
IN SWAT POLICE........ 749

TOPIC I

CRIMINALISTIC AND CRIMINAL JUSTICE ASPECTS IN SOLVING AND PROVING OF CRIMINAL OFFENCES

THEORETICAL AND PRACTICAL INFLUENCES ON THE KNOWLEDGE OF THE CRIMINALISTIC METHOD VERIFYING THE TESTIMONY ON THE SPOT

Miloš Dankovič, PhD[1]
Academy of the Police Forces, Bratislava, Slovak Republic

Miriam Meteňkova, PhD[2]
Academy of the Police Forces, Bratislava, Slovak Republic

Jan Mikloš, PhD[3]
Academy of the Police Forces, Bratislava, Slovak Republic

Abstract: This study represents just a partial result of the research of the criminalistic method Verifying testimony on the spot "výsk. 151" and deals with its basic aims. The primary aim based on theoretical and empirical analyses realised by research is to describe the level of theoretical knowledge processing the verifying testimony on the spot in criminalistics. The secondary aim is to find out weaknesses and troubles in practical applying the verifying testimony on the spot in the process of its use in clearing up crimes. The authors of this study makes a short analysis of proposed changes that are necessary for effective using the verifying testimony on the spot not only in police practice but also and mainly in the process of crime investigating.

Keywords: testimony on the spot, differences, criminalistics principles, similarities, troubles, criminal investigation.

INTRODUCTION

The beginning of the modern criminalistics we usually dated on the end of 19th century which represents the application full scientific methods in to criminalistic. The founder of the modern criminal-

1 milos.dankovic@minv.sk
2 miriam.metenkova@minv.sk
3 jan.miklos@minv.sk

istics is regarded to be an Austrian criminalist and a professor of criminal law Hans Gross, the author of the first textbook of scientific criminalistics called *Handbuch für Untersuchungsrichter als System der Kriminalistik* (Handbook for investigating judges as a system of crirminalistics, 1893) where he tried to systematized the then knowledge of the mentioned scientific field. He is also the author of the publication called *Psychology in criminalistics* where he, in a revolutionary way, claims that the main mission of psychology in the field of legal science shall be represented by the study of mental condition of participants in a criminal act.

Criminalistics went through a very long development alongside with law, especially with criminal law. That period was marked by various degrees and forms of physical violence of and non-objective procedures of those who were responsible for justice and punishment of the accused persons. However, those historical characters cannot be reproached with anything at the present time, as they followed the principles valid at that time, primarily the generally recognized rule, namely "*confessio regina probationum*"(Confession is the queen of evidence). Many criminalists are of the opinion that it is essentially not important what the name of a method or an investigation action is; what is important is the achievement of the investigation aim, namely the acquisition of relevant information about a particular crime and an offender. Discussions on the notion of the individual methods, their contents, principles and rules in carrying out the individual criminalistic methods are perceived as academic debates that are far away from practice of criminalistics.

DEVELOPMENT OF OPINIONS ABOUT THE VERIFYING OF THE TESTIMONY ON THE SPOT

In the basic part of this study we will try to summarize the development of the opinions about the notion and the substance of the method called *the verifying of the testimony on the spot* as a criminalistic method in both the Czechoslovak and, subsequently, Slovak criminalistics up to its legal regulation.

Up to the breakup of the Austrian-Hungarian monarchy, the development of criminalistics methods in Slovakia was dependant on the attitudes of the Police Centre in Budapest; as late as the end of the World War I., the development of the criminalistic methods was being determined by the police and gendarmerie centres in Prague. The creation of the Czechoslovak criminalistics can be connected with the creation of the Czechoslovak Republic (28 Oct. 1918). The Czechoslovak criminalistics took up the experience of policemen of Austria-Hungary. At the same time, criminal laws of the Austrian empire were passed (Imperial Act 119/1873).

At the beginning of the 1930s several important publications on criminalistics were published under the guidance of Jozef Šejnoha, e.g. *Criminal psychology* (*Kriminálna psychológia*, 1930), *Lessons in how to gather information at the scene of crime* (*Poznávacie učenie,* 1931), *Tactics of criminalistics*, (*Kriminálna taktika*, 1932) or *Education system in the field of criminalistics* (*Systém kriminalistického vzdelávania,* 1935). In the mentioned books, the author tried to summarize and systematically develop, primarily, the practical part of criminalistics without failing to mention the theory of criminalistics as well. A lot of books dealing with criminalistics were translated from German, e.g. a brochure of a German criminalist Polzer called *Practical handbook for criminalists* and published in 1931 (STRAUS, J., et al. 2004, or PORADA, V. et al. 2007).

In 1932, an important publication called *Investigation methods* of security service (*Vyšetrovacie metódy bezpečnostnej služby*) by Vítězslav Čelanský was published. The author of the book repudiates the so-called *criminalistic and technical methods* and means of evidence, and puts the main stress on the con-

fession of an offender. A principle was being enforced that it was necessary to interrogate an accused person by using many ways of interrogation and as long as to get the accused person´s confession.

An important contribution to the literature on criminalistics in the 1930s was the edition of a textbook by the major of gendarmerie Rudof Košťák. The name of the textbook is *Textbook on investigation tactics* (*Učebnica pátracej taktiky*) and it describes the methods of criminalistic technique and tactics. It is possible to note that at the time after the creation of the first Czechoslovak Republic criminalistics was being developed under a marked influence of foreign authors, primarily Austrian, German and French criminalists (E. Locard, E.F. Vidocq, H. Gross)[4]. However, in the work of the mentioned foreign authors we do not find any signs of the method of our study, namely the verifying of the testimony on the spot.

As early as after World War II, it was possible to register essentials, as to the content and the form, similar to the method called verifying the testimony on the spot. Within the practice of the Czechoslovak criminalistics, such a method / action that is very similar to the method of the verifying of the testimony on the spot, namely by using particular tactics, came into existence earlier than the verifying of the testimony was processed by criminalistics as a partial method and before it was mentioned in the specialist literature on criminalistics for the first time (VENHAČ, R. 1987). The first, though rather unclear and modified, appearance of the verifying of the testimony on the spot was in the publication called *The Essentials of Criminalistics* (*Základy kriminalistiky*) (NEMEC, B. 1954) where the verifying of the testimony appeared as "*verifying of different circumstances and facts at the scene of crime*". The author tried to describe criminalistic and tactical methods used until then while pointing out some outdated notions and names of the method and replacing them by "*the verifying of different circumstances*".

In 1957, the *Criminalistics proceedings* published a specialist article on the verifying of the testimony on the spot, at that time still called "*crime scene response*". The author of the article, a Soviet criminalist S. Stepičev (1957), dealt with possibilities of verifying the evidence gained by, e.g. the testimony of the accused person, and came to the conclusion that "...*crime scene response* is considered to be an independent action of investigation that differs in the essentials and tactics in carrying it out from other types of investigation, namely crime scene inspection, interrogation on the spot and investigation experiment." The author of the book also points out the difference in using the term of *the verifying of the testimony on the spot* and states that: "The fact of the non-uniform using of the term results in different ways of both carrying out of the verifying of the evidence and procedural regulations of this way of the verifying of the evidence".

The author at the same time describes the content of that way of the verifying of the testimony and specifies situations where such a way of verifying the testimony can be used (S. Stepičev, 1957):

- when the accused person pleads guilty and their plea of guilty must be verified, or when the accused person lies in their testimony and the obtained evidence is contrary to their testimony, the plea must be confirmed by objective facts;

4 For example, E. Locard (1877-1966), a French university profesor in Lyon is regarded to be one of the founders of modern forensic science. He formulated a basic principle of the forensic sciences saying: "*Every contact leaves trace*". E.F. Vidocq (1775 –1857), originally a French criminal, later a police officer and a secreat agent, that at the end of his life became founder and chief of the organisation called *Sûreté* (1812-1827), the first modern police organization in France. In 1833, he founded the first private detective agency in Europe. He is considered to be the cofounder of many disciplines of modern criminalistics. H. Gross (1847-1915) Austrian criminalist and professor of criminal law. He is the author of the firrst textbook of scientific criminalistics namely *Handbuch für Untersuchungsrichter als System der Kriminalistik* (Textbook for investigation judges as a system of criminalistics).

- when it is necessary to verify facts as stated in the testimony of witnesses and aggrieved persons;

Though the author formed the essentials of the theory of the verifying of the testimony on the spot, when looking for a name for the special deed of the investigation he came to conclusion that the method represents "reconstruction of a situation and circumstances of when a crime was committed". This is also the way of how he tried to solve questions of different substance and procedural importance for the purpose of forming new methods in criminalistics. The proposed solution became special by his proposal to introduce it for various, at that time only being formed, methods a unique name, i.e. "reconstruction of a situation and circumstances of a crime". His intention has never been carried out. Stepičev, however, does not speak about a method within criminalistics but about a tactical way of verifying the evidence (KONRÁD, Z. 2006).

In the 1960s, the notion of a "*crime scene response* appeared, in various circumstances, in specialist literature, e.g. the authors Matiášek, Bárta, Soukup (1966) wrote about *crime scene response* as one of the procedures of how to revive the memory of an interrogated person during interrogation; the authors, however, did not mention this procedure as a way of verifying the testimony. Later, the same authors wrote about *crime scene response* as a form of verifying the testimony given earlier. Though they did not deal with the issue in great detail, they managed to express the substance of such a deed concisely: „The substance of the deed consists in comparing the testimony of the interrogated person as given earlier to the objective situation on the spot (MATIÁŠEK, J. SOUKUP, J. BÁRTA, B. 1968).

At that time, the method of the verifying of the testimony on the spot started to be mentioned in specialist literature as an independent deed of investigation in analyzing various crimes. This can be supported by the article of P. Kraus (1957) titled as *Václav Mrázek Case* (*Prípad Václava Mrázka*) that concerns a series of sexual murders where the author states: "The whole investigation of the Vaclav Mrazek case was carried out in the sense of the strongest objectivity ... . When it seemed absolutely necessary and efficient, Václav Mrázek was transported to the area where, as he admitted during interrogation, he had committed his crimes. It was not about the so-called reconstruction of the case but about Mrazek´s showing the way, upon the investigator´s exhorting him to do so, to the scene of crime when sitting in a vehicle; once there, the offender (Mrazek) marked the exact spot in the area on the basis of benchmarks."

That period also includes the beginning of forming and theoretical processing some of, at that time new and theoretically not processed, methods of criminalistics that are represented by e.g. investigation experiment, reconstruction of a particular and the so-called crime scene response. Their beginnings, however, were marked by certain inaccuracies as is usual at the beginning of obtaining knowledge in general. The inaccuracies not only had but still have negative impact both on forming the criminalistic practice and thinking within the field of criminalistics but also on the quality of legal regulations in the process of proving the guilt. Many specifying opinions but also non-exact ones can be observed until the 1990s.

The division of Czechoslovakia into two independent parts and stormy transformation of the Slovak society during 1989 – 1992 also had impact on the theory and practice within the field of criminalistics. The creation of the independent Slovak republic means that the so far uniform Czechoslovak criminalistics was divided into two parts that went its own way. New institutions were formed that became a basis for the development of criminalistics both as a science and practice. In the Slovak Republic it is the Forensic science institute and the Police Force Academy in Bratislava that come into existence, whereas in the Czech Republic it is the Institute of Criminalistics of the Police of the Czech Republic and the Police Academy of the Czech Republic.

Subsequently, under the influence of various factors, the subject of criminalistics started to differentiate in comparison with the previous uniform Czechoslovak criminalistics. In regard to this fact it is important to present a change of the opinion relating both to the Slovak and the Czech criminalists, as to the method of the verifying of the testimony on the spot as an independent criminalistic method, and its way to having been passed in the Criminal Procedure Codes of both the countries.

NOTION AND ESSENCE OF VERIFYING THE TESTIMONY ON THE SPOT

The latest Czech author who gathered all the knowledge about the method, up to now, in his monograph called *Verifying the testimony on the spot* (*Prověrka výpovědi na míste*) was Z. Konrád (2006). Based on the essence of the verifying of the testimony on the spot, he specified, distinctly from the previous authors, the notion of the method. He came to the conclusion that: "Verifying the testimony on the spot is a specific method of criminalistic practice that enables to obtain criminalisticaly and legally relevant information through the comparison of the previous testimony to the momentarily objective situation at the scene of crime, objects being found there and being pointed at by the interrogated person".

A markedly strict definition of this method is due to I. Šimovček (1997), he as the author of the chapter about verifying the testimony on the spot, stated in the textbook called *Criminalistics* (*Kriminalistika*) that verifying the testimony on the spot is : "a method of clearing up within the field of criminalistics and consists in the following: the earlier interrogated person shows the place and points at the objects relating to the particular crime, the interrogated person also describes circumstances necessary to find out the relation to the mentioned objects of the crime or, for the purpose of better clarifying up the relation, the interrogated person demonstrates activities carried out when committing the crime; as a criminalist examines the spot and the objects pointed at by the interrogated person, the criminalist compares the testimony of the interrogated person and the facts found out to the situation on the spot to verify the evidence gathered up to now and to possibly find out another".

On the other hand, V. Krajník and others (2005) specifies, in his textbook Criminalistics, the method of the verifying of the testimony on the spot as follows: "...it is a criminalistic method that makes it possible to get from a person a verbal testimony on the spot of the committed crime." V. Krajník, however, points to the fact that, in essence, the method does not represent verification of the truthfulness of the testimony, it is just a method used to obtain the testimony under other conditions than is the testimony based on memory, and next Krajník adds that the method verifies the authenticity (not truthfulness) of the testimony. The aim of this method is to find out whether the person giving testimony knows the particular place and whether the content of the testimony corresponds to the place. This may be achieved by watching the person giving testimony and observing the way in which they move and orientate themselves on the spot and their verbal communication. The fact the method of the verifying of the testimony on the spot has become in Slovakia not only an independent criminalistic method but also an independent procedural deed and means of evidence is confirmed by the method´s having been passed by the Criminal Procedure Code 2005 Act no 30/Coll.

STATE OF THE VERIFYING OF THE TESTIMONY ON THE SPOT AND POSSIBILITIES OF ITS USING

The aim of the research has been to carry out a scientific analysis of the level of applying the verifying of the testimony on the spot as a criminalistic method in the Slovak Republic. The comparison of the theoretical level that is critically compared to the practical level of applying the method in clearing up crimes and elaborating an effective system of recommendations for the purpose of improving police work, primarily investigation. (METEŇKO, J., DANKOVIČ, M. 2009)

Pre-research of the mentioned method has been followed by a questionnaire which represents a dominant method in collecting empirical material. Subsequently, a research of selected respondents was conducted. After the evaluation of the research, the authenticity of the empirical knowledge has been compared and interpreted in relation to the main and partial hypotheses. The results of the research have been incorporated into a system of recommendations for the purpose of making the police work more effective.

Description of the researched sample

The researched sample, composed of 186 police officers (180 men and 6 women) having been 1 – 25 years with police. We have analyzed the content of data obtained during a directed speech with 27 respondents. An independent group (62 respondents) was formed consisting of students of the Police Force Academy and secondary police schools (only students of the post-secondary qualification study – commissioned officers enhancing their police education).

Basic group composed of police officers of: the District Headquarters of the Police Force, Regional Headquarters of the Police Force and other units of the Police Force working within the field of investigation; police officers working in CID; prosecutors, judges and barristers using the above mentioned method or the results of the method in their work; students and teachers of all police school levels.

Selected group:

V – 80 investigators and authorized police officers of the District Headquarters of the Police Force, Regional Headquarters of the Police Force and other units of the Police Force based on the structure of the selection.

OP - 44 officers of CID using the researched method in the units of the Police Force as mentioned in the previous part.

Combined selected group composed of:

PR - 5 prosecutors (random selection from the District Public Prosecution Office, Regional Public Prosecution Office, General Prosecution Office),

J - 5 judges (random selection from The District Court, Regional Court, Supreme Court),

B - 5 barristers,

T – 12 teachers (2 teachers from each police school in Slovakia (in Devínska Nová Ves, Pezinok, Košice, Police Force Academy in Bratislava) and faculties of law and/ or schools teaching criminalistics.

S – 62 police school students.

Selected group consisted of 124 police officers altogether from the following institutions: Justice and Criminal Police Office (91), Anti-Corruption Agency (9), Inspection of the Ministry of Interior of the Slovak Republic (6) and other units of the Police Force (18). The selected group was formed by random proportional selection with a falling quotient; the most respondents were represented by the District Headquarters of the Police Force, fewer respondents were represented by the Regional Headquarters of the Police Force, Headquarters of the Police Force and other units. The research was conducted in the Justice and Criminal Police Office (investigators, operational workers of the Police Force, Criminal police), inspection units of the Inspection service of the Department of the Control and Inspection service of the Ministry of Interior of the Slovak Republic, Anti-Corruption Agency of the Headquarters of the Police Force, Border and Foreign Police Office (Illegal Migration Combat Unit), District and Regional Traffic Inspectorates, police departments, General Prosecution Office, Regional Public Prosecution Office, District Public Prosecution Office, Special Public Prosecution Office, Regional Court, District Court, Police Force Academy and secondary police schools.

Combined group (27 respondents) consisted of prosecutors (5), judges (5), barristers (5) and teachers of police schools and civil schools (12) specialized in criminalistics and criminal law. The combined group was formed by random with assumed territorial specification and consisted of judges and barristers specialized in criminal law and using the results of the verifying of the testimony on the spot as part of the criminal law. An independent group of students (62) was composed of external students of the Police Force Academy and those of post-secondary enhancement study at secondary police schools (police officers trying to enhance their police education).

Methods and Methodics in solving the research issue

In regard to the content and the complexity of the research, the theoretical and empirical methods have been used depending on the aims of the individual research issues. The methodics of the research has been conditioned by both the object of the research and the aim of the conducted research.[5]

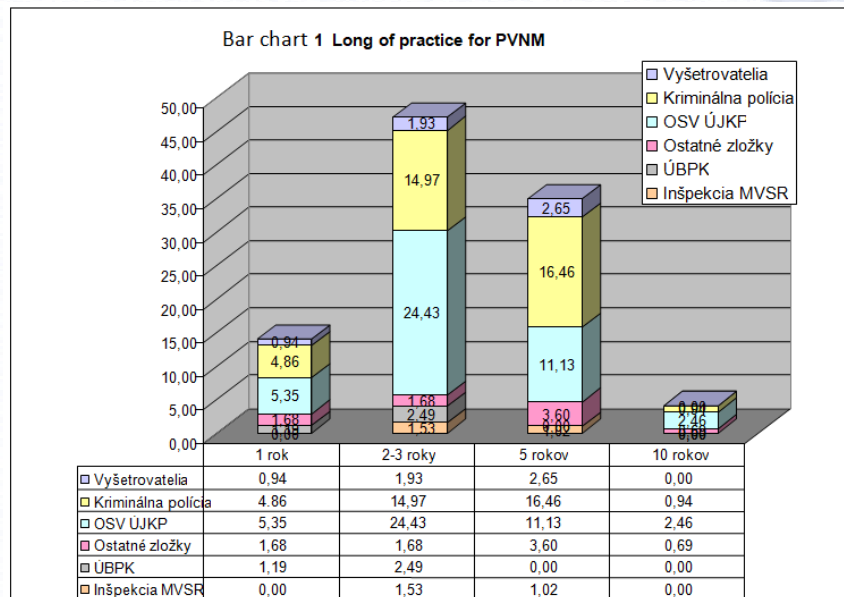
The following methods have been used in processing the theoretical and empirical conclusions:

- Studying written sources;
- Typology study method of written sources (Slovak and foreign literature).
- Formal logical thinking method – analysis, synthesis, induction, deduction, analogy, comparison and generalization, both in theoretical processing the knowledge and in evaluating the empirical research;
- Directed speech method;
- Questionnaire method;
- Statistical method (in processing the results);
- Method of generalizing the experience.

5 No research conducted in connection with the verifying of the testimony on the spot in Slovakia, former Czechoslovakia or any other country is known to the researchers of this study. Researches relating to the testimony, e.g. effectivity of specific interrogation techniques (Anglo-American sources) are known in foreign literature. However, Anglo-American system insists on interrogation and crime scene inspecion. As one of the methods examining truthfulness of the testimony is represented by a polygraph (lie detector).

SELECTED RESULTS OF THE RESEARCH

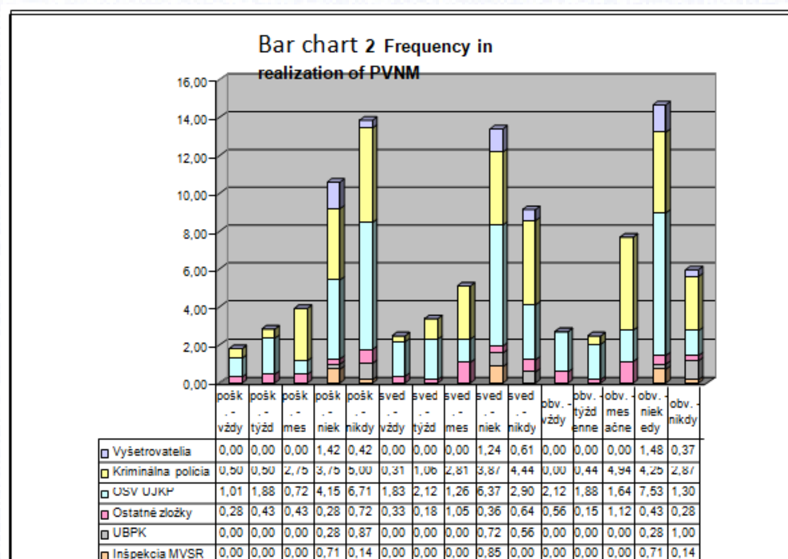
From the point of view of the theoretical knowledge and practical skills, the researched issue concerns the ability to manage (planning, carrying out and documenting) the verifying of the testimony on the spot as to the police practice. Up to 47% of the respondents think that 2 years of police practice is enough to manage the verifying of the testimony on the spot sufficiently well, 34.9 % of the respondents are persuaded that it is necessary to have work experience of at least 5 years of police practice. One can come to the conclusion that both the groups of the respondents think they manage the method sufficiently well and that just the mentioned length of their police practice is sufficient enough to carry out the verifying of the testimony on the spot in a highly qualitative way (Bar chart 1).



	1 rok	2-3 roky	5 rokov	10 rokov
Vyšetrovatelia	0,94	1,93	2,65	0,00
Kriminálna polícia	4.86	14,97	16,46	0,94
OSV ÚJKP	5,35	24,43	11,13	2,46
Ostatné zložky	1,68	1,68	3,60	0,69
ÚBPK	1,19	2,49	0,00	0,00
Inšpekcia MVSR	0,00	1,53	1,02	0,00

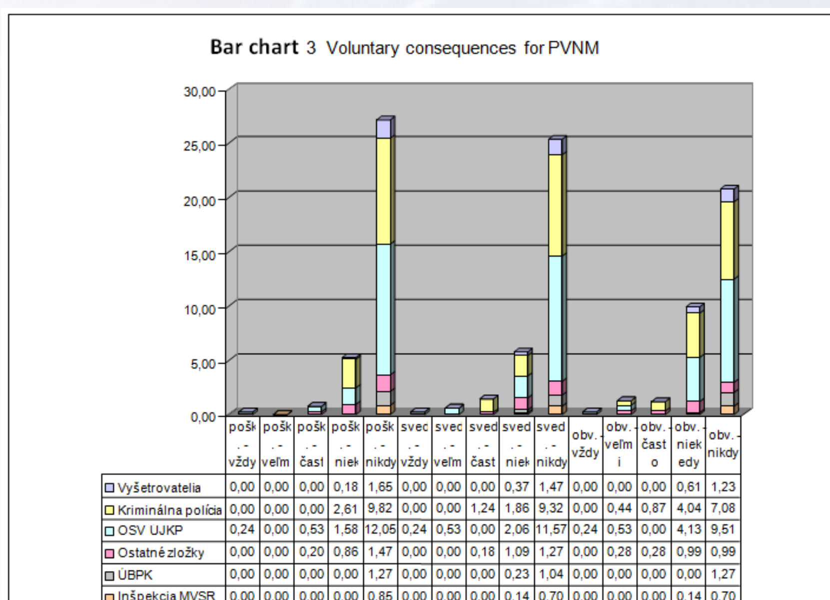
The frequency of the use of the verifying of the testimony on the spot by police officers shows that using the method depends on the procedural position of the person with whom the verifying of the testimony on the spot is being carried out.

In case of the aggrieved person, 13.9 % of the respondents have never used the method of the verifying of the testimony on the spot, and only 10.9 % of the respondents use the method occasionally. 13.4 % of the respondents use the method sometimes, whereas 9.1% of the respondents never use the method. The frequency of using the method is the highest with the accused persons. The method is sometimes carried out by 14.7 % of the respondents, used once a month by 7.7 % of the respondents, and has never been used by 6.0 % of the respondents (Bar chart 2). The method of the verifying of the testimony on the spot is the most frequently used in situations when the accused person (in committing the crime) was moving on various places, or when it is necessary to use the method for the purpose of finding and seizing the objects the accused person stole and hid on one or several places. The method of the verifying of the testimony on the spot is the most frequently used in cases when it is necessary to document the consequences of the committed crime.



	pošk. - vždy	pošk. - týžd	pošk. - mes	pošk. - niek	pošk. - nikdy	sved. - vždy	sved. - týžd	sved. - mes	sved. - niek	sved. - nikdy	obv. - vždy	obv. - týždenne	obv. - mesačne	obv. - niekedy	obv. - nikdy
Vyšetrovatelia	0,00	0,00	0,00	1,42	0,42	0,00	0,00	0,00	1,24	0,61	0,00	0,00	0,00	1,48	0,37
Kriminálna policia	0,50	0,50	2,75	3,75	5,00	0,31	1,06	2,81	3,87	4,44	0,00	0,44	4,94	4,25	2,87
OSV UJKP	1,01	1,88	0,72	4,15	6,71	1,83	2,12	1,26	6,37	2,90	2,12	1,88	1,64	7,53	1,30
Ostatné zložky	0,28	0,43	0,43	0,28	0,72	0,33	0,18	1,05	0,36	0,64	0,56	0,15	1,12	0,43	0,28
UBPK	0,00	0,00	0,00	0,28	0,87	0,00	0,00	0,00	0,72	0,56	0,00	0,00	0,00	0,28	1,00
Inšpekcia MVSR	0,00	0,00	0,00	0,71	0,14	0,00	0,00	0,00	0,85	0,00	0,00	0,00	0,00	0,71	0,14

To obtain a voluntary agreement from an aggrieved person for the purpose of using the method of the verifying of the testimony on the spot has never been a problem for 27.1 % respondents. It has sometimes been a problem to obtain a voluntary agreement with 5.2 % of the respondents, and only 0.2 % of the respondents always have a problem to obtain a voluntary agreement to use the method of the verifying the testimony on the spot with an aggrieved person. It has never been a problem to obtain a voluntary agreement of a witness with 25.4 % of the responders, it was sometimes a problem with 5.8 % of the respondents, and often a problem with 1.4 % of the responders. Just like in case of the aggrieved person, it is always a problem to obtain a voluntary agreement with 0.2 % of the respondents. As to the agreement of the accused person, it has never been a problem to obtain it with 20.8 % of the respondents, it is sometimes a problem with 5.8 % of the respondents and very often a problem to obtain the agreement with 1.2 % of the respondents. Similarly to the aggrieved person and the witness, it is always a problem to obtain an agreement from the accused person with only 0.2 % of the respondents (Bar chart 3).



	pošk. - vždy	pošk. - veľm	pošk. - čast	pošk. - niek	pošk. - nikdy	sved. - vždy	sved. - veľm	sved. - čast	sved. - niek	sved. - nikdy	obv. - vždy	obv. - veľmi	obv. - často	obv. - niekedy	obv. - nikdy
Vyšetrovatelia	0,00	0,00	0,00	0,18	1,65	0,00	0,00	0,00	0,37	1,47	0,00	0,00	0,00	0,61	1,23
Kriminálna polícia	0,00	0,00	0,00	2,61	9,82	0,00	0,00	1,24	1,86	9,32	0,00	0,44	0,87	4,04	7,08
OSV UJKP	0,24	0,00	0,53	1,58	12,05	0,24	0,53	0,00	2,06	11,57	0,24	0,53	0,00	4,13	9,51
Ostatné zložky	0,00	0,00	0,20	0,86	1,47	0,00	0,00	0,18	1,09	1,27	0,00	0,28	0,28	0,99	0,99
ÚBPK	0,00	0,00	0,00	0,00	1,27	0,00	0,00	0,00	0,23	1,04	0,00	0,00	0,00	0,00	1,27
Inšpekcia MVSR	0,00	0,00	0,00	0,00	0,85	0,00	0,00	0,00	0,14	0,70	0,00	0,00	0,00	0,14	0,70

Time necessary to prepare the method of the verifying of the testimony on the spot in all services of the Police Force differs depending on many factors, e.g. complexity of a particular case, insufficient amount of time – high endurance, underestimating to prepare the method, etc. The majority of the respondents prepare the verifying of the testimony on the spot within 0,5 – 1 hour (AP/aggrieved person – 13,5%, W/witness – 13,2%, AP/ accused person – 12,5%). Other category is represented by more than 3 hours (AP – 1,6%, W – 1,4%, AP – 1,5%). No preparation is made in case of AP – 3,0%, W – 3,3%, AP – 2,6%). Based on the results of our research we have found out that the preparation for the verifying of the testimony on the spot is with all police officers the same (Bar chart 4).

Persuasion that an accused person does not say the truth during the verifying of the testimony on the spot is gained by police officers in various ways. Untrue testimony of an interrogated person is the most frequently based on contradictions by comparing the testimony on the spot with the previous testimony – 39,6 %, comparing the content of the testimony with other information or evidence – 28,2 %, comparing utterances of nonverbal communication – 17,6 %, and finally based on one´s own intuition and professional experience – 14,6 % of the respondents think that a person does not say the truth in the process of the verifying of the testimony on the spot (Bar chart 5).[6]

If a person giving testimony states differences in their testimony in comparison to the previous testimony, 66.5 % of the respondents try to find out the reason of such a testimony, 4.8% of the respondents do not find out the reason of such a testimony.

The reasons of differences as stated in a testimony of persons in the process of verifying the testimony on the spot can be seen in the table 1 below. The most frequent reason, as stated by respondents, with *witnesses* or *aggrieved persons* is considerable lapse of time from a particular crime – 13.4 %. Another frequent reason is represented by weaknesses that concern perceiving and remembering important information – 11,1 %, very frequent reasons are represented by changes towards the original situation at a scene of crime – 7,2 %, and fear of revenge by the offender of a crime – 6,6 %. In case of suspicious or accused persons the difference in their statements are represented by covering up for possible offenders – 12,0 %, weaknesses that concern perceiving and remembering important information – 10,8 % and considerable lapse of time from a particular crime 10,4 %.

Table 1

Príčiny odlišností vo výpovedi osôb	Inšpekcia MVSR	ÚBPK	Ostatné zložky	OSV ÚJKP	Kriminálna polícia	Vyšetrovatelia	Podiel v %
pošk./sved. - nedostatky vnímania a pamäte	0,51	0,38	0,76	4,18	4,29	0,94	11,1
pošk./sved. - časový odstup	0,31	0,48	1,26	6,56	4,19	0,61	13,4
pošk./sved. - zmeny situácie	0,15	0,08	0,27	3,67	2,61	0,47	7,2
pošk./sved. - citové prežívanie	0,18	0,25	0,34	2,52	2,05	0,33	5,7
pošk./sved. - krytie spolupách.	0,08	0,31	0,65	2,38	2,33	0,3	6
pošk./sved. - strach z pomsty	0,05	0,42	0,53	2,31	3,17	0,11	6,6
obvin. - nedostatky vnímania a pamäte	0,48	0,38	0,95	4,61	3,36	1,02	10,8
obvin. - časový odstup	0,23	0,38	0,65	4,97	3,73	0,41	10,4
obvin. - zmeny situácie	0,11	0,31	0,5	3,67	2,33	0,33	7,3
obvin. - citové prežívanie	0,06	0,19	0,34	2,09	1,31	0,39	4,4
obvin. - krytie spolupách.	0,2	0,44	0,8	4,18	5,97	0,44	12
obvin. - strach z pomsty	0,18	0,21	0,57	2,09	1,96	0,17	5,2

If a police officer, during verifying the testimony on the spot, finds out that a person gives false testimony, there are different methods, forms and ways of how to persuade the person to change their

false testimony into a truthful one. The most frequently used ways of how to effect on the person giving false testimony during verifying the testimony on the spot, and as stated by the respondents, is presenting evidence and other information. The respondents point out contradictions in testimonies and they also state other evidence as an argument – 25.5 %. Illogical arguments during verifying the testimony on the spot are used by 23,9 % of offenders; 18,9 % of the respondents leave the person to give a false testimony and they document such a testimony for next use; emotional strain of a person giving testimony is being used and the tactics adopted to the method by 13,1 % of the responders. The least responders use psychical effecting on a person giving testimony as a form of pressure to influence the attitude of the person during verifying the testimony on the spot – 6,9 % (Bar chart 6). Whether a police officer manages to induce the person giving the testimony to change their attitude, i.e. to change their testimony, depends on age, sex, education, intellectual abilities and persuasiveness of the police officer.

Using psychology by police officers in their work depends on their theoretical knowledge and practical skills. A high number of officers, namely 56,0 % stated not to use any psychology in their work, in contrast to 14,6 % of the respondents using psychology knowledge in verifying the testimony on the spot. As many as 11.1 % promote an individual approach to the person giving testimony during verifying the testimony on the spot. Non-verbal communication is being used by 6.5 % of the respondents, whereas 4.2 % of the elements are assertive ones. 3.6 % of the respondents think to be able to recognize, through psychology knowledge, a lying person in various stages of the proceedings. Communication with a person by means of psychology tactics is used by 2.3 % of the respondents, and only 1.7 % of the respondents prefer getting to know the nature of the person giving testimony by using the method of verifying the testimony on the spot (Table 2).

Table 2

Využitie psychológie v policajnej praxi	Inšpekcia MVSR	ÚBPK	Ostatné zložky	OSV ÚJKP	Kriminálna polícia	Vyšetrovatelia	Podiel v %
charakter osobnosti	0	0	0	0	0,94	0,77	1,7
poznanie klamstva	0	0	0,61	0	3	0	3,6
asertivita	0	0,38	0	0	1,5	2,32	4,2
pristup k osobe	0	0,38	1,07	2,89	6,74	0	11,1
neverbálna komunikacia	0,36	0,77	0	2,89	2,06	0,44	6,5
komunikácia	0,36	1,15	0	0	0	0,77	2,3
áno, využívam	0,36	0	2,3	6,66	4,87	0,44	14,6
nie, nevyužívam	1,48	1,15	3,22	31	18,36	0,77	56

Compared to the opinion of police officers in the table above, 77.8 % of prosecutors, judges, barristers and teachers use psychology knowledge during a directed speech in verifying the testimony on the spot. Only 3.7 % of the respondents have never used psychology knowledge (Bar chart 7).

Advantage of using specialists, e.g. psychologists, experts, interpreters, etc. in verifying the testimony on the spot follows, as stated by respondents, from specialist counselling in all spheres of human activities necessitating specialist knowledge police officers do not have. This leads primarily to elucidating a particular crime (its course, reason of origin, mechanism of effecting objects, etc.), or clarifies the offender´s behaviour – 30.9 %. No advantages of the presence of specialists are perceived by 12.3 % of the respondents. The presence of the specialists is welcome as suitable by 3.8 % of the respondents, namely in cases of communicating between parties to a case. An advantage of providing more objective evaluating the testimony by a specialist in verifying the testimony on the spot is perceived

by 3.4 % of the respondents. Judging the psychological condition of the person giving testimony and interpreting done by specialists are perceived as indispensable and representing advantage by 3.0 % of the respondents. The activities of estimating whether the interrogated person could have committed a particular crime and evaluating trustworthiness and truthfulness of the testimony by means of specialists are used by 2.4 % of the respondents. 28.9 % of the respondents did not know how to answer the question (Table 3).

Table 3

Výhody účasti odborníkov	Inšpekcia MVSR	ÚBPK	Ostatné zložky	OSV ÚJKP	Kriminálna polícia	Vyšetrovatelia	Podiel v %
odborné poradenstvo	1,27	1,3	3,36	14	11	0	30,9
nie sú výhody	0	0	1,22	5,19	3,73	2,2	12,3
výmena názorov	0	0,31	0	0	3,54	0	3,8
tlmočenie, psycholog. pôsobenie	0	0,57	0	0	1,31	1,1	3
odhad, či to osoba mohla vykonať	0	0	0	0	1,31	1,1	2,4
núti strany objektívnejšie vypovedať	0,43	0,57	0	0	1,31	1,1	3,4
dokazovanie	0	0	0,84	5,62	5,59	0	12,1
lepšie pochopenie - zadokumentovanie	0	0,76	0	2,45	0	0	3,2
neviem	0,84	0,31	2,21	16	9,51	0	28,9

Directed speech with prosecutors, judges, barristers and teachers showed that 63.0 % of the respondents found the most important role of the specialists in providing specialist counselling within a specific field during verifying the testimony on the spot. 37.0 % of the respondents find necessary not only the help of interpreters but also psychologists who help them to familiarize with psychological aspects of offender´s behaviour at the scene of crime (Bar chart 8).

The question about what theoretical aspects of the method called verifying the testimony on the spot are necessary to be processed, 29.6 % of the respondents answered and stated, first of all, the necessity to remove contradictions within the Criminal Procedure Code concerning the method. Next, it is necessary to process, in greater detail, instructing the persons giving the testimony, and the procedural course in carrying out the mentioned method – 25.9 %. 14.8 % of the respondents stated that the conditions of carrying out the method had been refused by the persons giving testimony and they also stated their doing away with objections of bias towards the persons giving testimony. On the other hand, the theoretical processing of the method at the present time is sufficient for 29.6 % of the respondents (Bar chart 9).

The method of the verifying of the testimony on the spot and the possibilities of how to use it more frequently as a criminalistic method could be improved by better professional education of police officers – 19.8 %, increase in the number of investigators – 15.1 %, better technical equipment of the police – 9.7 %, experience exchange between senior and junior police officers and experience exchange with police officers abroad – 6.0 %, more powers for police officers in carrying out procedural deeds – 2.1 % and better information exchange among the individual police units – 0.5 %. Up to 46.8 % of the respondents did not know how to answer the question (Table 4).

Table 4

Možnosti skvalitnenia PVNM	Inšpekcia MVSR	ÚBPK	Ostatné zložky	OSV ÚJKP	Kriminálna polícia	Vyšetrovatelia	Podiel v %
odborná príprava	0	0,88	0,53	0	17,15	1,21	19,8
lepšia techn. vybavenosť	0	0,88	0,53	3,89	3,17	1,21	9,7
širšie právomoci pri	0	0	0,84	1,3	0	0	2,1
realizácii úkonu							
lepšia informovanosť	0	0,46	0	0	0	0	0,5
výmena skúsenosti (starší s mladším, so zahraničím)	0,2	0,19	0,92	3,17	1,31	0,22	6
zvýšenie stavu vyšetrovateľov	0,43	0	0,84	10,2	2,42	1,21	15,1

Based on the results of the directed speech with prosecutors, judges, barristers and teachers, the method of the verifying of the testimony on the spot could be improved and more frequently used by providing better professional education and training programmes – 51.9 %, by providing experience to junior police officers by the senior ones, and by experience exchange with colleagues abroad – 22.2 %, a manual meant for investigators and their practicing model situations – 19.5 %, and interconnection of the theory and the practice in the form of consultations and deliberations 14.8 % (Bar chart 10).

OUTPUTS FROM RESEARCH

The results of our research being presented and conclusions made have lead us to state that our hypothesis has been confirmed, namely that *the present carrying out of the method called the verifying of the testimony on the spot in the Slovak Republic does not bring expected results within the process of clearing up criminality*. In regard to the content of our research and its aims we have applied the principles and procedures of a qualitative research both in collecting and interpreting the data and in selecting the methods to be used. The results achieved by the classification method of qualitative data (interpersonal relations in carrying out the method of verifying the testimony on the spot) have given rise to a set of factors making it difficult to carry out the method. Subsequently, a relation analysis has made it possible for us to describe the reasons negatively effecting on the course and the results of the method called verifying the testimony on the spot. All the reasons are of more general nature and represent both the theoretical and the methodological starting points for the purpose of applying them under the conditions of police practice.

The method of the verifying of the testimony on the spot is often confused with interrogation, investigation experiment or reconstruction of a crime. We have tried to explain some of the tactical procedures of interrogation considered by criminalists as the method of the verifying the testimony on the spot. The principle of verifying the testimony on the spot, as a method of the criminalistic practice, consists, in our opinion, in comparing the previous testimony given and documented during an interrogation to the subsequent statement given in verifying the testimony on the spot at the objective and real scene of crime. The person giving testimony person demonstrates, in their own way, describes or shows the place, objects, situation, activity or the course of the crime directly at the scene of crime The person giving testimony provides the investigator with the information obtained in a mediated way together with the source of the evidence and the description of circumstances under which the information was obtained.

Only reliable information can represent basis for the decision about a particular crime. It is not possible to unambiguously determine the quantity of the evidentiary information necessary for police officers to come to reliable and truthful conclusions because each crime is unique. That is why the quality of the evidentiary information always depends on a particular case. The verifying of the testimony on the spot represents, in criminalistic practice, source of information about a particular crime.

ANALYSIS OF SELECTED ISSUES OF THE RESEARCH

Ad. 1 The method of the verifying of the testimony on the spot is, at the present time, considered to be an independent and specific method of the criminalistic practice and has its stable position in the structure of criminalistics that is separated from similar criminalistic and tactical methods, primarily those of the reconstruction of a crime, investigation experiment and crime scene examination. The process of the introducing the method of the verifying of the testimony on the spot is a historic and dynamic one and is conditioned by both the necessity of expanding scientific knowledge from different scientific disciplines but also by improving the legal regulation and last but not least by improving the professional knowledge of law enforcement bodies.

Ad. 2 The method of the verifying of the testimony on the spot is used, in criminalitic practice, to verify and complete the testimony and to obtain new evidence or its sources. The method makes it possible to verify truthfulness of the facts as stated in the testimony (place, object, crimes not reported or cleared up so far, facts connected to a particular place, whether the place is known to the person giving testimony as the result of their participation in the crime or whether the person giving testimony knows about the place only from hearing, or the facts mentioned by the person are thought up). The method also represents an effective way of how to verify and evaluate the individual investigation versions, as it often happens that police officers decide to use a lot of investigation versions they do not manage to verify during the investigation. It is just the verifying of the testimony on the spot that could help in such situations, however, at the present time this part of the method is being underappreciated.

Ad. 3 Analysing the knowledge based on the present level of criminalistics in connection with the method of the verifying of the testimony on the spot induces us to think that it is the method of criminalistic practice that, at the present time, is specified as one of the criminal procedure deeds (means of evidence) in the Criminal Procedure Code of the Slovak Republic. The method of the verifying of the testimony on the spot is a criminal procedure deed and is passed in Sec. 158 Criminal Procedure Code; the results brought by the method, namely knowledge of a particular crime as obtained by law enforcement body represent evidence under Sec. 119 subsec.2 Criminal Procedure Code.

Our research has clearly confirmed that the method of the verifying of the testimony on the spot has potential to become an effective criminalstic and tactical method to be used in investigating crimes as it is at the present time. However, it is necessary to point out that the use of this method in evidence of a crime is limited by the nature of the method itself. It is an empirical method consisting in effecting on a particular object.

Despite the stated facts, there are reserves in criminalistic practice in using the method. The reserves consist in:

1. The verifying of the testimony on the spot is not always carried out on a required professional level.
2. Despite its advantages, the verifying of the testimony on the spot does not represent a frequently used method.

3. The verifying of the testimony on the spot is confused with other criminalistic and tactical methods by some law enforcement bodies.

Ad. 1 The reasons of weaknesses in carrying out the verifying of the testimony on the spot are different, however we think that it is mostly about a conglomerate of various negative factors: insufficient professional education, time pressure, underappreciation in preparing the method, inexperience of police officers.

Ad. 2 Answering the question why the method of the verifying of the testimony on the spot is not used more frequently exceeds the content of this thesis. Despite of this fact, we would like to state a few notes of the issue. Investigation itself represents demanding work both from psychological and physiological points of view. Investigators usually work under time pressure as follows not only from the nature of their work (offenders are continually ahead of investigators), criminal procedure periods (e.g. 6 months period of custody) but also overstrain of investigators. The verifying of the testimony on the spot is a very demanding criminal procedure deed requiring extensive preparing and organising. It is therefore understandable, the method is not frequently used by investigator.

Ad. 3 The method of the verifying of the testimony on the spot is often confused with the crime reconstruction and investigation experiment. For some law enforcement bodies it is sometimes a problem (primarily with young and inexperienced investigators, authorized police officers and response officers) to distinguish among the criminalistic and tactical methods as there is a lot they have in common. The basic difference in comparison to other criminalistic methods is the way of carrying them out. In case of the verifying of the testimony on the spot, it is not necessary to reconstruct the situation of a particular crime and it is also not necessary to carry out an experiment activity. Voluntarily participation of a suspicious person, accused person, aggrieved person and a witness in carrying out the method is indispensable, in comparison to the possibility to replace those persons in case of an investigation experiment or a reconstruction model; this, of course, does not have to positively impact on the investigation of a particular crime. Confusion of the verifying of the testimony on the spot with other criminalistic and tactical methods is the result of insufficient professional education of law enforcement bodies.

In defining the substance of this criminalistic method we have come to the conclusion that though each verifying the testimony represents a process using several methods, without a comparing method we are not able to verify anything. What is possible to derive from this is that the basis of every verification (verifying the testimony) is a verification method. It is thus possible that in the process of the verifying of the testimony one will compare the information acquired about an object being verified to the primary information acquired about the object being verified or to the object itself. From this follows that the essence of the verifying of the testimony on the spot consists in comparing the testimony conducted earlier both to the momentarily real situation and its elements that are on a particular place voluntarily demonstrated or described by the person giving the testimony.

Based on comparing the individual definitions of the verifying of the testimony on the spot, the present understanding of the system of criminalistics and its methods in the Slovak Republic and the need for specifying and generalizing the notion of the verifying of the testimony on the spot we have decided to follow the essence of the verifying of the testimony on the spot:

Verifying the testimony on the spot is a specific criminalistic method that enables to acquire information relevant to both the criminalistics and the law by means of comparing the testimony as given at the first interrogation to the testimony given at the verifying of the testimony at the scene of crime, including objects, as demonstrated in a real situation.

Based on the analysis of the basic tactical principles, we can allege that the tactical procedure used in verifying the testimony on the spot must be legal, i.e. it must not be in contradiction with the principles of the Criminal Procedure Code. We have come to the conclusion that the following basic principles of the verifying of the testimony on the spot can be accepted:

- voluntary participation of the person whose testimony shall be verified;
- initiative of the person whose testimony shall be verified;
- verifying the testimony on the spot shall be conducted by one managing person;
- investigator´s active control during the verifying of the testimony on the spot;
- watching the person giving testimony,
- verifying the testimony on the spot is an unrepeatable deed,
- presence of a bystander as a witness of the deed;
- verifying the testimony on the spot with several persons separately;
- vigilance.

This study intends to find out new knowledge and information about how the method of the verifying of the testimony on the spot tends to be used by police officers of the individual police services within the Police Force of the Slovak Republic and other cooperating units. The results of the research concerning the method of the verifying of the testimony on the spot have shown some problems and reasons of such adverse conditions of police practice. These problems can be summarized into three groups (METEŇKO, J., DANKOVIČ, M. 2009) :

1. Problems concerning police officers: insufficient knowledge of procedural process, behaviour of police officers in procedural deeds, underappreciation to prepare the verifying of the testimony on the spot, failure to inform barristers, absence to inform the person giving testimony before carrying out the procedural deed itself, and insufficient professional education.
2. System reasons (derived from managing and functioning the Police Force): valid legislation, high endurance, insufficient technical equipment, insufficient education system, absence of foreign experience, high rate of fluctuation of police officers, cooperation relations within the Police Force and the absence of specialization of police officers.
3. Problems concerning procedural parties: unwillingness of persons to give a testimony, ignoring the summonses, uncooperativeness of procedural parties, enforcing objections of bias, weaknesses in trying to get important information and covering up potential offenders.

Another question necessary to be solved at the present time is education within the department of the Ministry of Interior of the Slovak Republic. Model of a 1-year study at secondary police schools in the past was, in our opinion, optimal; the study contained the subject criminalistics that included the issue of the verifying of the testimony on the spot. The number of lessons meant for the subject was 138 lessons. As a result of the shortening the length of the study to 6 months, the number of lessons of the subject criminalistics was reduced as well, namely to 58 lessons, and the topic of the verifying of the testimony on the spot was excluded, including the other criminalistic and tactical methods except of crime scene examination. The subject law also had to give up the topic concerning criminal procedural law that included evidence within a criminal procedure, and individual means of evidence. At the present time police education should be extended to 8 months at secondary police schools. That is why it is necessary not to forget criminalistic and tactical methods to become again an indispensable part of the extended education of the subject criminalistics (the number of proposed lessons is 70).

The method of the verifying of the testimony on the spot must ensure objectivity, truthfulness, convincingness and demonstrativeness of results. This can be possible only by using the following tactical ways:

1. thorough analysis of the testimony and evaluation both of the course and the results of the previous interrogation of a suspicious person, accused person, witness or an aggrieved person; focus on detailed description of a place, objects, course of the crime, etc. makes it possible to find contradictions of the comparison to the reality during the verifying of the testimony;
2. thorough knowing the person giving testimony, their psychology, personal family environment, amount of property, etc.;
3. forming sufficient conditions for the purpose of well perceiving and seeing, i.e. climate, roads, situation, etc.;
4. in case of the verifying of the testimony on the spot meant for several persons, it is necessary to carry out the verifying independently with each person to ensure objectivity of the results of the method,
5. exclusion of psychical or physical effecting on the person giving testimony under negative influences, namely an investigator or other subjects;
6. detailed documenting individual facts and the whole process of the verifying of the testimony on the spot.

It is necessary to emphasize that the basic condition for the method of our research to become an effective means of evidence is that it must always be carried out thoroughly, in the sense of criminalistic principles and by following all the relevant criminal and procedural provisions.

Efficiency of knowledge in police practice

The presupposed contribution of the results of our research can be divided into a narrower and a broader point of view. The results of the empirical research in the narrower sense could optimize the performance of the method of the verifying of the testimony on the spot. The results of the empirical research in the broader sense could be used in activities of the individual police units.

Based on the conclusions of the previous part of this study, we would like to submit the following proposals to improve and increase the use of the verifying of the testimony on the spot:

1. to incorporate the method of the verifying of the testimony on the spot into the curriculum and syllabus of the subject crimialistics for the proposed model of 8-month study at secondary police schools; to incorporate the method either separately or together with other criminalistic and tactical methods.

2. to prepare for police officers a brief handbook of criminalistic tactics that would include criminalitic and tactical methods including the verifying of the testimony on the spot. The handbook should contain brief characteristics of each of the mentioned methods and an instruction of how to carry them out. The enclosure of the handbook should contain instructions in compliance with the Criminal Procedure Code and a brief familiarizing with how to document the course and the results of the mentioned deeds. The handbook should be of smaller size and have a hard and washable cover for the purpose of its being used in the field.

3. To incorporate the topics of the verifying of the testimony on the spot, criminalistic experiment, and criminalistic reconstruction of a case, their characteristics, differences and ways of how to carry them out into professional education of police officers. Despite the methodological differences of the mentioned, the necessity to show the differences follows from the similarity of some of the elements of the methods (way of preparation, partially the way of how to carry them out and how to document them) that primarily the inexperienced investigators are not able to distinguish. It is also necessary to emphasize the circumstance that the importance of these criminalistic and tactical methods has been increased after the introduction of contradictory procedure at the contemporary criminal procedure.

4. To use the form of distance education, namely e-learning (similar form of education is being used in the courses for crime scene technicians), as part of professional education of police officers, or instruction and methodology seminars where an example of the verifying of the testimony on the spot could be presented, preferably the one that has already been solved in practice.

5. To use new possibilities and trends of how to document places of a crime, to use aerial photographs and maps from new servers.

6. One of the aims of this research has also been to find out the needs of police practice and, subsequently, process the proposals of *de lege ferenda* for the purpose of legislative activity (amendment of the Criminal Procedure Code in the part concerning means of evidence). The Criminal Procedure Code effective from 1 of Jan. 2006 (Act no 301/2005 Coll.) contains specific provisions concerning carrying out the testimony on the spot, namely in Sec.158. This legal regulation is certainly not ideal, however, it provides a very good legal framework for explaining how to carry out the verifying of the testimony on the spot in high quality, and is supported by the procedural law. Anyway, we think that our recommendations in favour of the change of or to harmonize Sec. 119 Subsec. 2 and Sec.158 the Criminal Procedure Code in the process of amendment thereof are correct, and this would be beneficial for law enforcement bodies. In connection with this change it is also necessary to amend the Article 65 of the regulation of the Ministry of Interior 2007, no 17 as amended.

By reason of the stated above we propose:

1. to amend the name of the Sec. 158 "Verifying the testimony at the scene of crime" to "Verifying the testimony on the spot"

2. and to incorporate into the Sec 158 subsec. 1 Criminal Procedure Code the terms "suspicious person, accused person, witness and aggrieved person" as follows:

Section 158

Verifying the testimony on the spot

1. Verifying the testimony at the scene of crime shall be carried out if it is necessary to do so and in the presence of <u>the suspicious person or accused person or witness</u> for the purpose of completing or verifying information necessary for the criminal procedure relating to the scene of the crime.

2. The procedure of the verifying of the testimony on the spot must suitably follow regulations on an investigation experiment.

7. Based on the psychology knowledge of how to formulate a testimony, extended by one´s own knowledge of how to investigate similar crimes, an investigator can guess probable reasons of errors and weaknesses in a testimony of a person both by verifying the testimony on the spot, and by means of procedures proved reliable to help to remove the weaknesses in the testimony. A person giving testimony is recommended:

- to give a chronological and maximally detailed testimony, to state all the facts and details, even if they find them not to be essential for the investigation;

- if the person giving testimony is not able to state the exact time and place of the crime, the investigator should start with what the person remembers well and exactly; on the basis of this the investigator can derive the continuation of the crime;

- to recall the whole crime, environment, weather, light of the crime, and their mental condition at the time of the crime;

- to try to differentiate their opinions from the really perceived situation;

- to try to describe the whole crime from the point of view of other participant in the crime (e.g. witness), such as what that one had to and could perceive;

- to state who can confirm the information provided by them, or to state the source of the information in case of the mediated information;

- to draw a particular object, to demonstrate the critical action (e.g. the way the offender attacked) etc. If they are unable to verbally demonstrate the mentioned;

- to understand the crime as a reason of a certain result or as a result of a particular reason;

- The investigator must not insist and force the person giving a testimony to state circumstances quickly if they cannot remember them; the investigator must take into account various types of memories.

8. By studying the specialist literature, we have found out that the method of the verifying of the testimony on the spot has not yet been divided based on particular criteria. We think that the person that was interrogated by a law enforcement body can participate in the verifying of the testimony on the spot (except a person exempt from the law enforcement bodies and courts)[7]. That is why, just like in case of interrogation that represents an obligatory presupposition of carrying out the testimony on the spot, we propose to classify that one as follows:

1. based on the procedural status of the person giving testimony;
2. based on selected criminalistic and technical points of view.

1. Based on the procedural status of the person giving testimony.

It is possible to use this criterion when taking into account how the person giving testimony is involved in the verifying of the testimony on the spot or the process of clearing up the crime. Based on this, we can divide the verifying the testimony on the spot as follows:

- Verifying the testimony on the spot in case of a suspicious person (accused person). It is a person whose status is being changed in relation to the situation they are being found at the moment of giving testimony, i.e. before charge of accusation: after the accusation, a suspicious person becomes an accused person. Motivation of the person giving testimony should by the same as that person knows all circumstances of how the crime was being prepared, carried out or kept secret.

- Verifying the testimony on the spot in case of a witness. The purpose of this verifying of the testimony on the spot is to obtain relevant information on the crime as perceived by the witness, or to verify or to complete other pieces of information important for the criminal procedure and relating to a particular place.

- Verifying the testimony on the spot in case of an aggrieved person. The Criminal Procedure Code includes the aggrieved person into a group of witnesses. From the point of carrying out the testimony on the spot, it seems to be more suitable to include the aggrieved person into an independent category.

7 See in greater detail: § 8 zák. č. 301/2005 – Trestný poriadok (Sec. 8 Act 301 – Criminal Procedure Code 2005).

- Verifying the testimony on the spot in case of an expert. From the theoretical point of view, it is possible to talk about the verifying of the testimony on the point in case of an expert, e.g. in connection with accomplishment of facts of a crime under the Section 347 – untrue expert´s report or interpreting or translating providing untrue information.

2. Based on selected criminalistic and technical points of view:

- Based on the age. Age influences, in an essential way, the basic psychic factors that effect on forming and decoding the memory trace or the course of the verifying of the testimony on the spot. That is why we distinguish statements of minors, juveniles, majors or old persons.
- Based on criminal experience. We distinguish the following kinds of verifying the testimony of a person: without previous criminal experience; unpunished but interrogated in the past; punished – habitual criminal. Depending on the criminal experience, it is necessary to decide for a suitable way (primarily in case of persons giving false testimony, or in case of self-incrimination).
- Based on mental health. Verifying the testimony on the spot can also be carried out with persons of low intellect, mentally ill persons having limited legal capacity. It is necessary to consider the verifying of the testimony on the spot in regards to the person and the circumstances of the crime, namely to consider whether the purpose of the verifying of the testimony on the spot can be achieved in a different way.
- Based on the physical or health condition. In specific cases it is necessary to carry out the verifying of the testimony on the spot with a person that is injured, ill, immobile, or a pregnant woman. In such cases it is necessary to consult a doctor.

There are other criminalistic and tactical points of view influencing the verifying of the testimony on the spot. For example endangered or protected witnesses or those kept in secret, where, depending on the seriousness of the case, it is necessary to consider the range and the nature of endangering the witness. Preparation and tactics of carrying out the verifying of the testimony on the spot must be adapted to the circumstances of the crime and the need to protect witness´s life and health or their identity.

CONCLUSION

The results of our research achieved by analysing the present condition of the verifying of the testimony on the spot as a criminalistic method, have shown the necessity of introducing new scientific knowledge that will not only generalize the present norms, methods and means, but also scientifically support the method of the verifying of the testimony, eliminate its imperfections and ensure its further development for the purpose of practical application of the method by the individual units of the Police Force.

Verifying the testimony on the spot has come into existence as a criminalistic method as a result of the actual need arising from the practice of criminalistics in the process of becoming familiarized with criminalisticaly relevant events. This is the reason why the method has been used by criminalists, though under various names and in various ways. Based on the critical analysis of foreign, Czechoslovak and subsequently Slovak criminalists, we can allege that the method of the verifying of the testimony on the spot has been constituted as a specific crimnalistic method and represents a means of not only verifying and making testimonies objective but it is also a means of finding new evidence or its source.

We think that the definitions of the verifying of the testimony on the spot, as stated in the past, are overcome and they mostly represent a description of the content of the activity when applying the method. That is why we propose a new definition of the notion of the verifying of the testimony on the spot.

Verifying the testimony on the spot is a specific criminalistic method that enables investigators to acquire information relevant both to the criminalistics and the law by means of comparing the testimony as given at the first interrogation to the testimony given at the verifying of the testimony at the scene of crime, including objects.

Efforts of some criminalists not to acknowledge independence of the verifying of the testimony on the spot have been overcome. This fact becomes evident in the field of legislation as well because the verifying of the testimony on the spot has been passed and regulated by the Criminal Procedure Act both as an independent means of evidence and a procedural action. From the point of evidence, it is a means of evidence (Sec. 119 Subsec.2 Criminal Procedure Code) where the law enforcement body *de facto* verifies the testimonies of a suspicious person, accused person, aggrieved person, witness under specific conditions of a place, where a crime was committed or being prepared, or where an attempted crime was committed.

We are persuaded that, at the present time, when the criminalistic method of the verifying of the testimony on the spot, has been constituted and stipulated by the Criminal Procedure Code, it needs to be theoretically processed. In this regard, we propose to regulate Sec. 158 Criminal Procedure Code and Art. 65 regulation of the Ministry of Interior of the Slovak Republic 2007 no 17 relating to the verifying of the testimony on the spot, as those are in contradiction with the recommendations of criminalistics, primarily in the obligatory participation of the suspicious person, accused person, aggrieved person or the witness in the process of the verifying of the testimony on the spot.

Conclusions and recommendations concerning the results of the research relating to the police practice are summarized in the final part of this thesis. As the method of the verifying of the testimony on the spot is not classified by a division in criminalistics, we have tried to classify it considering its individual kinds based on the procedural status of a person giving testimony and based on the other criminalistic and tactical points. In transforming the knowledge of this thesis into practice, it is still necessary to overcome many problems. The knowledge, however, is necessary to be introduced into practice for the purpose of knowing the ways of committing increasingly sophisticated crimes.

Reflecting on the necessity of the investigation practice and the status of the theoretical processing the issue of the verifying of the testimony on the spot in the present Slovak criminalistics, we have come to the conclusion that only by unifying different opinions, introducing new knowledge and solving problems arising from applying the method under survey is it possible to improve the method for the purpose of its broader use in investigation practice and responsive familiarizing with particular cases.

We are persuaded that the method of the verifying of the testimony on the spot can be considered as one of the crucial elements for resolving criminal cases.

REFERENCES

1. KONRÁD, Z. , 2006, *Prověrka výpovědi na míste* (Verifying the testimony on the spot). Praha: PA ČR 2006, 74 p. ISBN 80-7251-221-8.
2. KRAUS, P. , 1957, Případ Václava Mrázka (*Václav Mrázek Case)*. In: *Kriminalistický sborník* (Criminalisic proceedings), 1957, no 9, p. 562.
3. KRAJNÍK, V., et al., 2005, *Kriminalistika* (Criminalistics). Bratislava: APZ, 2005, 356 p. ISBN 80-8054-356-9.
4. MATIÁŠEK, J., BÁRTA, B., SOUKUP, J., 1966, *Výslech a psychologie* (Interrogation and psychology). Praha: Orbis 1966, 215 p.
5. MATIÁŠEK, J. SOUKUP, J. BÁRTA, B., 1968, *Psychologie a výslechová prax* (Psychology and interrogation practice). Praha: Orbis 1968, 251 p.
6. METEŇKO, J., DANKOVIČ, M. , 2009, *Previerka výpovede na mieste ako kriminalistická metóda: Záverečná správa z výskumu.* (Verifying the testimony on the spot as a criminalistic method: Final research thesis) Bratislava : Akadémia PZ (Police Force Academy) – Katedra kriminalistiky a forenzných disciplín (Departmentt of criminalistics and forensic sciences). 2009. 83 p. VÝSK. 151.
7. NEMEC, B., 1954, *Základy kriminalistiky* (Essentials of criminalistics). Praha: MV HSVB, 1954. 335 p.
8. Ríšsky zákon 119 zo dňa 23.5.1873 (Imperial Act 119/1873). Československá republika s novelami recipovala zákonom číslo 11 Sb. zo dňa 28.10.1918 (The Czechoslovak Republic amended Act no 11 Coll., on 28 Oct1918).
9. STEPIČEV, S., 1957, *Výjazd na miesto ako taktický spôsob previerky dôkazov* (Crime scene response as a tactical way of verifying the evidence). In *Kriminalistický zborník* (Criminalistik proceedings), 1957, no 12, p. 751 – 757.
10. STRAUS, J., et al. 2003, *Dějiny československé kriminalistiky slovem i obrazem – do roku 1939* (*History of the Czechoslovak criminalistics in a word and picture – until 1939*). Praha: Police History 2003, 197 p.. ISBN 80-89477-18-5.;
11. PORADA, V. et al. 2007, *Kriminalistika.* Bratislava: IURA EDITION, 2007, 604 p. ISBN 978-80-8078-170-5.
12. ŠIMOVČEK, I., et al., 1997, *Kriminalistika* (Criminalistics). Bratislava: APZ, 1997, 642 p. ISBN 80-8054-005-5.
13. VENHAČ, R. 1987, *Prověrka výpovědi na míste* (Verifying the testimony on the spot). Praha: Kriminalistický ústav VB, 1987, 54 p.

THE PRINCIPLE OF EQUALITY OF ARMS – CASES VERSUS MACEDONIA IN FRONT OF THE EUROPEAN COURT OF HUMAN RIGHTS

Katerina Krstevska Savovska, PhD[1]
Faculty of Security, Skopje, University "St. Kliment Ohridski", Bitola, North Macedonia
Ice Ilijevski, PhD
Faculty of Security, Skopje, University "St. Kliment Ohridski", Bitola, North Macedonia

Abstract: The right to a fair trial as stipulated in Article 6 of the Convention for the Protection of Human Rights and Fundamental Freedoms encompasses in itself several principles among which is the principle of equality of arms. Having in mind the request for the criminal procedure to be fair, which implies the principle of equality of arms to be respected, the paper will focus on two Macedonian cases – the Case of Stoimenov and the Case of Duško Ivanovski. In addition, the paper will focus on the relevant documents and judgements, and will pay a special attention to the Court's statement in which it recalls that the principle of equality of arms is part of the wider concept of a fair hearing within the meaning of Article 6 Paragraph 1. Namely, it requires a "fair balance" between the parties: each party must be afforded a reasonable opportunity to present their case under conditions that do not place them at a disadvantage *vis-à-vis* their opponent or opponents.

Keywords: fair trial; equality of arms; Macedonia.

INTRODUCTION

Article 6 of the Convention for the Protection of Human Rights and Fundamental Freedoms (the Convention), defines one of the most relevant rights, i.e. the right to a fair trial (Council of Europe, 1950). As noted by Mole and Harby (2006: 5), the Article 6 guarantees the right to a fair and public hearing in the determination of an individual's civil rights and obligations or of any criminal charge against him. Although it is not expressly referred to within Article 6, OSCE/ODIHR (2012: 110-111)

1 katerina.krstevska@gmail.com

point out that the principle of equality of arms is both an autonomous concept and inherent element of the overarching right to a fair hearing under the European Court of Human Rights (the ECHR). The principle of the equality of arms, according to Toma (2011: 3), is extremely important as it implies compliance with the right to defence or the necessity of a contradictory debate, these being strong guarantees in which the principle lies. Therefore, Vitkauskas and Dikov (2012: 48) observe that while there is no exhaustive definition as to what the minimum requirements are of "equality of arms", there must be adequate procedural safeguards appropriate to the nature of the case and corresponding to what is at stake between the parties. These may include opportunities to: a) adduce evidence, b) challenge hostile evidence, and c) present arguments on the matters at issue. In the same line is Leigh (1997), by perceiving that equality of arms implies many things, for example, that a person charged with a criminal offence shall be informed of the facts alleged against him and their legal classification; that he shall be given adequate time to prepare his case; that a party must be able to put forward his arguments in such conditions that he is not put at a considerable disadvantage in relation to the other side; that he shall be given the opportunity to have knowledge of and comment on the observations filed and evidence adduced by his adversary; and that he shall be given access to all material evidence held by the prosecution authorities which bears on his guilt or innocence.

According to Cape and Namoradze (2012: 75), the Convention's Article 6 does not contain any explicit provision giving a suspected or accused person the right to seek evidence, investigate facts, interview prospective witnesses or obtain expert evidence. This may be seen as a *de facto* recognition of the tensions inherent in establishing rights that apply to both inquisitorial and adversarial judicial systems. Whilst adversarial, at least in theory, as regards the accused as a party to the proceedings who is responsible for the production of their own evidence, inquisitorial considers the accused as a subject of a state-sponsored enquiry into their guilt or innocence. In the latter case, it is for the judicial authorities and/or the police to conduct investigations and to determine which pieces of evidence are relevant.

Consequently, attention should be given to the requirement that the expert should fulfil since his relevance in determining the admissibility of expert opinion, i.e. based on the England and Wales Law Commission (2009: 2), the expert must be capable of providing an impartial opinion, in recognition of the fact that an expert's overriding duty is to the court and not the party calling him to testify. Kalajdziev (2014: 103-104) elaborates that the ECHR does not openly oppose the model under which forensic experts, as objective and impartial parties, are appointed by the court. However, in cases when indictment acts are factually based on forensic findings and opinions, they are treated as "witnesses against the defendant" in terms of defendants' right to fair trial and therefore the defence has to be given an adequate and honest chance to contest their findings and opinion, as well as to produce alternative forensic expertise in its defence.

Although Article 6 cases do not generally catch the headlines as much as cases under some other articles of the Convention, Harris, O'Boyle and Warbrick (2009: 329) stress that they are staple diet of the Convention system. As provided by the authors, the majority of cases decided at Strasbourg raise issues under Article 6, probably because it is in the administration of justice that the state is most likely to take decisions affecting individuals in the areas of conduct covered by the Convention. When it comes to the Macedonian cases, it should be pointed out that in the period from 1997, when the Convention was ratified by the Assembly as well as entered into force (Law on Ratification of the Convention, Official Gazette, 1997), until the end of 2019, the ECHR in 145 judgements out of 165 found at least one violation, with a note that in 47 judgements (32.4%) it found the violation of Article 6 (ECHR, 2020: 9). Moreover, if Article 6 is chosen as a search criteria through the HUDOC database that provides access to the ECHR's case-law, as well as "equality of arms" as keywords, despite the

fact that seven Macedonian cases are given as a result of the search, an attention should be given to *Stoimenov v. Macedonia* (ECHR, 2007) and *Duško Ivanovski v. Macedonia* (ECHR, 2014), since they address the issues of fair trial, equality of arms and expert reports.

THE CIRCUMSTANCES OF STOIMENOV'S CASE AND THE ECHR'S RULING

The applicant Mr Jordan Stoimenov (Macedonian national; born in 1963; lives in Vinica), on September 06, 2001 lodged the Application No. 17995/02 against the Republic of Macedonia. He complained that the principle of equality of arms had been breached because the national courts had convicted him on the basis of, *inter alia*, an expert opinion provided by the Forensic Science Bureau ("the Bureau") within the Ministry of Internal Affairs ("the Ministry"), i.e. the same Ministry that had set in motion the proceedings against him. Or, to be more precise, Mr Stoimenov complained about several alleged violations of the Convention's Article 6 - the courts had refused his request for an alternative expert examination concerning the quality of the poppy-tar; the courts had based their decisions on the expert reports produced by the same Ministry that had brought the criminal charges against him; he had been incited by a police agent acting as an agent provocateur to commit the offence of which he was later convicted; and the courts had refused to accept that he had decided to call off the sale of poppy-tar.

Concerning the circumstances of the case, on January 30, 2000, a criminal charge was submitted by the Ministry to the public prosecutor against Mr Stoimenov and four other persons for committing the criminal act of unauthorized production and release for trade of narcotic drugs and psychotropic substances (Article 215 of the Criminal Code). The criminal charge was followed by an indictment that was lodged by the Public Prosecutor to the Kočani Court of First Instance, against Mr Stoimenov and four other persons (Mr M., Mr D., Mr M.G. and Mr I.P.) for possession, offering for sale and selling of opium. During the pre-trial procedure, two expert reports were prepared by the same expert of the Bureau about the quality of the cakes of poppy-tar, i.e. the Expert report No. X-121/2000 of January 28, 2000 (about 23 cakes of poppy-tar that had been confiscated from Mr I.P.), and the Expert report No. X-122/2000 of January 30, 2000 (about the quality of 12 cakes of poppy-tar that had been confiscated from Mr M). As the ECHR observed - "both expert opinions were almost identically worded and provided succinct information about the technique used to determine the composition of the poppy-tar and the conclusion that it was opium".

Although the representative of Mr Stoimenov requested an alternative expert opinion from a scientific institution to be obtained, the Kočani Court of First Instance refused such request at the hearing on March 10, 2000. In essence, the representative submitted such request on two grounds, the first one - the Bureau operated within the Ministry, and the second one - the same Ministry had lodged the criminal charge against Mr Stoimenov. The other reasons were that the poppy-tar was old and had been buried for many years, and because of its poor quality an authorised organisation had refused to buy it. The arguments about the poor quality of the poppy-tar and about the report drawn up by the Ministry were reiterated by the representative at the end of the hearing within his concluding remarks. However, on the same date the Kočani Court of First Instance delivered a judgement by which Mr Stoimenov and the other accused were found guilty and sentenced to imprisonment of three to four years. Even though the accused used the term "poppy-tar", the court ruled that it was in fact opium and based its findings entirely on the written expert reports (the reports undoubtedly have established that it was opium containing all the necessary substances to be considered a psychotropic substance).

Furthermore, the Kočani Court of First Instance stressed that the Bureau was a state body authorised to perform such expert examinations, as well as that there was no prohibition in the Law on Criminal Procedure for the Bureau to provide such expert opinion (Article 234 Paragraph 2).

The procedure continued in front of the Štip Court of Appeal, since Mr Stoimenov logged an appeal in which, among other things, it pointed that the Kočani Court of First Instance refused to order an alternative, an independent analysis of the quality of the poppy-tar. However, the Štip Court of Appeal on June 14, 2000, dismissed his appeal and upheld the lower court's decision. The explanation was that the lower court did not make a mystique when it refused the request for an alternative expert examination of the quality of the drugs; the expert opinion provided by the Bureau was unambiguous; the expert examination by the Bureau had been carried out properly; the lower court had relied entirely on the Bureau's report, and the same as the lower court - it dismissed the request for an alternative examination by another institution.

Finally, by repeating the complaints raised in the appeal, Mr Stoimenov submitted a request to the Supreme Court for extraordinary review of a final decision, but once again his request was dismissed and the lower courts' decisions were upheld (April 12, 2001). The Supreme Court stated that his complaint about violation of defence rights was ill-founded, because the trial court could reasonably establish on the basis of the expert opinion provided by the Ministry that it was opium of good quality; there were no doubts in the expert opinion that would have warranted ordering of another examination or an opinion by other experts; and the expert opinion submitted by the Ministry did not contain any shortcomings or deficiencies which would have raised reasonable doubts as to its validity. In addition, the Supreme Court dismissed his request for extraordinary mitigation of the penalty imposed (April 12, and November 2, 2001), as well as it rejected the second request for extraordinary review of the final decision (May 29, 2002).

Concerning Mr Stoimenov's complaint about the principle of equality of arms regarding the expert evidence, the Government objected to it on two bases: first - the expert opinions provided by the Bureau could not be contested solely on the ground that the Ministry had subsequently filed criminal charges against him, and second - in order to justify a further expert report, Mr Stoimenov should have substantiated his criticism of the reliability of the Bureau's opinion, but had failed to do so. In addition, the Government noted that the Bureau had been equipped to provide such expert opinions and had a statutory basis in the Law on Criminal Procedure. On the other hand, Mr Stoimenov gave the following arguments: the expert opinion provided by the Bureau had fallen foul of the requirements for a proper expert opinion (there was no explanation what kind of "analysis" had been made, what method had been used or the percentage of the alkaloids found in the poppy-tar); the trial court failed to examine the expert who had provided the opinion, despite his alleged request; the Ministry had filed the criminal complaint against him and at the same time submitted the expert opinion on the quality of the poppy-tar; etc.

Based on the circumstances of the case, as well the arguments given by Mr Stoimenov and the Government, in the Judgement dated April 5, 2007 (final July 5, 2007), the ECHR found that there had been a breach of Article 6 Paragraph 1. Namely, the ECHR stressed several issues:

- The expert opinion provided by the Bureau was the only report that existed on the quality of the poppy-tar;
- Mr Stoimenov had no possibility to submit a private expert opinion by himself, since the cakes of poppy-tar had been confiscated by the authorities and he had no possibility to access them;
- The Government's assertion that the quality of the poppy-tar had been irrelevant for conviction cannot be accepted, because it was *corpus delicti* of criminal act;

- The Bureau drew up the expert report whose transmission to the public prosecutor set in motion the criminal proceedings against Mr Stoimenov;
- The national courts refused the defence request for appointment of another expert to determine the quality of the poppy-tar, and found that the Bureau's expert opinion was conclusive;
- The Bureau cannot be considered as a court-appointed expert because it was not appointed by the court to carry out the analysis of the poppy-tar (based on Article 234 of Law on Criminal Procedure). On the contrary, the Ministry on its own motion had drawn the expert report in order to substantiate the criminal charge that had submitted to the public prosecutor;
- The opinion submitted by the Bureau was more akin to evidence against Mr Stoimenov, and it was used by the prosecuting authorities rather than a "neutral" and "independent" expert opinion;
- Mr Stoimenov was unable to challenge the Bureau's report as evidence submitted by the public prosecutor, which means that he was deprived of the opportunity to put forward the arguments in his defence on the same terms as the prosecution.

THE CIRCUMSTANCES OF DUŠKO IVANOVSKI'S CASE AND THE ECHR'S RULING

On March 18, 2005, the Application No. 10718/05 was submitted against the Republic of Macedonia by Mr Duško Ivanovski. The applicant (Macedonian national; born in 1971; lives in Skopje) complained that there was a violation of his rights under the Convention's Article 6, i.e. he was denied the right to a fair trial in the criminal proceedings against him, because the domestic courts had based their judgments on unlawfully obtained evidence (his fingerprint found in the cellar, in respect of which no search warrant had been issued), and on the expert reports produced by the Bureau (could not be considered an impartial expert); as well as he had been denied of the opportunity to examine the witnesses in his defence and have alternative expert evidence.

The criminal charge for drug trafficking, that was submitted by the Ministry against Mr Ivanovski contained several pieces of evidence, among which were: the Expert report (No. 10.2.6-5520/1; February 5, 2003) of examination of a padlock that had secured cellar no. 10 and 13 keys that had been confiscated from Mr Ivanovski (the locking system of the padlock had been damaged and it could be opened with any object, including all keys that were confiscated); the Expert report (No. X-164/2003; February 5, 2003), which confirmed that five packages found in cellar no. 10 contained 2.296 kg of heroin; the Expert report (No. X-164/2/2003; February 10, 2003) that confirmed that 0.991 kg found in the two other packages contained two substances that were often mixed with heroin; the Expert report (No. SK-164/2003; February 5, 2003) about the fingerprint found on one of the packages confiscated in cellar no. 10, with a remark that when the found fingerprints were entered into the system of automatic search of fingerprints, it was determined, after verification of the list of suspected candidates, that they corresponded to the right middle finger of Mr Ivanovski.

Following the examination conducted by the investigative judge (February 5, 2003), in which Mr Ivanovski remained silent, the public prosecutor on February 17, 2003 lodged an indictment against him for possession and offering for sale of heroin and other prohibited substances. The trial court delivered the judgement on March 20, 2003, by which Mr Ivanovski was convicted for drug trafficking and was sentenced to two-and-a-half years of imprisonment. It should be noted that in the concluding remarks at the trial his lawyer drew attention to several issues: no search warrants had been issued regarding the personal search of Mr Ivanovski and the search of cellar no. 10; in the absence of any eyewitnesses,

there had been no direct evidence that would link Mr Ivanovski with the drugs, which had been hidden in a cellar that had belonged to a third party and could have been opened with any key; Mr Ivanovski's fingerprint had been secured in the absence of an expert and the police had sought an expert examination *ex post facto*; the Expert report No. SK-164/2003 had been unclear and imprecise because it had contained no information as to the manner and circumstances under which that fingerprint had been secured; it would have been impossible for Mr Ivanovski to manipulate the packages with only one finger; no fingerprints had been found on the padlock and the cellar where the drugs had been found; the expert examination of the substance found in the packages had been too small to contain compacted material in the quantity indicated in the Expert report No. X-164/2003; the place and the person who had determined the quantity of the substance had not been established; the expert examinations had been carried out in his absence; also he challenged whether the substance found had been pure heroin and that the prosecuting body in practice carried out expert examinations which meant that the evidence obtained thereby was not impartial.

In the appeal Mr Ivanovski repeated the issues that were raised in the concluding remarks by the lawyer. In addition, he pointed out that the trial court did not examine the police officers who had secured his fingerprint in his absence, as well as the experts who had drawn up report No. SK-164/2003 and requested them to be examined. He noted that the trial court could not have validly based its judgment on those expert examinations since they had been carried out by the Bureau and the examinations had been biased, and therefore sought alternative expert examinations to be conducted over the fingerprint, since it had been the sole evidence linking him with the drugs. Furthermore, he requested the neighbours to be examined because they attended the search regarding his allegations that his fingerprint found on one of the packages had been the result of an argument which he had had in the cellar with the police after he had refused to comply with their order to touch the packages. However, the Skopje Court of Appeal at a public session held on May 20, 2004 dismissed both appeals (the public prosecutor also submitted an appeal concerning the determined sentence), and upheld the trial court's judgment.

On July 6, 2004 Mr Ivanovski submitted an application for extraordinary review of a final judgment, and repeated the remarks given in the appeal, with an accent to the quality and impartiality of the expert examinations carried out by the Bureau. Also, he sought alternative expert examinations of the fingerprint and heroin found. However, on November 2, 2004, the Supreme Court dismissed his application and confirmed the lower courts' judgments. Furthermore, on February 17, 2005 he was informed by the public prosecutor that there were no grounds for lodging a request for protection of legality to the Supreme Court.

The same as in the Stoimenov's case, the ECHR ruled that there was a violation of the Convention's Article 6 Paragraph 1 and 3 (d) because domestic courts' refused to hear the defence witnesses and admit alternative expert evidence. Namely, Mr Ivanovski was unable to challenge the reports of the Bureau as evidence submitted by the public prosecutor that created an imbalance between the defence and the prosecution, i.e. the principle of equality of arms between the parties had been breached. In order to support such decision, the ECHR gave the following arguments in its Judgement dated April 24, 2014 (final July 24, 2014):

- The trial court did not refer to any evidence when it dismissed the allegations of defence that Mr Ivanovski was pushed by the police officers and in order not to fall down he touched the packages. There was no other evidence that would link Mr Ivanovski with the substance found in the cellar, i.e. his fingerprint found on one of the packages constituted the principal evidence, because it established a direct link between Mr Ivanovski and the drugs;

- In order for the defence position to be strengthened, Mr Ivanovski asked several persons to be examined (the police officers who had secured the fingerprint in the cellar; the experts of the Bureau who had drawn up the expert report regarding the fingerprint; the neighbours who had attended the search of cellar no. 10), however the Court of Appeal did not examine any of them and gave no explanation. Furthermore, the Supreme Court made no comment about the inability of Mr Ivanovski to call witnesses in his defence. Therefore, not being able to call the experts who had prepared the fingerprint report, made the defence's task of proving the usefulness of the counter-reports more difficult;
- Mr Ivanovski was unable to introduce himself a private expert opinion (which was confirmed by the Government). This implies that he was not given any opportunity to conduct an active defence as required under Article 6 Paragraph 1 and 3 (d), as well as he was not able to raise his grievances regarding the expert evidence;
- The expert reports were akin to incriminating evidence used by the prosecution rather than a "neutral" and "independent" (they were submitted by the Bureau which is a State agency; were performed within the preliminary investigation - not in adversarial proceedings and without any participation of the defence; were drawn up without a court order; were transmitted to the public prosecutor which set in motion the criminal proceedings);
- Even though the expert reports were challenged by the defence on the quality and accuracy, the trial court admitted them as evidence;
- The defence's request for new expert examinations to be performed was refused by the courts, stating that the expert evidence submitted by the prosecution had been based on scientific methods and there was nothing to cast doubt on their credibility; etc.

CONCLUSION

In *Salduz v. Turkey* (ECHR, 2008: §50), the ECHR points out that the principle of fair trial as defined in Article 6 can also be applied in the pre-trail procedure, not just in the procedure in front of a "tribunal" competent to determine "any criminal charge". Namely, as noted in *Lisica v. Croatia* (ECHR, 2010: §47), Article 6 may be relevant before a case is sent for trial if and so far as the fairness of the trial is likely to be seriously prejudiced by an initial failure to comply with its provisions. In essence, as mentioned in *Khan v. the United Kingdom* (ECHR, 2000: §34), while Article 6 guarantees the right to a fair hearing, it does not lay down any rules on the admissibility of evidence as such, which is therefore primarily a matter for regulation under national law. It is not the role of the ECHR to determine, as a matter of principle, whether particular types of evidence - for example, unlawfully obtained evidence - may be admissible or, indeed, whether the applicant was guilty or not. The question which must be answered is whether the proceedings as a whole, including the way in which the evidence was obtained, were fair.

In addition, the ECHR in *Bykov v. Russia* (ECHR, 2009a: §90) stresses that it must be examined in particular whether the applicant was given the opportunity of challenging the authenticity of the evidence and of opposing its use, as well as the quality of the evidence must be taken into consideration, including whether the circumstances in which it was obtained cast doubt on its reliability or accuracy. As illustrated in *Guilloury v. France* (ECHR, 2006: §55), an applicant claiming a violation of his right to obtain the attendance and examination of a defence witness should show that the examination of that person was necessary for the establishment of the truth and that the refusal to call that witness was prejudicial to the defence rights. Therefore, in *Polyakov v. Russia* (ECHR, 2009b: §31), the ECHR

observes that although it is normal for the national courts to assess the evidence before them as well as the relevance of the evidence which defendants seek to adduce, there might be exceptional circumstances which could prompt the ECHR to conclude that the failure to hear a person as a witness was incompatible with Article 6.

By implying these standards in the cases of *Stoimenov v. Macedonia* and *Dusko Ivanovski v. Macedonia*, there is no wonder why the ECHR found the violation of Article 6. Despite the fact that several alleged violations of the principle of fair trial were raised by the Macedonian applicants, one violation was common for both cases. They both raise a doubt whether the expert reports were neutral, especially since such reports were drafted by the Bureau within the Ministry - the same Ministry that submitted criminal charges against them. As the ECHR noted - a doubt was raised concerning the Bureau's opinion that was more akin to evidence against the applicants used by the prosecuting authorities rather than a "neutral" and "independent" expert opinion.

From the above, it can be concluded that if the principle of fair trial is not respected in the pre-trial procedure, it will have a negative impact over the fairness of the procedure in front of the court. And the situation in the Macedonian cases got worse, when the courts' actions created an imbalance between the defence and the prosecution, which violated the principle of equality of arms between the parties. Namely, the main fault of courts was not allowing the opportunity for the accused to challenge the expert reports by examining the experts that drafted the reports. In addition, the courts did not enable another expert reports to be drafted by impartial institution, i.e. the defence did not have the opportunity to present their case under the conditions that do not place them at a disadvantage *vis-à-vis* its opponent - the prosecutor. The courts just accepted the expert reports and admitted them as evidence in the procedure, which implied the judgements to be based on them. All of this was done, beside the fact that the expert reports were prepared in the pre-trail procedure, without a court order, by the Bureau that was within the scope of the Ministry, the same Ministry that logged the criminal charge against the applicants. Furthermore, the courts invoked that the Bureau was an authorized authority for providing such expertise according to the Law on Criminal Procedure.

As a final remark that should be followed by the Macedonian authorities in the future, can be found in the observation made by Decaigny (2014: 156), i.e. two procedural safeguards must be put in place in order to guarantee fair trial rights. First, as a matter of equality of arms, each party must be in a position to gather expert information. Second, a sufficient possibility must be provided to challenge the validity of the expert opinions produced by another party.

REFERENCES

1. Cape, E. & Namoradze, Z. (2012). *Effective Criminal Defence in Eastern Europe*. Chisinau: Soros Foundation - Moldova, 75.
2. Council of Europe. (1950). *European Convention of Human Rights.* Downloaded June 1, 2020 http://www.echr.coe.int/Documents/Convention_ENG.pdf.
3. Decaigny, T. (2014). Inquisitorial and Adversarial Expert Examinations in the Case Law of the European Court of Human Rights. *New Journal of European Criminal Law,* 5(2), 156.
4. European Court of Human Rights [ECHR]. (2000). *Khan v. the United Kingdom.* 35394/97, 04.10.2000. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-58841.

5. European Court of Human Rights [ECHR]. (2006). *Guilloury v. France.* 62236/00, 22.09.2006. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-75999.
6. European Court of Human Rights [ECHR]. (2007). *Stoimenov v. Macedonia.* 17995/02, 05.07.2007. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-80035.
7. European Court of Human Rights [ECHR]. (2008). *Salduz v. Turkey.* 36391/02, 27.11.2008. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-89893.
8. European Court of Human Rights [ECHR]. (2009a). *Bykov v. Russia.* 4378/02, 10.03.2009. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-91704.
9. European Court of Human Rights [ECHR]. (2009b). *Polyakov v. Russia.* 77018/01, 29.04.2009. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-75999.
10. European Court of Human Rights [ECHR]. (2010). *Lisica v. Croatia.* 20100/06, 25.05.2010. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-147196.
11. European Court of Human Rights [ECHR]. (2014). *Duško Ivanovski v. Macedonia.* 10718/05, 24.07.2014. Strasburg. Downloaded June 1, 2020 http://hudoc.echr.coe.int/eng?i=001-142515.
12. European Court of Human Rights [ECHR]. (2020). *Overview 1959-2019.* Strasburg. Downloaded June 1, 2020 https://echr.coe.int/Pages/home.aspx?p=reports/factsfigures&c=, 9.
13. Harris, D., O'Boyle, M., & Warbrick. (2009). *Law of the European Convention on Human Rights - Second Edition (Macedonian Edition).* Skopje: Prosvetno delo, 329.
14. Kalajdziev, G. (2014). *Effective Defence in Criminal Proceedings in the Republic of Macedonia.* Skopje: Foundation open society - Macedonia, 103-104.
15. Law on Ratification of the Convention for the Protection of Human Rights and Fundamental Freedoms and the First Protocol, Protocol no. 4, Protocol no. 6, Protocol no. 7 and Protocol no. 11 to the said Convention [Law on Ratification of the Convention]. (1997). *Official Gazette of the Republic of Macedonia,* no. 11/1997.
16. Leigh, L. H. (1997). The right to a fair trial and the European Convention on Human Rights, in D. Weissbrodt and R. Wolfrum (eds.). *The Right to a Fair Trial.* Berlin: Springer-Verlag. Downloaded June 1, 2020 http://hrlibrary.umn.edu/fairtrial/wrft-lhl.htm.
17. Mole, N. & Harby, C. (2006). *A guide to the implementation of Article 6 of the European Convention on Human Rights - Human rights handbooks no. 3 - 2nd edition.* Strasbourg: Council of Europe, 5.
18. OSCE/ODIHR. (2012). *Legal Digest of International Fair Trial Rights.* Warsaw. Downloaded June 1, 2020 https://www.osce.org/odihr/94214.
19. The Law Commission. (2009). *Consultation Paper No 190 - The Admissibility of Expert Evidence in Criminal Proceedings in England and Wales - A New Approach to the Determination of Evidentiary Reliability.* London. Downloaded June 1, 2020 https://www.lawcom.gov.uk/project/expert-evidence-in-criminal-proceedings.
20. Toma, E. (2011). The principle of equality of arms - part of the right to a fair trial. *Law Review - International Journal of Law and Jurisprudence,* I (3), 3.
21. Vitkauskas, D. & Dikov, G. (2012). *Protecting the right to a fair trial under the European Convention on Human Rights - Council of Europe human rights handbooks.* Strasbourg: Council of Europe, 48.

PROTECTION OF THE RIGHTS OF THE CHILD WITHIN THE HUMAN RIGHTS SYSTEM AND THE NATIONAL FRAMEWORK

Olga Jović-Prlainović, PhD[1]
Faculty of Law, University of Priština, Kosovska Mitrovica, Serbia

Abstract: The rights of the child are an achievement of the modern age. The rights of the child as human rights in international law are recognized and protected through special international documents that represent the institutional framework for protection of the rights of the child from the point of view of humanity. The child has various rights whose purpose is to protect the child in the course of growing up and maturing. Standards adopted by the international community that are or should be implemented in the European and national system of protection of the rights of the child also apply to the rights of the child. Bearing in mind that generally accepted rules of international law and ratified international agreements are an integral part of the legal system of the Republic of Serbia, and that the regular practice of applying ratified international agreements in courts has not yet been adopted, it is necessary to make the national legal framework more effective.

Keywords: protection of the rights of the child; international standards; national protection framework

INTRODUCTION

Established legal standards in universal documents on human rights in terms of ensuring the rights of the child, and the protection and promotion of the rights of the child in the European and national framework, are the objective of this research. The contemporary view on the rights of the child goes beyond the simplified interpretation of regulations related to children, as children's rights represent an area of legislation that includes several departments in both international and European, as well as domestic law. As far as the rights of the child are concerned at the global and regional level, the

1 olga.jovic@pr.ac.rs

research focusses its attention on primary sources of law and the European case law, primarily on the case law of the European Court of Human Rights, with special reference to the case law of the Court of Justice of the European Union, and key strategic documents and guidelines, i.e. other non-binding instruments.

The rights of the child were first specially laid down by the Family Law of the Republic of Serbia (*Official Gazette of the Republic of Serbia*, No. 18/2005, 72/2011, 6/2015). In the field of protection of the rights of the child, established international standards are sought to be achieved through the adoption of legal and other regulations. In a series of attempts to complete the normative system of protection of children's rights, and three decades following the ratification of the UN Convention on the Rights of the Child, the Preliminary Draft Law on the Rights of the Child and the Children's Rights Commissioner (2019) was passed. Even though it regulates the content of the rights of the child, improvement and exercise of the rights of the child in all areas of life for each child, it is not adequate and does not offer any new mechanism for protecting the rights of the child in relation to the existing law[2], which is why its adoption should be seriously reconsidered; this is necessary due to the fact that this Preliminary Draft Law is a clumsy attempt at unifying earlier solutions of special proposals of legal texts on the rights of the child and on the rights of the child Commissioner. The area of children's rights in our country is regulated by around a hundred laws that are not mutually harmonized, as there are legal gaps in the regulations, which all together deepen legal uncertainty. The reason for this, on the one hand, resides in the fact that the process of harmonization and improvement of legislation is not carried out in a coordinated and comprehensive manner, whereas on the other hand, the effects of the law on children and application of basic principles of children's rights are insufficiently taken into account. (Situational analysis of children and adolescents in Serbia 2019: 57). According to the professional public, activities focused on the areas where the problems of children are most pronounced are of the essence in terms of protection of the rights of the child, such as prevention and protection of children from violence in all environments where children live (family, pre-school, school ...), protection of children in the media, the child's right to culture and education and the availability of cultural content adapted to their age, which would be better applied through strategic documents in this matter.[3]

LEGAL PROTECTION OF THE CHILD IN INTERNATIONAL LAW

Assuming that human rights are of moral origin and that the legislator cannot abolish them at will, states, as international entities, are obliged to legally regulate the field of human rights, i.e. to refrain from violating rights and create conditions for exercising human rights (Cranston, 1991: 29-34). Human rights belong to all people irrespective of origin, gender, race, religion, or other affiliation. Unlike positive law, which arises from the act of a certain social force that passes its own laws and results from social convention, human (natural) rights spring from the very nature of things, as they exist as objective reality, possessing its psychological and moral coercion (Perović, 2004: 9).

2 Ombudsman's opinion on the Draft Law on the Rights of the Child and the Commissioner of the Rights of the Child sent to the Ministry of Labor, Employment, Veterans' Affairs and Social Affairs on 25 September 2019, https://www.pravadeteta.com/ (2.08.2020).

3 Agreement on Cooperation and Understanding in the Field of Protection of the Rights of the Child, the Ombudsman and Network of Organizations for Children of Serbia (MODS), Belgrade 2019, https://www.ombudsman.rs/; Proposed strategy in the field of prevention and protection of children from violence for the period 2020-2023, Belgrade 2020, https://www.pravadeteta.com/ (2.08.2020).

In the field of human rights of the child, the basic question is whether human beings have different degrees of rights in accordance with their own specific qualities (rights of embryos, fetuses, infants, the mentally ill, people in coma or future generations), or what makes children's rights special and whether the nature of these rights is the same or different from human rights (Winston, 1988: 6-7), having in mind cultural differences and the establishment of common values (Vučković-Šahović, 2000: 29-30). The child is a subject of law; however, due to the fact that the child depends on adults, the relationship of equivalence between the rights of the child and the rights of adults is conditioned by the scope of exercising the rights in accordance with the child's developmental possibilities and his/her best interest.

States and international organizations participate in the process of recognizing the rights of the child through standardization, protection and promotion of these rights. Children's rights are protected by universal human rights instruments adopted under the auspices of global intergovernmental organizations, the most famous of which is the United Nations, thereby confirming the attitude of most countries, which provides credibility and strength to the adopted international instrument (Vučković-Šahović, Petrušić, 2015: 38). The UN conventions on human rights, which were adopted under the auspices of the UN also apply to children, where some of them attribute special provisions to the child, while others contain provisions that concern all people and thus also apply to children. The United Nations human rights program commenced following the adoption of the Universal Declaration of Human Rights (1948), which forms the basis for subsequent international human rights treaties. The universal system of human rights protection has been supplemented by the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights (1966). Regulation of the child's right to non-discrimination, the right to a name and registration in the register of births, the right to citizenship (Article 24 of the ICCPR) represents the first significant step in creating binding norms of international legal protection of the child. The provisions of the International Covenant on Economic, Social and Cultural Rights recognize the right of all (people) to the highest standard of mental and physical health that can be achieved, as well as measures taken by states to reduce mortality at birth and measures to ensure healthy child development.

A special international law on the rights of the child has been discussed since the adoption of the UN Convention on the Rights of the Child (1989). Widespread discrimination against children, endangering their physical and mental development, insufficient protection of children are reasons for specifying the obligations of UN member states regarding respect for the rights of the child. The Convention sets standards of crucial importance for the social and legal position of the child by regulating civil, social, economic, cultural and political rights, given that in the human rights conventions adopted so far, civil and political rights have been separated from economic, social and cultural ones (Vučković-Šahović, 2000: 66).

The Convention on the Rights of the Child is the legal basis for the process of harmonizing national regulations governing the availability and protection of fundamental rights of the child, together with the Optional Protocol on Child Prostitution and Pornography and the Optional Protocol on the Participation of Children in Armed Conflicts. Promotion of the protection and exercise of the rights of the child has been expanded by the Third Optional Protocol to the Convention on the Rights of the Child on Complaints, which provides the child with access to justice through the newly adopted appeal procedure to the Committee on the Rights of the Child (an independent international body monitoring the implementation of the Convention and its Optional Protocols), provided that the state has accepted the proceedings and that the remedies in the national State have been exhausted (Article 5 of the Protocol). The signatory states, including the Republic of Serbia, should ratify it in order to be bound by the provisions contained in this document.

PROTECTION OF THE RIGHTS OF THE CHILD IN EUROPEAN LAW

The rights of the child in the European framework tie in with the existing international standards. Regional (European) organizations have also concluded human rights agreements and set up systems to monitor the implementation of member states' obligations. A single system of protection in the field of human rights was formed within the Council of Europe through the adoption of the European Convention on Human Rights (1950) and through the case law of the European Court of Human Rights. In terms of creating common standards for the protection of human rights through the implementation of other Council of Europe conventions, such as the Convention on the Adoption of Children (1967, 2008), the Convention on the Legal Status of Children Born Out of Marriage (1975), the Convention on Contact with Children (2003) and the Committee of Ministers Council of Europe, and the recommendation of the Parliamentary Assembly of the Council of Europe 874 (1979) on the European Charter of the Rights of the Child, resolutions, declarations, charters, recommendations, strategies play a vital role in the field of the rights of the child, and are respected by member states without any formal legal obligations to do so, as these instruments are not subject to ratification and are not binding. As a rule, they precede international agreements or represent their supplement. The list of sources is lengthy and is constantly updated with new instruments that have a strong moral and political impact on member states.

The CoE's strategic activity in the field of promotion and protection of children's rights expressed through the Strategy for the Rights of the Child 2012-2015 ("Monaco Strategy") is of key importance for directing and undertaking activities in the field of children's human rights. However, it has not been revised since 2015. This document envisages four strategic goals: promotion of services and systems in the field of justice, social and health care systems; elimination of all forms of violence against children, including sexual violence, trafficking in human beings, corporal punishment and violence in schools; guaranteeing the rights of children with disabilities, children in detention, children in alternative care institutions, migrant children and Roma children; promoting children's participation (access to information and the right to express opinions in public and private life). At the end of the implementation period of the Strategy, the issue of determining the goals on which the activities of the Council of Europe in the field of children's rights should be based in the short-term, medium-term or long term period has remained open.

The European Union as a political organization that significantly contributes to the promotion of human rights and in cooperation with the Council of Europe responds to the challenges and threats faced by European citizens. During 2014, these two most influential European organizations established the framework for cooperation in the field of promotion of human rights, democracy and the rule of law, based on binding international conventions of the Council of Europe, supervisory bodies and assistance programs. Most EU member states protect the rights of the child through special legislation on the rights of the child, whereas in countries where this is not the case, the area of children's rights is regulated by lower legal acts and special laws pertaining to family, social rights, education, health care, i.e. certain legislations established *Commissioner* for Child *Rights*.[43]

The protection of children's rights in the EU is a part of a coordinated program based on three pillars. The first pillar is the EU Charter of Fundamental Rights (2000)[54] and it contains the first references to the rights of the child at the EU constitutional level: recognition of the child's right to free compulsory

4 [3] *European Centre for Parliamentary Research and Documentation: Request* 1407 - Violence against children, *by the National Assembly of the Republic of Serbia, Request 866* Bill on Youth (Children*), by Slovak National Council.*

5 [4] EU Charter of Fundamental Rights, SL 2012 C 326.

education (Art. 14 para. 2), prohibition of age discrimination (Art. 21), and prohibition of exploitation of children for work (Art. 32). The content of the provision of Art. 24 of the Charter encompasses basic principles of the rights of the child: the child's right to freedom of expression in accordance with age and maturity, protection of the best interests of the child in all matters concerning them, and the right to maintain personal relations with both parents. The second key element is the Lisbon Treaty (2009),[65] an instrument that introduced significant institutional, procedural and constitutional changes to the EU, strengthening the potential for protection of children's rights as a general objective of the EU, through the adoption of directives in the most sensitive areas of child rights (prevention of child pornography, prevention of trafficking in human beings and protection of victims of trafficking). The third pillar of the EU's strategic policy pertains to internal cooperation between Member States through the "EU Guidelines for the Promotion and Protection of the Rights of the Child"[76], while in relation to external issues the European Commission has adopted Communication Protocol on Special Position of Children so that the rights of the child could be included in all EU[87] external activities in which non-EU countries also participate. In 2011, the European Commission also adopted the EU Program on the Rights of the Child,[98] which set out key priorities for improving the law and development of children's rights policy in all EU Member States, and focusing on legislative processes that are important for the protection of children. Proceeding from the fact that the EU can legislate only in areas where it has competence in accordance with the treaties, and bearing in mind that children's rights cover several sectors, the competence of the EU is determined in each specific case. The areas of children's rights in which the EU has adopted a significant number of regulations are as follows: data and consumer protection, asylum and migration, cooperation in civil and criminal matters (*Handbook on the Rights of the Child in European Law*, 2015: 20).

The rights of the child within the European judicial system

The role of the European Court of Human Rights in protecting the rights of the child is reflected in a very broad jurisdiction. Although the Court's case law to date has shown that the largest number of petitions were filed for violations of Art. 8 of the ECHR - the right to respect for private and family life - considered from the point of view of the rights of parents and not children, cases resulting from violations of other convention provisions are not predominant, but are more clearly focused on children's rights: the right to protection from inhuman and degrading treatment (Article 3 of the ECHR) or the right to a fair trial (Article 6 of the ECHR). When the applicant is a child, the European Court of Human Rights often refers to the UN Convention on the Rights of the Child when deciding, and in some cases the Convention's principles on the rights of the child have had a significant impact on the Court's opinion (the right to a fair trial). In the case *T. v. United Kingdom* [109]:. "where a child was faced with a criminal charge and the domestic system required a fact-finding procedure with a view to establishing guilt, it was essential that the child's age, level of maturity and intellectual and emotional capacities be taken into account in the procedures followed. It is considered that the public trial process in an adult court with attendant publicity must be regarded in the case of an eleven-year-old child as a severely intimidating procedure and concluded that, having regard to the applicant's age, the application of the full rigours of an adult, public trial deprived him of the opportunity to participate effectively in the determination of the criminal charges against him, in breach of Article 6 § 1"(paragraph 82).

In other areas, the Court's approach differs somewhat from the conventional approach as, for example, in the case of freedom of expression and information, which is best illustrated by the decisions in the cases *Handyside v. United Kingdom*[1110] and *Gaskin v. United Kingdom*.[1211] In

11 10 App. no. 5493/72, 7.12.1976, paragraph 50, https://hudoc.echr.coe.int/(6.08.2020.).
12 11 App. no. 10454/83, 7.07.1989, paragraph 52-53, https://hudoc.echr.coe.int/(6.08.2020.).

the case *Handyside v. United Kingdom*, which refers to receiving information appropriate to the age and maturity of the child, in the Court's view, prohibition of the book entitled *Little Red School Book* (translated from Danish and written for school-age children, which examines social phenomena such as sexuality and drug use), imposed by the British authorities, is in line with the exception set out in the provision of Art. 10 para. 2 of the European Convention on Human Rights regarding the protection of morality. At a critical stage of development, young people could interpret certain passages of the book as an incentive for actions for which they are not mature enough and which could be detrimental to them (paragraph 49).

The case of *Gaskin v. United Kingdom* refers to a person who spent most of his childhood in an orphanage when the local authorities kept records that were confidential. When the applicant requested access to the documentation, he was denied it. The decision was justified through the guarantee of confidentiality of public records, which is necessary for the proper functioning of the social welfare service for children. The court concluded that the provision of Art. 10 of the ECHR was not breached and reiterated its interpretation that in accordance with the right to information public authorities are prohibited from denying information transmitted to an individual, but does not oblige the state to transmit that information to an individual (paragraph 52).

The extensive case law of the European Court of Human Rights also contains decisions in which it explicitly relies on the Convention on the Rights of the Child. In the case of *Maslov v. Austria* the Court has taken the view that the implementation of a measure of expulsion of juvenile offenders, in addition to protecting the best interests of the child, includes an obligation to reintegrate the child which would not be achieved by severing the child's family or social ties by expulsion. Therefore, the measure of expulsion of a minor constitutes a disproportionate interference with the right to respect for the applicant's family life (Article 8 of the European Convention on Human Rights).

As a rule, the Court of Justice of the European Union in cases involving children considers proceedings when the national court requests interpretation of primary legislation (contract) or secondary legislation (regulation, directive) from the Court of Justice of the European Union (Article 267 TFEU), which is important for an ongoing case before a national court (Handbook on the Rights of the Child in European Law, 2015: 28). With the development of the idea of promoting and protecting the rights of the child at the EU level, and despite the adoption of a number of legal measures and programs in the field of children's rights, most cases in CJEU practice so far concern children's rights in the context of freedom of movement and citizenship. While deciding regarding the abovementioned cases, the CJEU took the view that children enjoy all privileges related to EU citizenship, including the right to independent residence, social and educational rights based on EU citizenship. The CJEU case *Dynamic Medien GmbH v. Avides Media AG*[1313], which is most cited in the literature because the CJEU directly applied the UN Convention on the Rights of the Child and thus established a standard for how European law should be interpreted in relation to children. The CJEU referred to Art. 17 of the Convention on the Rights of the Child, which obliges member states to take appropriate measures so as to protect children from information and media material that endangers their well-being (paragraphs 42 and 52).

Nevertheless, in other cases, the CJEU referred to general convention principles in its decisions, especially in cases of cross-border child abduction. Namely, the rule is that the relevant EU legal instruments are to be interpreted in accordance with the provisions of the EU Charter of Fundamental Rights. In connection with the abduction of children, the provision of Art. 24 of the Charter, the content of which was clarified by the CJEU in the *Aguirre Zarraga* case and Regulation no. 2201/2003 (Bruxelles

13 [13] C-244/06. Judgment of the Court (Third Chamber)14.02.2008. https://eur-lex.europa.eu/(7.08.2020.).

II bis), is of special importance[1414]. The CJEU is of the opinion that the child's right to be heard requires that the procedure and conditions that allow the child's free expression of opinion be available, and that it take place in court (Handbook on the Rights of the Child in European Law, 2015: 85). According to the CJEU in this case, the court of the member state to which the child was taken (Germany) cannot oppose the return of the child on the grounds of violation of the right to be heard in the home country (Spain), or the execution of the court decision ordering the return of the child, because the assessment of the violation of these provisions falls within the exclusive jurisdiction of the state from which the child was taken (Handbook on the Rights of the Child in European Law, 2015: 86).

In the field of protection of children's rights, the EU is very cautious when attaching overriding importance to the Convention on the Rights of the Child, and above all in politically sensitive issues (e.g. immigration issues).[1515] Since the adoption of the EU Charter of Fundamental Rights, in cases concerning the protection of the rights of the child the CJEU has referred to its provisions which are the same or similar to the provisions of the Convention on the Rights of the Child.

2. NATIONAL FRAMEWORKS FOR PROTECTION OF THE RIGHTS OF THE CHILD

As mentioned in the introductory part of this paper, ratified international treaties are applied directly in domestic law, i.e. the laws on ratification of international treaties are listed right after the Constitution (*Official Gazette of RS*, No. 98/06). The direct application of international agreements exposes certain limitations, so it is necessary to harmonize the existing legal texts with the confirmed agreements as well as the adoption of new laws.

In the field of children's rights, the established standards are divided into the following thematic units:

- children in the family protection system;
- children in non-litigious, administrative and executive proceedings;
- inheritance rights of the child;
- children in the criminal justice system;
- children in conflict with the law;
- prohibition of discrimination against children;
- children in the education system;
- children in the health care and public health system;
- children in the social protection system (Banić, Petrović, Stevanović, 2011:6).

The Family Law of the Republic of Serbia is a reference framework for the application of standards and principles on the rights of the child. This law specifically prescribes the rights of the child, namely: the child's right to know his/her origin, the child's right to live with his/her parents, the child's right to personal relations (contact) with a parent with whom he/she does not live, the child's right to proper and complete development, the child's right to education, the child's right to freely express his/her opinion and the child's right to undertake legal affairs (Articles 59-65 of FLRS). In addition, laws in the field of labor, social and health care, information, public records, laws in the field of criminal and civil law are also significant for the exercise of the rights of the child. (Vučković-Šahović, Petrušić, 2015:69).

The exercise and protection of the rights of the child in every state requires a good legislative framework. There are regulations that are directly or indirectly significant for the rights of the child, they are distributed in the laws regulating certain areas of social relations. In the Republic of Serbia, the relationship between the legislative and factual situation is not satisfactory, bearing in mind the fact that despite the measures taken to establish an appropriate legal, institutional and strategic framework that would be harmonized with international standards in the field of children's rights, the exercise of children's rights is accompanied by certain challenges in reality.

The strategic document reflecting the state policy in relation to children is the National Action Plan for Children (2004-2015),[1616] which provided for priority measures and activities aiming to create the most favorable conditions for children's life, growing up and inclusion in society. Given the state's obligations under the Convention on the Rights of the Child, the major shortcoming of NAP was the fact that it did not cover all areas of children's rights. During 2018, the relevant ministry launched an initiative to draft a new National Action Plan for Children, which has not been applied to date, and our country does not have a unified one in the field of children's rights (Bulletin of the Center for Children's Rights, 2019: 4). Activities aimed at children are carried out in accordance with strategies for certain issues, namely: Strategies for prevention and protection of children from violence, Strategies for prevention and protection against discrimination, Strategies for education development in Serbia until 2020, National Youth Strategies (2015-2025), which contain goals directly applicable to children, while most of the remaining strategies (the total number of strategies is over sixty) have only an indirect impact on the lives of children (Golić Ružić, 2015: 11).

In strategic documents, the main directions of policy development towards children are as follows: reduction of child poverty and protection of children from the consequences of economic crises; quality education, without discrimination and inclusion of Roma children in education; better health for all children, improvement of the position and rights of children with disabilities; protection of the rights of children without parental care; protection of children from exploitation, violence, abuse and neglect; protection of children from trafficking in human beings; improving children's health and social protection; strengthening the capacity of the state to solve problems related to children's rights and increase budget for children (Vučković-Šahović, Petrušić 2015:74).

CONCLUSION

The major goal of international legal protection of the rights of the child is the establishment of adequate protection mechanisms in national law. The rights belong to the child at birth and have to be recognized in the areas of his/her human, individual, collective, civil, political, economic, social and cultural interests, in accordance with age and developmental abilities of the child. Basic questions that are always asked when the child is the center of attention are as follows: what are the rights of the child in general, what is the nature of those rights and what is their content. Essentially, the rights of the child are not different from human rights, nor is their basis different. Only individual, specific rights are different, and thus a special type of protection is different. A special attitude towards the regulation of children's rights is conditioned by the fact that children are subjects of rights, and that they cannot acquire rights and obligations until they reach certain age due to the lack of intellectual maturity and lack of life experience.

The exercise of the rights of the child in the nation state is guaranteed by the ratification of international agreements. The state is obliged to respect, protect and promote the rights of the child. The process of promoting the rights of the child implies constant activities aimed at spreading the idea of the rights of the child, including all systems of society. This means that states, in the field of children's rights, have to take certain measures through national bodies in charge of protection of children's rights, the ombudsman for children's rights, specialize judges, improve the network of social institutions, create special policies in the field of children's rights, improve education, inform children about their rights, etc.

REFERENCES

1. Agencija Europske unije za temeljna prava i Vijeće Europe (2015). Priručnik o pravima djeteta u europskom pravu, https:/fra.europa.eu, https://www.coe.int/en/web/commissioner/thematic-work/children-rights, https://echr.coe.int/
2. Bilten Centra za prava deteta (april-jun 2019), Centar za prava deteta: Beograd
3. Banić Milena, Petrović Marija, Stevanović Ivana (2011). Analiza zakonodavstva Republike Srbije iz perspektive prava deteta: Centar za prava deteta, Beograd
4. Golić Ružić Milena (2015). Drugi i treći alternativni periodični izveštaj o primeni Konvencije o pravima deteta u Republici Srbiji (2008-2014), Centar za prava deteta, Beograd
5. Cranston Michael (1991). U čemu se sastoje ljudska prava, Prava čoveka: zbornik dokumenata, Beograd
6. Herring Jonathan (2001, 2004) Family Law, Pearson Education Limited: England
7. Perović Slobodan (2004). Pravo na slobodu i prirodno pravo, Pravni život br.7-8, Beograd
8. Vučković-Šahović Nevena (2000), Prava deteta i međunarodno pravo, Jugoslovenski centar za prava deteta: Beograd
9. Vučković-Šahović Nevena, Petrušić Nevena (2015). Prava deteta, Pravni fakultet Univerziteta u Nišu: Niš
10. Winston Morton (1988), Understanding Human Rights, y: Winston M. (eds.) The Philosophy of Human Rights, Wadsworth Publishing Company: Belmont

11. Novi sporazum o saradnji između Evropske komisije i saveta Evrope o ljudskim pravima, Kancelarija Saveta Evrope u Beogradu, http://www.coe.org.rs
12. European Centre for Parliamentary Research and Documentation: Request 1407 - Violence against children, by the National Assembly of the Republic of Serbia, Request 866 Bill on Youth (Children), by Slovak National Council
13. Istraživanje br. 3-0412 „Zakon o pravima deteta", Biblioteka Narodne Skupštine Republike Srbije za potrebe rada narodnih poslanika i Službe Narodne Skupštine od 19.04.2012. godine, www.parlament.gov.rs
14. Izvod iz sudske prakse Evropskog suda za ljudska prava, Sarajevo 2001.
15. Nacionalni plan akcije za decu (2004-2015. godine), http://www.minrzs.gov.rs
16. Ustav Republike Srbije, *Službeni glasnik RS*, br. 98/06.
17. Porodični zakon Republike Srbije, *Službeni glasnik RS*, br. 18/05, br. 72/2011 i 6/15
18. European Convention on Human Rights, European Treaty Series - No. 5, http://www.echr.coe.int
19. Recommendation 874 (1979) on a European Charter on the Rights on the Child, http://assembly.coe.int
20. Prikaz Strategije SE o pravima deteta za period 2012-2015, www.cpd.org.rs
21. Povelja Europske unije o osnovnim pravima, SL 2012 C 326
22. Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007, OJ C 306.
23. Council of the European Union, *EU Guidelines for the Promotion and Protection of the Rights of the Child*, Bruxelles 2007, https://eur-lex.europa.eu/
24. Communication from the Commission to the Council, European Parliament and Social Committee and the Committee of the Regions - A Special Place for Children in EU External Action (5/2/2008 – COM (2008)
25. Zakon o ratifikaciji Konvencije UN o pravima deteta, *Službeni list SFRJ-Međunarodni ugovori*, br. 15/1990.
26. The Optional Protocol on the involvement of children in armed conflicts, *Službeni list SRJ-Međunarodni ugovori*, br. 7/2000
27. The Optional Protocol on the sale of children, child prostitution and child pornography, *Službeni list SRJ-Međunarodni ugovori*, br. 7/2000
28. Optional Protocol to the Convention on the Rights of the Child on a communications procedure, A/RES/66/138, http://www.ohchr.org
29. Universal Declaration on Human Rights, 1948,
30. http://conventions.coe.int/Treaty/EN/Treaties/Html/058.htm
31. Međunarodni pakt o građanskim i političkim pravima,*Službeni list SFRJ-Međunarodni ugovori*, br. 7/1971
32. Međunarodni pakt o ekonomskim, socijalnim i kulturnim pravima, *Službeni list SFRJ-Međunarodni ugovori*, br. 7/1971

33. Situaciona analiza dece i adolescenata u Srbiji 2019, UNICEF, Rеđina De Dominićis, direktorka kancelarije u Srbiji

34. Mišljenje Zaštitinika građana na Nacrt zakona o pravima deteta i zaštitniku prava deteta, Beograd 2019, https://www.pravadeteta.com/

35. Predlog strategije u oblasti prevencije i zaštite dece od nasilja za period od 2020-2023, Beograd 2020, https://www.pravadeteta.com/

36. Maslov v. Austria, App. no. 1638/03, 23.06.2008, https://hudoc.echr.coe.int/

37. T. v. United Kingdom, App. no. 24724/94, 16 December 1999, https://hudoc.echr.coe.int/

38. Handyside v. United Kingdom, App. no. 5493/72, 7.12.1976, https://hudoc.echr.coe.int/

39. Gaskin v. United Kingdom App. no. 10454/83, 7.07.1989, https://hudoc.echr.coe.int/

40. C-244/06, *Dynamic Medien GmbH v. Avides Media AG* 14.02.2008. https://eur-lex.europa.eu/

41. C-491/10 PPU, *Joseba Andoni Aguirre Zarraga v. Simone Pelz*, 22.12.2010. https://eur-lex.europa.eu/

42. Case C-540/03 *European Parliament v Council of the European Union*, 27.06. 2006. https://eur-lex.europa.eu/

THE LEGAL FRAMEWORK FOR CRIMINAL PROSECUTION OF THE PROHIBITION OF INCITEMENT AND INSTIGATION OF INEQUITY, HATRED AND INTOLERANCE IN THE REPUBLIC OF SERBIA

Vladimir Đurić, PhD[1]
Institute of Comparative Law, Belgrade, Serbia

Abstract*:* This paper explores the legal framework for criminal prosecution of the prohibition of incitement to and instigation of inequity, hatred and intolerance in the Republic of Serbia. The author provides an overview and analysis of the legal framework and points to the dilemmas and controversies that the criminal prosecution may be faced with in relation to the said prohibition. The conclusion is that the provisions regulating that prohibition do not have systemic quality and that the criminal prosecution of that prohibition consequently can have limited effects.

Keywords: inequity, hatred, intolerance, criminal prosecution

INTRODUCTION

The prohibition of incitement and instigation to hatred and intolerance, or hate speech as it is called in many legislations and scientific papers, provokes a number of theoretical and legal controversies. The most common dilemmas regarding hate speech are manifested when it comes to relationships, in fact conflicts, between freedom of speech and hate speech, as well as in the scope and range of its legal incrimination. In that sense, it is clear that, first of all, legislators can face the controversies and dilemmas that accompany this prohibition in its normative regulation. In comparative law, there are two approaches to the regulation of this prohibition. According to the first approach, the goal of prohibiting hate speech is to protect public order and it exists in the legislations of Great Britain, Israel and Australia, and a different approach finds the basic goal of such a prohibition in the protection of human dignity, which is the characteristic of the legislations of Canada, Denmark, France, FR Germany and

1 v.djuric@iup.rs

the Netherlands (Coliver, 1992: 363-366). The feature of the first approach is a more restrictive application of legal norms, while the characteristic of the second approach is the prescription of not only criminal, but also civil sanctions and more frequent application of the above mentioned in practice.

Courts may also face various controversies regarding the prohibition of inciting and provoking hatred and intolerance in resolving specific disputes related to it. This refers both to the constitutional courts that can deal with the issue of this prohibition in different forms within their jurisdiction and whose approach to this issue in comparative law is very far from any uniformity (Rosenfeld, 2003: 1523), and to criminal courts that often face the dilemmas arising from the legal incrimination of this prohibition.

The aim of this paper is to point out possible controversies and dilemmas that accompany the criminal law elaboration of this institute or, more precisely, which arise from its normative regulation in the Republic of Serbia.

THE CONSTITUTIONAL REGULATION OF THE PROHIBITION ON INSTIGATION AND INCITEMENT TO INEQUALITY, HATRED AND INTOLERANCE IN THE REPUBLIC OF SERBIA

The banning of provoking and inciting inequality, hatred and intolerance is one of the most important prohibitions provided by the Constitution of the Republic of Serbia (Official Gazette RS, 98/2006). It is normatively expressed in several provisions of the Constitution, which makes it the most frequently mentioned constitutional prohibition that affects the enjoyment and expression of many constitutional rights and freedoms.

Basically, the Constitution explicitly prescribes the prohibition of incitement to hatred and intolerance in Article 49. According to this Article, any provocation and incitement to racial, national, religious or other inequality, hatred and intolerance is prohibited and punishable. By linguistic interpretation of the presented constitutional provision, firstly it can be determined that it is not a prohibition, since closer regulation, in all its aspects, is left to the free assessment of the legislator, but the prohibition for which the Constitution explicitly prescribes *punishment*, which indicates its primary criminal, penal law, regulation and protection. The essence of the prohibited activities is *provocation* and *instigation*, which may indicate that the prohibition is violated both by the occurrence of a consequence, i.e. by the creation of hatred and intolerance as well as by the very acts that may lead to such a consequence. It is important to stress that the Constitution prohibits and orders the punishment of *every* activity that may have or lead to such consequences.

Inequality, hatred and intolerance, observed in the order listed by the constitution-maker, are not equally legally determined categories, but according to the presented provision of the Constitution, they are equally socially dangerous. Legally speaking, inequality has its clear meaning, while hatred and intolerance are categories that somewhat escape precise legal definition.

Finally, the consequence of this constitutional prohibition does not have to be embodied only in racial, national and religious, but also *in every other* inequality, hatred and intolerance. Since the object of racial, national and religious hatred and intolerance are primarily, but not necessarily and exclusively, *groups* that share certain racial, national and religious characteristics, it is clear that the basis of the *second* is inequality, hatred and intolerance, which refers both to culture, gender, sexual orientation, etc. as well as to vulnerable social groups determined by those characteristics.

A systematic interpretation of the provisions of the Constitution leads to the conclusion that, according to Article 202, paragraph 4 of the Constitution, deviation from that prohibition is not allowed even during the state of emergency or war, which, according to some authors, classifies it as an absolutely protected right (Pajvančić, 2009: 66). In fact, this is not an absolutely protected right, but equality and tolerance are absolutely protected and are some of the basic values of the constitutional order of the Republic of Serbia. Such a conclusion is indicated not only by the absolute protection that those values enjoy, but also by the constitutional solutions regarding the obligations of the state to encourage understanding, appreciation and respect for differences by measures in education, culture and public informing (Article 48) as well as to encourage the spirit of tolerance and intercultural dialogue and take effective measures to promote mutual respect, understanding and cooperation in the field of education, culture and informing (Article 81). Also, the constitutional provisions according to which inciting and instigating racial, national and religious inequality, hatred and intolerance, in various ways, is the prescribed basis for banning religious communities (Article 44, paragraph 3), for preventing dissemination of information and ideas through the media (Article 50, paragraph 3) and for prohibiting various types of associations (Article 55, paragraph 4) lead to the conclusion that equality and tolerance are some of the basic values of the constitutional order of the Republic of Serbia.

Bearing in mind the constitutional regulation of the prohibition of inciting and encouraging racial, national, religious and other inequality, hatred and intolerance, it could be concluded that in the Republic of Serbia this prohibition has primarily the function to protect public order. However, the above mentioned constitutional provisions are not devoid of certain open issues, especially in the context of the criminal law regulation of this prohibition.

In principle, the first of the open issues regarding the constitutional prohibition of inciting and encouraging racial, national, religious and other inequality, hatred and intolerance stems from the differences between the normative regulation of the prohibition in the Constitution and relevant international acts. Namely, the constitutional regulation of this prohibition contained in Article 49 and its linguistic interpretation contradict to some extent the international legal framework for the prohibition of hate speech with regard to the consequences that such activities cause and that are required for their prohibition. Namely, Article 20, Paragraph 2 of the International Covenant on Civil and Political Rights requires Member States to prohibit any advocacy of national, racial or religious hatred *that constitutes instigation to discrimination, hatred or violence*. Thus, unlike the Constitution, the International Covenant on Civil and Political Rights stipulates that the consequence of hate speech must be reflected in incitement to discrimination, hatred or violence.[2] A slightly different definition is contained in the International Convention on the Elimination of All Forms of Racial Discrimination, which in Article 4 (a) requires all parties to criminalize *all dissemination of ideas based on racial superiority or hatred, incitement to racial discrimination, as well as all the acts of violence or incitement to such acts against any race*, or group of persons of another color or ethnic origin as well as providing any assistance to racist activities, including its financing. Thus, the Convention, unlike the Covenant, requires the prohibition of those activities, whose consequences are not reflected in discrimination and violence, but also in dissemination of all ideas based on racial superiority (Mendel, 2010: 9).[3]

Keeping in mind the differences that exist in the stated definitions and especially the differences between the content of that prohibition and the consequences required by the Constitution of Serbia

2 Also, the UN Human Rights Committee in its General comment no. 11 explicitly specifies that this is a ban on advocacy, regardless of whether the advocacy has internal or external goals (Human Rights Committee, 1983).

3 By the way, the Committee on the Elimination of Racial Discrimination is of the opinion that the presented article of the Convention includes four types of activities: 1) dissemination of ideas based on racial superiority or hatred, 2) incitement to racial hatred, 3) acts of violence and 4) incitement to such acts (Committee on the Elimination of Racial Discrimination, 1993).

and the International Covenant on Civil and Political Rights, it is important to stress that according to international law, what states are *required* to prohibit in order to ensure equality is not necessarily identical to that what they are *allowed* to ban in order to meet that goal (Mendel, 2010: 2), and that the clear point of international bodies monitoring the implementation of international human rights treaties is that, in case the states require a higher degree of prohibition, they cannot invoke the provisions of international treaties to justify non-compliance with obligations under domestic law.

Regarding the consequences of violation of that prohibition, but also the activities that lead to it, there is an open question of how they should be interpreted and determined. Inequality is a legal term that has its relatively clear meaning. On the other hand, another open question is the way in which the terms "hatred" and "intolerance" should be understood, especially in the context of *incitement.* In general, the answer to the question of what is understood by the term "incitement" is extremely complex in international law, so it is not surprising that the UN High Commissioner for Human Rights has expressed concern that the term does not have a clear definition in international law (United Nations High Commissioner for Human Rights, 2008: par. 24). Also, since hatred, according to the opinion of international treaty bodies, is more a state of mind rather than an act, which as such is classified as an opinion (Mendel, 2010: 9) (and this may be all the more related to intolerance), and the prohibition of incitement to a certain state of mind, or opinion can be quite controversial. Since the Constitution prescribes not only the prohibition, but also the punishment of instigation and incitement to racial, national, religious or other inequality, hatred and intolerance, the question may be asked whether the consequences of violation of the prohibition, but also the activities leading to them, should be interpreted and determined in accordance with the criminal law definition of those terms. However, it seems that simply applying the criminal law understanding of certain terms that describe the consequences of the prohibition, but also the activities that lead to them, is not sustainable in entirety. Namely, the constitutional notion of instigation cannot be paralleled in all respects with the criminal law notion of instigation since according to the criminal law concept instigation is always committed *in relation to a specific criminal offence*, and the instigator must be aware of the causal link between the act of instigation and the decision to commit a criminal offence as well as of all *the essential features of that act* (Stojanović, 2006: 245) and hatred and intolerance, of course, are not criminal offences in themselves. The constitutional notion of instigation might be related to the notion of propaganda. Propaganda consists of presenting or spreading certain facts (false or true) or ideas in order to influence other people, so that they accept those ideas and, possibly, take certain actions necessary to achieve propaganda goals, but which can also be criminal in their character. If propaganda also contains agitation (invitation) to commit criminal acts, then it gets closer to the criminal law notion of instigation. But it also differs from it since instigation is directed at a certain crime, which is not the case with propaganda (Jovičić, 2006:228). Of course, even in this context, it is clear that hatred and intolerance, in themselves, are not criminal offences (Lazarević, 2006: 783).[4] In international law, incitement has been considered in the context of causality by some contracting authorities although it is pointed out in the relevant comments that there cannot be any equality between incitement to a particular act and the cause of such an act, so the most important standard for assessing whether certain statements incite hatred is the context in which they are uttered, and hatred inevitably encounters some kind of "tangible manifestation" (Mendel, 2010: 6-9). Also the notion of "provocation", at least in the domestic criminal law literature has not been deprived of certain dilemmas, especially regarding the question of whether provocation could be indirectly done by "manifestation" (Ćirić, 2008: 153). However, by that we already approach the issue of criminal elaboration of the constitutional prohibition of incitement and instigation to racial, national, religious and other hatred and intolerance.

4 In the comments of the domestic criminal legislation, it is pointed out that hatred is a mental state which negatively values the object of hatred, while intolerance means a state of mistrust, a feeling of intolerance and repulsion (Lazarević, 2006:783)

CRIMINAL PROHIBITION OF PROVOKING AND INCITING HATRED AND INTOLERANCE

As pointed out, the punishabilty of violating the prohibition prescribed in Article 49 of the Constitution primarily refers to criminal protection. The Criminal Code (Official Gazette RS, 85/2005, 88/2005 - ispr., 107/2005 - ispr., 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016, 35/2019) provides for two criminal offences that correspond to the aforementioned constitutional prohibition and that sanction the violation of equality (Article 128 of the Criminal Code) and the prohibition of inciting national, racial and religious hatred and intolerance (Article 317 of the Criminal Code). Article 128, paragraph 1 of the Criminal Code stipulates the imprisonment of up to three years for whoever, due to national or ethnic affiliation or absence of such affiliation or difference in political or other conviction, disability, sex, language, sexual orientation, education, social status, social origin, property status or other personal characteristic, denies or restricts the right of man and citizen guaranteed by the Constitution, laws or other legislation or general acts or ratified international treaties or pursuant to such difference grants another privileges or benefits. Article 317, paragraph 1 of the Criminal Code stipulates that whoever instigates or exacerbates national, racial or religious hatred or intolerance among the peoples and ethnic communities living in Serbia shall be punished by imprisonment of six months to five years. Paragraph 2 of the same Article stipulates that the offender shall be punished by imprisonment of one to eight years if the act is committed by coercion, maltreatment, compromising security, exposure to derision of national, ethnic or religious symbols, damage to other persons, goods, desecration of monuments, memorials or graves, while paragraph 3 stipulates more severe prison sentences if the offence is committed by abuse of position or authority, or if these offences result in riots, violence or other grave consequences to co-existence of peoples, national minorities or ethnic groups living in Serbia.

While it is clear, on the one hand, that the normative regulation of the criminal offence of violation of equality fully complies with the constitutional requirements prescribed in Article 49 of the Constitution and its systematic interpretation regarding *the prohibition of inciting inequality*, because it sanctions all forms of violation of equality on prohibited grounds of discrimination,[5] on the other hand it is not clear whether incitement to such a violation is also criminally sanctioned, unless the constitutional notion of "incitement" could be equated with the criminal notion of "instigation", which is, as we have already pointed out, a special dilemma.

The criminal offence of prohibition of instigation to national, racial and religious hatred and intolerance under Article 317 of the Criminal Code does not correspond in all respects to the requirements of Article 49 of the Constitution. First of all, it incriminates incitement and instigation to exclusively national, racial and religious hatred and intolerance, while the Constitution in Article 49 explicitly refers to other hatred and intolerance which should also be punishable. Also, the criminal offence is reduced only to the hatred and intolerance *that exist among the peoples and ethnic communities living in Serbia.* In other words, if it concerns peoples or ethnic communities that do not live in Serbia, despite the existence of an act of execution, the criminal offence does not exist (Stojanović, 2020: 969). Finally, but perhaps most importantly, the mention of "peoples and ethnic communities living in Serbia" in the legal description of that criminal offence does not correspond to the relevant constitutional and legal provisions that deal with the status of various national and ethnic communities in Serbia and minority rights. Namely, according to the relevant provisions of the Constitution, as well as to the legal definition of the term *national minority* contained in the Law on Protection of Rights and Freedoms

5 National or ethnic affiliation, race or religion or due to absence of that affiliation or due to differences in political or other beliefs, gender, disability, sexual orientation, gender identity, language, education, social status, social origin, property status or other personal characteristics

of National Minorities (Official Gazette FRY,11/2002, Official Gazette SM, 1/2003, Official Gazette RS, 72/2009, 97/2013, 47/2018), only the Serbs have the status of ethnic people in the Republic of Serbia while all other groups of citizens, numerically sufficiently representative and, although representing a minority of the population, having a long and strong bond with the territory of the state, characterized by special features specified in the Law and whose members care about maintaining their collective identity, are considered national minorities. Starting from the above remark, and in the context of the legal definition of the criminal offence of inciting national, racial and religious hatred and intolerance, it follows that, for example, different ethnic communities of migrants "living" in Serbia that do not have the officially recognized status of a national minority could be the passive subject of this offence, but not other ethnic communities that do not "live" in Serbia, which was certainly not the intention of the constitution-maker who prescribed the punishment of incitement to such hatred or intolerance.[6]

There are some other dilemmas regarding the constitutional prohibition of incitement and instigation to racial, national, religious or other inequality, hatred and intolerance and the criminal offence of prohibition of incitement to national, racial and religious hatred and intolerance specified in Article 317 of the Criminal Code. Namely, Article 54a of the Criminal Code stipulates that if the criminal offence was committed out of hatred due to race or religion, national or ethnic origin, gender, sexual orientation or gender identity of another person the court will take it as an aggravating circumstance, *unless it is prescribed as a criminal offence.* Regarding that, the following question can arise: what is the connection between the criminal offence of prohibition of instigation to national, racial and religious hatred and intolerance and the aggravating circumstance that the offence was committed out of hatred due to certain affiliation. The relevant comments emphasize that the ratio of the provision of Article 54a is in providing stronger criminal protection to certain social groups (Stojanović, 2020: 278), but, on the other hand, it is also stated that the hatred referred to in this provision of the Criminal Code entered the legal description of the act from Article 317 of the Criminal Code as its central element (Stojanović, 2020: 279). In this sense, although it could be inferred from the linguistic interpretation that hatred as an incentive to committing the criminal offence of instigation to national, racial and religious hatred and intolerance should be treated as an aggravating circumstance, the relevant comments point out that, while imposing the sentence, the prohibition of double assessment should be applied in the case if a criminal offence, specified in Article 317 of the Criminal Code, was done out of hatred. Such an attitude is based on the interpretation according to which the act from Article 317 of the Criminal Code is protected by a good group, while the provision specified in Article 54a of the Criminal Code aims at increased criminal protection of the individual as a member of a group (Stojanović, 2020: 279). In any case, it seems that the existence of both provisions – the one specified in Article 317 of the Criminal Code and the other one stated in Article 54a may lead to significant confusion.

To make the matter even more systemically unclear, Article 344a of the Criminal Code stipulates that the criminal offence of violent behavior at a sports event or public gathering, among other things, may be committed by behavior or slogans that provoke national, racial, religious, or *some other hatred or intolerance* whereby other hatred or intolerance is incriminated, but *only such as implies some discriminatory basis* and *only as a result of violence or physical confrontation with the participants*. On the other hand, Article 174 of the Criminal Code prescribes the criminal offence of violation of reputation due to racial, religious, national, but *also other affiliation*, which consists of public exposure to the public humiliation of *a person or a group* due to such an affiliation!

6 In this context, although partially correct, the remark contained in some relevant comments of the Criminal Code that the notion of *people* should be interpreted broadly in order to include national minorities, seems insufficient, since the legal description does not refer to national minorities, and that, given that a national minority is "always part of a people who do not live in their home country" (although this may not necessarily be the case), provoking and inciting hatred or intolerance towards the national minority seems to involve the people whose part the national minority is (Stojanović, 2020:969).The problem with the legal definition of this act is contained, however, in the fact that inciting and instigating hatred or intolerance towards the native people of certain national minorities from Serbia could remain outside the framework of legal incrimination!

Bearing in mind the presented dilemmas and the lack of systemic quality of the solutions contained in the Criminal Code, the question arises as to whether the criminal elaboration of the constitutional order of prohibition from Article 49 of the Constitution is in all respects appropriate, more precisely whether it is appropriate to raise the issue of the constitutionality of legal provisions. Moreover, if the constitutional prohibition of incitement and instigation to inequality, hatred and intolerance has the function to protect the objective order, as indeed it does, then the question arises as to whether the Constitutional Court should *ex officio* initiate proceedings to review the constitutionality of the disputed provisions of the Criminal Code.[7]

But this question is not only raised in relation to the Criminal Code. For example, the Law on Rehabilitation (Official Gazette RS, 92/2011) stipulates that *by law*, persons whose rights and freedoms have been violated until the day this Law came into force, and who have been punished by a court or administrative decision, among other things, for a criminal offence specified in Article 2 of Law on Prohibition of Instigation to National, Racial and Religious Hatred and Discord (Official Gazette SFRY, 36/45 and Official Gazette of the Federal People's Republic of Yugoslavia, No. 56/46) shall be rehabilitated, if the act has been done only by writing. If the prohibition on instigation to national, racial and religious hatred is one of the most important prohibitions in the Constitution of the Republic of Serbia, then it is not clear why the legislator deviated from it in the Law on Rehabilitation, regardless of the fact that he reduced rehabilitation only to persons who have committed criminal offences by the act of writing and there is an open question whether the Constitutional Court of Serbia should cancel such a provision. In a broader sense, it is clear that the Law on Rehabilitation extends to a period when the rule of law, and consequently human rights and freedoms were not fully guaranteed. On the other hand, the question arises as to why the legislator would include something that is punishable even in the current concept of liberal democratic constitutionality under the correction of human rights violations.

CONCLUSION

The constitutional prohibition of incitement and instigation to inequality, hatred and intolerance specified in Article 49 of the Constitution protects the fundamental values of the constitutional order of the Republic of Serbia and its function is the protection of public order. Its definition in the text of the Constitution exceeds the standards of banning hate speech contained in certain international treaties. On the other hand, its normative elaboration in the Constitution itself, but also in certain laws, especially in the Criminal Code, does not have a systemic quality. Therefore, there are a number of dilemmas and controversies regarding this prohibition, which consequently means that criminal prosecution of its violation may have limited effects. Those are dilemmas regarding the issue of which provision is relevant to determine the existence of a violation of this prohibition; how the terms "provocation", "instigation", "hatred" and "intolerance" should be interpreted; who should be considered a passive subject of the criminal offence of prohibition of instigation to national, racial and religious hatred and intolerance; what should be the relationship between the incrimination of this crime and the aggravating circumstance that proves that any crime was committed out of hatred and, last but not least, the dilemma as to whether the Constitutional Court, since this prohibition has the function to protect public order, should ex officio initiate procedures to control the constitutionality of laws that do not implement it, or do not fully respect it.

7 This issue also refers, to some extent, to the possibility for the constitutional court to control the omission of the legislator (Đurić, 2013: 609-624), (Ustavni sud, 2011).

REFERENCES

1. Coliver, S. (1992). Hate Speech Laws: Do They Work? In: S. Coliver (Ed.), *Striking a Balance: Hate Speech, Freedom of Expression and Non-Discrimination*, Essex, United Kingdom, University of Essex
2. Committee on the Elimination of Racial Discrimination, (1993). General Recommendation XV, Report of the Committee on the Elimination of Racial Discrimination, 2, UN Doc A/48/18
3. Ćirić, J. (2008). Sloboda govora i govor mržnje – krivičnopravna regulativa, In: Zbornik Usaglašavaje krivičnog zakonodavstva sa Ustavom Srbije, Beograd: Udruženje za krivično pravo Srbije
4. Đurić, V. (2013). Kontrola ustavnosti nečinjenja (propuštanja) zakonodavca, *Pravni život* IV/12, 609-624.
5. Human Rights Committee. (1983). General comment No. 11: Article 20, Downloaded June 6, 2020
6. http://www.ohchr.org/Documents/Issues/Opinion/CCPRGeneralCommentNo11.pdf
7. Jovičić, J. (2006). Krivična odgovornost i kažnjivost podstrekača u našem krivičnom zakonodavstvu, In: S.Tabaroši (Ed.) *Razvoj pravnog sistema Srbije i harmonizacija sa pravom EU- prilozi projektu*, Beograd: Pravni fakultet Univerziteta u Beogradu
8. Lazarević, LJ. (2006). *Komentar Krivičnog zakonika Republike Srbije*, Beograd : Savremena administracija.
9. Mendel, T. (2010). Hate Speech Rules under International Law, 1-10, Downloaded June 6, 2020
10. http://www.law-democracy.org/
11. Pajvančić, M. (2009). *Komentar Ustava Republike Srbije*, Beograd: Konrad Adenauer Stiftung.
12. Rosenfeld, M. (2003). Hate Speech in Constitutional Jurisprudence: A Comparative Analysis. Cardozo Law Review, 24, 1523-1567
13. Stojanović, Z. (2006). *Krivično pravo – opšti deo*, Beograd: Pravna knjiga.
14. Stojanović, Z. (2020). *Komentar Krivičnog zakonika*, Beograd: Službeni glasnik.
15. United Nations High Commissioner for Human Rights (2008). Study compiling existing legislations and jurisprudence concerning defamation of and contempt for religions, UN Doc. A/HRC/9/25
16. Ustavni sud Srbije, Problem zakonodavnih pravnih praznina (propusta) u ustavnosudskoj praksi, Upitnik za 14. Kongres Konferencije evropskih ustavnih sudova (Questionnaire on the topic "Problems of Legislative Omission in Constitutional Jurisprudence" for the XIVth Congress of the Conference of European Constitutional Courts, May 22-29 2011), 1-29, Downloaded June 6, 2020
17. http://www.confeuconstco.org/reports/rep-xiv/report_Serbian_se.pdf

ARCHIBALD REISS'S CRITIQUE OF SERBIAN POLITICAL ELITES: MORAL DECAY AND INSTITUTIONAL DEFICIENCIES OF POLITICAL ORDER AND ITS PRACTICE IN SERBIA AFTER THE GREAT WAR

Dejan Vuk Stanković, PhD[1]
Teacher Education Faculty, University of Belgrade, Serbia

Abstract: *Archibald Reiss claims that moral decay of political elites, the lack of genuine patriotism, disrespect to war heroes, morally and intellectually questionable scientific and educational elites along with widespread political corruption are almost fatal deficiencies of political order and society in Serbia after The Great War. Although Reiss's considerations were critical and realistic, he proposed substantial corrections of moral codes and practices of the Serbian post-war political as well as intellectual elites. His propositions fluctuated from the glorification of virtues of a Serbian common man and warrior to neutralization of morally and culturally adverse influences from the West. Archibald Reiss's views of political, national, and cultural patterns in Serbia show a great deal of overlap with the standpoint of the famous legal and political theorist Slobodan Jovanovic. Reiss's warnings and advice are meaningful and relevant today and represent his lasting and vivid legacy.*

Keywords: Archibald Reiss, moral decay, lack of patriotism, political corruption, questionable intellectual elites.

INTRODUCTION

Archibald Reiss had a significant role in the Serbian society in the post WW I era. Among many things he did for Serbia and the Serbs, he left his political testimony and moral reflection over conditions in the Serbian society, especially about the political actors, institutions, and political culture and practice.

1 dejan.vuk.stankovic@gmail.com

His insights are frank, open-minded, highly critical, strict, precise, and well-intentioned. Most of all, as many researchers have pointed so far, Reiss's insights in the social and moral habitus of the Serbian society, as well as the social and political elite, are relevant today.

The set of Reiss's insights were exposed in a posthumously published short book, "Listen, Serbs". The book was written in 1928. The first edition waited decades to be published. "Listen, Serbs" got its first edition in 1997.

As the title suggests, this small book is the warning and imperative. A warning always comes out of the full awareness of the specific situation when someone is in jeopardy. On the other hand, the urgent tone in the title of Reiss's book indicates that warning implies what the Serbs should do to overcome their own political mistakes and false beliefs.

In the preface of his book, Reiss clearly describes his approach. His primary aim is to discover the truth about the social and moral virtues and deficiencies of the Serbian society.

Reiss's commitment to truth is presented in the following quotation: "I will not hide anything important from what I saw, because a true friend is not the one who flatters you, but the one who tells you the truth, the whole truth" (Rajs, 2006: 2).

Reiss was completely aware that the moral and political flaws of the Serbian society and politics might be fatal to it. He noticed the extent of influence of the Serbian moral and political weaknesses in their community: "Some of your shortcomings, if you do not eliminate them, will be fatal to your nation" (Rajs, 2006: 2).

Given the fact Archibald Reiss participated and played an active role in the state administration, his theoretical stance about politics, morality, and society is like the stance of the observer who is the actor of a process that he observes.

Also, Reiss's analysis is not uttered in the form of a scientific system. It is a set of direct observations and critical judgments. It encompasses description, explanation, and critical assessment of the political events, social processes, and political and social actors. As it was pointed out in sociological literature, Reiss made a concise and fruitful overview of political values, moral orientations, and psychological profiles of all social strata in Serbia in the post WW I era (Šuvaković, 2012: 354).

The Reiss's sociological portrait of the Serbian society was complete. He considered social status, moral flaws, and virtues of the social strata: peasantry, intellectuals, public officials and administration, soldiers, military officers, and the wounded or handicapped soldiers.

Among many moral as well as political flaws, moral decay of political elites, a considerable level of political partisanship, the lack of genuine patriotism, disrespect to war heroes, morally and intellectually questionable scientific and educational elites along with widespread political corruption are almost fatal deficiencies of political order and society in Serbia after The Great War.

In his views about the political, moral, and cultural shortcomings of intellectual and political elites, Archibald Reiss was very close to the famous law and political theorist Slobodan Jovanovic. It might be noted that there is a significant level of similarity between these two scientists and public intellectuals. The relevance of their profound and well-grounded insights is presented even today. This circumstance suggests that the warning tone of their writings and pessimistic standpoint were justified.

This paper will have three parts. In the first part of it, I am going to expose Reiss's moral and political objections about the political and ethical shortcomings of the Serbian society. The second part of the

work will be focused on Slobodan Jovanovic's moral and political objections about the political and cultural patterns in Serbia. Also, after the comparison of Reiss's and Jovanovic's writings, the relevant similarities between them will be singled out and discussed. In the concluding part of this work, it will be pointed out what the main contributions are of Reiss's analysis of moral and political patterns and habitus in Serbia of his time.

REISS'S INTERPRETATION OF SOCIAL AND MORAL DEFICIENCIES AND VIRTUES IN SERBIA BETWEEN TWO WORLD WARS

After the heroic victory over enemies in the World War I and the unification with Croats, Slovenians, and other nations in one state, Serbia became the most influential political community in the first Yugoslavia. Despite the legacy of epic and majestic war victory, new political and social circumstances posed a new challenge for political elites and society as a whole. It was evident that unique circumstances will clearly show moral and civic virtues, but also the shortcomings of the Serbian culture, primarily political and intellectual elites.

Although he devoted much more attention to the analysis of morals and shortcomings of the Serbs, Reiss was utterly aware of their social and moral virtues.

Patriotism, honesty, hospitality, democratic manners, egalitarianism, and pride are the most significant and widely spread virtues of the Serbian society. Those moral excellences belong mostly to the peasantry. The peasantry was the morally healthiest part of the Serbian community.

In the eyes of Archibald Reiss, the peasantry had only two significant flaws: the lack of industry and commitment in their primary economic activity – agriculture and a strong inclination to leave home and land and to live in big towns and cities.

Unlike peasantry, public officials and administration, along with intellectuals, are burdened with various moral and political deficiencies that might be fatal to the Serbian society and state.

The list of moral and social shortcomings is very long, and it is made very precisely.

The first moral flaw relevant to politics is morally inconsistent relations towards war enemies.

Despite war hostility, the Serbs often enable their enemies to use their economic resources and gain a huge amount of profit. The post-war economic cooperation between the Serbs and Germans or Hungarians shows how the Serbs can easily forget their sufferings and national tragedy. This kind of oblivion is a clear example of the disrespect to their own victims and war efforts. The tendency mentioned above ruins the core of the nation's self-respect. "God knows how much you suffered in the war with the Austrians, Hungarians, and Germans, how much they plundered your poor country, how many of your best brothers and sisters were tortured and killed because they were patriots… Thousands and thousands of Germans, Viennese, and even Budapesters come peacefully to acquire wealth, and you allow it" (Rajs, 2006 :11).

Along with the mentioned moral flaws goes one more similar. An inconsistent relation to previous western enemies is connected with uncritical and blind imitation of western values and practices: "The representatives of the same Germany that was your ruthless enemy are celebrated by the "flower" of your capital's intelligence, which is proud to be modern" (Rajs, 2006: 11).

At the same time, the Serbian elites show the high-level of negative emotions towards wealthier and more prosperous nations. Jealousy and envy are two dominant emotions in communication with more successful nations and their representatives.

Reiss noted that within the elite, there are contradictory emotions. Serbian intellectual, as well as the political elite, has affective oscillation that ranges from the uncritical glorification of more successful foreigners to envy and jealousy that is often felt very strongly towards them. One of the examples of this tendency in the reaction is intense feeling of xenophobia that is directed towards the successful people from abroad: "Those among you who would like to be considered the ruling class are xenophobes and, what is worse, their xenophobia is not a consequence of excessive nationalism, but strange envy. You are jealous of more educated, elegant, and advanced strangers than you. It is unbearable for them when they have to admit that these people are above them. Then they hate them, despise them, and if it doesn't pay to drive them away, they find all possible ways to persecute them" (Rajs, 2006: 12)

An unbalanced, irrational, and disoriented attitude towards more powerful nations is an obstacle to a clear picture of friends and opponents in the international arena.

Reiss also noted that intellectuals are obsessed with external omens of status and power. They prefer formal education and honor of university position over knowledge and personal and social responsibility. For the Serbian intellectuals, as Reiss saw them, it is more important to have social influence and power over moral autonomy and conscience.

Scientific research and knowledge are not the top priority. The spirit of scientific research and critical reasoning is not bolstered and encouraged in communications with students. Strong repulsion in intellectual circles is also felt towards every individual who stands out from the average with his dedication, responsibility, work, and talent. Morally and intellectually exceptional personality is controversial and is the subject of suspicion of people of average moral and intellectual qualities.

Intellectual superficiality, along with a lack of moral consciousness dominate the Serbian universities, despite the fact that they are found to serve an entirely different purpose. Instead of promoting the spirit and practice of meritocracy, the Serbian intelligentsia bolsters averageness and detests anybody capable of elevating from the mediocre mentality in Serbia: "Noble society" thus does not allow any of its members to rise above the average. By all means, it tries to prevent the path of the one who dares and wishes to step out of its ranks. Therefore, the real intellectuals of this country, and there are many of them, do not succeed in Serbia, so they leave the fight discouraged. That is why the most important positions in the administration and elsewhere are most often occupied by people of no value. That is why your administrative staff is clumsy" (Rajs, 2006: 13).

The stagnation of society is an inevitable and harmful consequence of the prevailing moral "climate" in the society. However, Reiss makes critical remarks of the political morality of the Serbian intellectual and political elite on its attitude towards the state, laws, and fundamental moral and political values appropriate to democracy.

Avarice, the propensity to corruption along with the capability to instigate political and value cleavages in society, are the significant shortcomings of the Serbian intellectuals that directly refer to politics and the public sphere. The propensity to corruption could be best seen in the obsession with money. The vast majority of the Serbian intellectuals are greedy and morally questionable in their search for money.

The intense obsession with money puts aside any social or moral virtue. When money is at stake, neither patriotism nor honesty matters: "Since it is driven by profound feelings, "intelligence" kneels

down in front of the cash. The more money someone has, no matter how dishonorably acquired, the more they respect him and, at the same time, envy him. The "king of money" rules your intelligence. According to it, a man can do anything provided there are many banknotes in the pocket. Honor is an unknown value at the "intelligence" stock market. An honorable man is considered a fool, and only the one who knows how to turn events to his advantage is appreciated. Naturally, patriotism does not go with such feelings. Therefore, this beautiful virtue is completely lacking in your "intelligence". What it wants to plant as patriotism is just pure envy of others. Many members of the "intelligence" would coldly sacrifice freedom, and the survival of their country, if it were beneficial to them" (Rajs, 2006:22).

Besides these moral and social flaws, the intellectuals in Serbia have a complex of superiority. They simply regard themselves as intellectually, morally, and politically "higher" than the rest of the society. "When people from the city gain some prosperity and come into contact with a more refined life, they are usually inclined to consider themselves higher than people from the countryside, who live simply. It was much worse with your young people after returning from abroad. They considered themselves superior. They contemptuously called others — those who did not have a university degree or some similar paper — peasants. And they gave themselves that ridiculous common name "intelligence". These people of poor spirit do not realize that true intelligence is not acquired only through studies, even the highest ones. True intelligence is a natural gift, and an ordinary peasant can be a hundred times more intelligent than a university student or professors with half a dozen degrees" (Rajs, 2006: 9).

Almost fatally and wholly alienated from society, the intellectuals sooner or later, become prone to corruption. Such moral and social constellation establishes a morally decadent value system. The ruling value system appreciates only personal success measured in terms of the amount of money and real social power and influence.

Also, the perverted value system respects force and powerful nations. That is the reason why war enemies such as the Germans regain trust and respect in the eyes of the Serbian intelligentsia. At the same time, the system of values disregards as irrelevant honor, human dignity, and national pride: "An honorable man is considered a fool, and only the one who knows how to turn events to his advantage is appreciated. Naturally, patriotism does not go with such feelings. Therefore, this beautiful virtue is completely lacking in your "intelligence". What it wants to plant as patriotism is just pure envy of others. Like all immoral beings, the intellectuals admire the force, even when it is most abused. This led her to reconcile almost immediately with the worst enemies of her country, the Germans, after the war. Only ten years after the last cannon shot, they are accepted as the privileged" (Rajs, 2006: 26).

Education, talent, imagination, clear and rational thinking, genuine intellectual capacities, and values are just façade. The intellectuals in Serbia always want to become socially influential, enormously wealthy, and politically powerful. Will for the power of various kinds is the genuine preoccupation of the Serbian intellectuals.

There is one more flaw that might be attributed to the academics. That is their unhidden propensity to instigate deep and intense political cleavages and to ruin the authentic Serbian values: "They should be at the head of those whose task is to rebuild the country after years of tribulation, it should harmoniously regulate cooperation with your brothers after they have been liberated thanks to your war victims and to steer the country on the path of progress, which would be easy with such a bright people and a rich country like yours. What did they do, however, they destroyed and degraded all the good you had. It is thanks to them that the simple yet very sublime spirit is less and less encountered that has enabled your people to remain intact despite the centuries of oppression" (Rajs, 2006: 28).

Reiss's concluding remarks about the Serbian intelligentsia are negative and pessimistic. Most intellectuals in Serbia are prone to corruption, and they are power-seeking people, not committed to spiritual values and scientific work. Usually, their personalities represent a decadent mixture of greedy, intellectual superficiality and the lack of patriotism: "Instead of acting positively, your scholars have responded negatively. Instead of building, the scholars were breaking down. It is a hotbed of rot and corruption, from which you suffer so much. If you let them continue, you will lose your land. Clean the house, sweep away all the arrogant and harmful puppets. Do not be overshadowed by people who have virtually no value, but whose lousy example is immensely dangerous to the spiritual health of your people" (Rajs, 2006: 29).

After a detailed analysis of the intellectuals, Reiss directed his study to politicians, public officials, and administration. Reiss's writings on politics might be considered as the study of political pathology. He recognized almost the same moral and intellectual shortcomings. The flaws of political elites are substantively connected with the deficiencies of intellectuals. To be more precise, Reiss claims that there is a mutual connection between the increase of the role of the intellectuals in Serbia and the appearance of moral decay of the political elites: "With the increasing power of the scholars, people started to realize what personal benefit they could gain from the membership and active role in political parties. They create interest in taking advantage of your party policy, so now you have professional politicians who make a living from it. What am I saying - they amass wealth? If before the war you had politicians who, in their already foreign-distorted spiritual structure, had in mind only what they considered suitable for the country, your parliament was already flooded with people who sought personal gain in those political passions. The race for ministerial positions has begun! Your assembly was no longer an expression of the people's will" (Rajs, 2006:31).

Besides greed and unscrupulous power seeking that might be attributed to all political actors, other characteristics of Serbian political life are the highest possible level of political clientelism, partisanship, and the tendency of the political elite to capture a state.

Presence of greed and unscrupulous power seeking as substantial determination of the Serbian politician could be noted in the following passage from the Reiss's book: "Your politicians have rushed to regain power and governance. It never occurred to them that the first ranks should be left to those who sacrificed themselves for the fatherland. On the contrary, they tried to remove all veterans from important positions by all means possible. These, in turn, were still too tired from the superhuman efforts they had made, so they allowed it. Politicians no longer knew any limits of their selfishness and ambition. The best way to become rich quickly is to become a minister!" (Rajs, 2006:35).

Politics is the best possible means of becoming rich and powerful. It is sure that there is no social activity that enables quick, easy, and assured success. The "fatal attraction" of politics lies in the fact that politics is the source of enormous power. To maintain his position, any politician tends to form a network consisted of loyal cooperatives. They are in specific relations. The relations are based on an exchange between unquestionable loyalty and benefit. Those who are loyal to political leaders will get their share of various interests.

On the other hand, politicians could only maintain their positions thanks to a large group of loyalists who are ready for anything possible to protect their posts and position of their leader. The political system based solely on the mutual exchange of benefits between the political leader and his associates is called the clientelistic political system. Although the expert in the fields of chemistry and forensics, Archibald Reiss anticipated politically and socially relevant concepts such as clientelism.

The political clientelism is manifested in two ways. First, the political party has a dominant role in political life and society — no room for any kind of sensible political activity except engagement in the political party. As proof for this claim, Reiss points out that there are political representatives of society, except those who come from political parties: "All parliamentarians, or almost all, today belong to political parties, so they have become mighty. Above all, they introduced iron discipline into their membership to hold it well in their fists. Not a single MP, who belongs to a foreigner, must vote as his conscience dictates. His vote is determined by the party, and the party has only one thing in mind: to stay in power if it has it or to come to it if it does not exist. No minister may carry out any reform he deems necessary without the approval of the party. The party has a president, who often has much more real power than the head of state himself" (Rajs, 2006: 40-41).

Also, the omnipotency of political parties is visible in the fact that party elites exclusively determine who will be a public servant. The only criteria for getting a job in the government or any other part of public administration is either loyalty to a political party or membership in it: "Politicians are omnipotent. Politics interferes with everything and governs everywhere. If there is a position in the government, no matter how important, the choice is not decided by the merits of the candidate, but by political connections. He may be the most ignorant, the most dishonorable man. If he is a "protégé" of the party's foreign politician in power, he will defeat the most professionally and morally qualified man" (Rajs, 1997: 54).

Between the two world wars, the state was entirely controlled by politicians. The political system and state administration were under the substantial influence of party elites. They subjected the country to their interest. Reiss discovered a mutual bond between the omnipotence of the politicians and widespread corruption. As a substantial influence of politicians from the ruling parties is present everywhere, the fraud is deeply rooted in the state from bottom to top.

Reiss's conclusion was simple: the omnipotence of the politicians is harmful to the state and society as well as is the lack of moral restrictions of academics involved in politics.

SLOBODAN JOVANOVIC'S VIEWS ON INTELLECTUALS AND POLITICS - A QUEST FOR CULTURAL REDEFINITION OF POLITICAL ELITES AND PRACTICE

Slobodan Jovanovic was one of the leading Serbian intellectuals for many decades in the first part of the 20th century. He wrote a lot in the different areas of scientific research, such as history, politics, law, philosophy, political theory, etc. As a politically sensitive writer, he made significant remarks on the Serbian intellectuals, their civic engagement, and its consequences on political, social life. These remarks were exposed in the essay "On cultural pattern", published in Canada in 1963.

Like Archibald Reiss, Jovanovic noted that politically engaged scholars are showing extremely harmful moral and political tendencies. Their rude political ambitions pave the way for ethically immoral actions. Without moral restrictions, their political activity is reduced to grabbing positions and infinite enjoyment of the various political privileges. Those tendencies are epitomized in the concept of a half-intellectual that is prevailing in the Serbian society of Jovanovic's time.

The half-intellectual has neither moral nor cultural pattern. He is led by an intense desire for social success. To achieve social success, the half-intellectual does not respect any demands of morality: "the half-intellectual finished school with success, but in terms of cultural education and moral upbring-

ing, he did not get anything…He does not respect and appreciate spiritual values... Along with spiritual values, he rejects moral discipline... In social competition, this primitive with a degree is fighting without any moral restrictions" (Jovanovic, 2005: 51).

In the political arena, the half-intellectual is ready to do anything to grab money and positions in the state administration. Mostly, the half-intelectual does not have genuine political ambitions. His ambitions are to become socially recognized and wealthy: "The political aim of a semi-intellectual is not political. It consists in becoming rich and occupying high positions. He does not know of any higher and more general goals" (Jovanovic, 2005: 52).

Jovanovic found out what is the crucial reason why half-intellectuals were so widely presented in Serbia. It is the uneven development of human capacities, and the lack of care for the improvement of other relevant abilities that make a man a fully educated person. "Not a small number of scientists have realized that science and culture are not the same. A scientist is often developed one-sidedly. He extends his intellectual capacities and disregards others. The cultured man is not one-sided. He cares not just for his intellectual abilities but also improves sensitivity and morality" (Jovanovic, 2005: 51).

Overcoming the opposition between the cultured man and the one-sidedly developed intellectual is the key for establishing intellectually superior, morally sensitive, and politically responsible elite. Such an elite lacked Serbia. It is up to the educational system to enable full development of human capacities. The task of society is to bolster the continual improvement of all men's abilities. The result of the education process should be the adoption of civic and political virtues like "love for individual freedom, political patriotism, and legal equality".

Along with these political and civic virtues, Jovanovic insists that a politician specifically should develop and continually improve his sense for temperance: "Among many attributes, for politicians, the most important one, is self-discipline. The one who cannot control himself, will certainly not be capable of controlling others. In politics, it is not enough to be arduous; it is also necessary to be temperate" (Jovanovic, 2005: 62).

CONCLUSION

It is noticeable that Archibald Reiss and Slobodan Jovanovic saw that one of the problems of Serbian political and public life lies in the substantial moral imperfections of the Serbian academics. Their common opinion is that public intellectuals are often the examples of moral decay. Although both scholars established the same diagnosis about politics and morality, they differ in proposals on how to solve problems in the political system and public life. While Reiss insisted on the return to the pure righteousness of common man, especially peasantry and warrior, Jovanovic's idea was the reaffirmation of humanistic ideals in education as a substantial part of education for everyone.

Both Jovanovic and Reiss claimed that the connection between politics and morality is necessary and rare in Serbia. They knew that only through progress in individual and civic virtue, educational system, and development of responsible public political culture would it be possible to improve political life, social and personal morality of those who run power and decide about the state and nation.

REFERENCES

1. Archibald, R. (2006): Listen, Serbs, Dečje novine, Gornji Milanovac, Serbian Historical Museum, The Union of Associations of 1912-1920Liberation Wars and Descendants, Belgrade.

2. Jovanović, S, (2005), Cultural pattern, Beograd, Stubovi kulture.

3. Šuvaković, U. (2012): Doprinos Arčibalda Rajsa sociološkom proučavanju međuratnog srpskog društva, Collection: Sto godina sociologije u Srbiji (ed. Antonić, S.), Sociološki pregled, Vol. XLV, no. 1, Belgrade, pp. 353-373.

4. Milosavljević, B. (2012) Kulturni obarzac i pojam poluintelektualca , Zbornik Balkanološkog instituta Srpske akademije nauka i umetnosti, Belgrade, pp.127-141

POLICE DETENTION OF FOOTBAL FANS AS MEASURE OF PREVENTING VIOLENCE IN CASE LAW OF THE EUROPEAN COURT OF HUMAN RIGHTS

Miloš Stanić, PhD[1]
Institute of Comparative Law, Belgrade, Serbia
Stefan Andonović, PhD[2]
Institute of Comparative Law, Belgrade, Serbia

Abstract: Violence among supporters at football matches has become a part of everyday life. Legal systems are trying to provide appropriate answers to this negative phenomenon. Regarding the fact that Serbia is a signatory to the European Convention for the Protection of Human Rights and Fundamental Freedoms, it is of the utmost importance to secure that actions of state authorities are in line with the case law of the European Court of Human Rights. At the same time, it provides useful guidelines and boundaries for both the legislator and state bodies dealing with this specific problem. Consequently, the paper analyzes two decisions of the European Court of Human Rights, concerning the police detention of fans for the purpose of preventing violence at football matches. The authors pay special attention to the standards and conditions that the respective state is obliged to fulfil in a specific case. Authors also offer, where that seems necessary, an appropriate critical opinion. The scientific justification for studying this topic lays in the fact that there is the social need to clearly define the limits of preventive actions of state authorities, which have to be in line with the principle of protection of guaranteed human rights and freedoms, as an imperative in any democratic legal order, if Serbia one day decides to implement this measure in our legal system.

Keywords: police detention, prevention of violence at football matches, human rights, case law of the European Court of Human Rights.

1 stanicmisa@gmail.com
2 stefan.andonovic91@gmail.com

INTRODUCTION

Sport represents an unavoidable part of human life, whether it is a form of entertainment, recreation or professional activity. Although it has its positive sides, it also carries with it high risks, such as violence (Tošić & Novaković, 2018: 517). Violence at sporting events is an old phenomenon. It was noted even in the texts from the period of ancient Greece and the Roman Empire (Simonović, Đurđević, & Otašević, 2011: 81; Hajsok, 2018: 11). It was pretty similar throughout history: crowd behavior greatly resembled modern hooliganism (Kasalo-Banić, 2016: 15). In the recent history of human civilization, violence, especially at football matches, has been especially pronounced. It is interesting as a fun fact, that the first serious incident connected with football happened in Buenos Aires (Argentina) on 16 July 1916, when supporters and police came into conflict because the match had been postponed because the stadium did not have sufficient capacity (Simonović et al., 2011: 81).

Semantically, the term known as "hooliganism" derives from the name of a certain Patrick Hooligan, an Irish bouncer from London (Nikač & Milošević, 2010: 235). Hooliganism emerged in England in the 1960s. The first phase of the emergence of hooliganism covers the period from the late 50's and early 60's of the 20th century, when both inside and outside the stadium organized violence was recorded (Kasalo-Banić, 2016: 16). As a matter of fact law did not devote as much attention to football hooliganism as academia did and throughout the decades, it was seen as an ordinary public order problem, the control of which did not require the introduction of specific legislation (Tsoukala, 2009a: 22; Guilianotti, 2013: 9).

Regardless of increasing violence, until the mid-1980s this problem was not an issue of concern for the European institutions. Apart from the European Parliament that mentioned it in 1984 in a sport related Resolution (European Parliament, 1984), only the Council of Europe sought to address the question on a more systematic basis. The Council of Europe's main goal is, 'to create a common democratic and legal area throughout the whole of the continent, ensuring respect for its fundamental values: human rights, democracy and the rule of law' (Council of Europe, The Council of Europe in Brief, Our Objectives, according to Coenen, Pearson & Tsoukala, 2016). In that particular Recommendation, "the prevention of violence in the sport is placed within the broader frame of educational and cultural measures, in order to reduce violence in society" (Simonović, et al., 2011: 90). One must not forget that right to sport represents a human right (Andonović, 2017: 143), so violence on sport events could be viewed as a violation of human right.

The rising concern of the Council of Europe led to the adoption of the Recommendation number R(84)8 in 1984 (Council of Europe, 1984). The authors of this Recommendation, which was actually the first counter-hooliganism text adopted at the European level, rested for the first time upon the idea that football crowd disorder was a serious public order problem the control of which required the introduction of specific measures. Though non-binding, "the provisions of the Recommendation number R (84) 8 played an important role in the shaping of future counter-hooliganism policies because they were to a great extent reproduced in the 1985 European Convention on Spectator Violence and Misbehavior at Sports Events and in particular at Football Matches" (European Convention on Spectator Violence and Misbehavior at Sports Events and in particular at Football Matches (Council of Europe, 1985; Tsoukala, 2009b).

Undoubtedly, the Heysel disaster has had a deep impact on the perception of football hooliganism in Europe (Šuput, 2010: 236; Marković, 2016: 135). As a result, football crowds have been the subject of increased regulation across Europe, and even though in many states the problem of football-crowd violence and disorder appears to be on the wane, restrictions of both a criminal and civil nature are

becoming tighter (Coenen et al., 2016: 2; Simonović et al., 2011: 90). The images of the dying victims made the danger from the phenomenon so obvious that it was universally accepted that its control should rely on an appropriate legal framework. It was to signify the beginning of a new period, from 1985 to late 1990s, in the course of which football hooliganism acquired, to some extent, a normative specificity. It is not surprising that this normative specificity first appeared at the European level, in the adoption of the 1985 European Convention on Spectator Violence and Misbehavior at Sports Events and in particular at Football Matches. Set up in the aftershock of the Heysel disaster, the European Convention did not promote any genuinely new policy as it essentially reproduced the main provisions of the aforementioned Recommendation (Tsoukala, 2007: 4).

This "broad compliance with the provisions of the aforementioned Recommendation should not however shift our attention away from the fact that, from then onwards, this situational prevention policy was conceived in radically new terms. First, in seeking to respond to the ways football hooliganism manifested itself, the temporal and spatial limits of this policy were extended to cover, on the one hand, the periods before and after fixtures and, on the other, places outside of football stadia. Second, and most importantly, in defining its target population, this policy went well beyond the 'known troublemakers', which were the sole target of the Recommendation number R (84) 8, to cover 'potential troublemakers and people under the influence of alcohol or drugs'" (Tsoukala, 2009b). The Convention concerns sporting events in general and is not limited to football matches. The Convention focuses on three core areas, prevention, international cooperation and the identification and treatment of those who misbehave at sporting events. Since 1998, the compliance of the member states with the Convention is actively monitored (Coenen et al., 2016: 8).

At present, 41 of Council of Europe member states have signed and ratified the Convention (Coenen et al., 2016: 8). The goal of the Convention is the prevention and control of spectator violence and to ensure the safety of spectators at sporting events (Council of Europe: 2014). The drafters of this Convention emphasized the importance of domestic and international cooperation among all competent state and civilian actors and proposed the introduction of a situational prevention policy, centering on the segregation and surveillance of football spectators (Tsoukala, 2009b). When assessed about twenty-five years later, the impact of the European Convention on the shaping of European counter-hooliganism policies is undoubtedly distinguishable beneath the many different domestic penalizations of football-related violent behavior, and most obvious in the development of domestic and international police cooperation" (Tsoukala, 2009b).

The circumstances of the cases

Within the Council of Europe, the European Court of Human Rights also contributes to the fight against hooliganism, making a clear distinction between permissible and impermissible state intervention in the fight against hooliganism. This is especially the case with the so-called preventive police detention ordered by the police against potential rioters. Regardless of the fact that this institute does not exist in Serbia, it is interesting to look at two examples, the Case of Ostendorf v. Germany and the Case of S., V. and A. v. Denmark, and see how far the state intervention could go. At the same time, it provides useful guidelines and boundaries for both the legislator and state bodies who are dealing and who will deal with this specific problem.

In the Ostendorf v. Germany Case (for more detail see Herz, 2017) the detainee was a supporter of FC Werder Bremen (Case Ostendorf v. Germany, 2013), who had been registered by the Bremen police in a database on persons prepared to use violence in the context of sports events. Furthermore, he was considered to have been involved in eight different incidents in the context of football games during

the period of 7 years (Case Ostendorf v. Germany, 2013). The applicant had further been identified by the Bremen police as a "gang leader" of hooligans from Bremen. The police searched the members of the group and seized a mouth protection device and several pairs of gloves filled with quartz sand were found on members of the group other than the applicant (Case Ostendorf v. Germany, 2013). In order to prevent the violence, on that specific day, the group of fans from Bremen, already placed under police surveillance, went to a pub (Case Ostendorf v. Germany, 2013).

It is important to notice that all the members of the group were ordered by the police to stay with their group of football supporters with whom they had travelled from Bremen and who were to be escorted by the police to the football stadium. They were further warned in a clear manner of the consequences of their failure to comply with that order, as the police had announced that any person leaving the group would be arrested (Case Ostendorf v. Germany, 2013). Under section 32 of the Hessian Public Security and Order Act, regulating custody, the police may take a person into custody if this is indispensable in order to prevent the imminent commission or continuation of a criminal or regulatory offence of considerable importance to the general public (Case Ostendorf v. Germany, 2013). Section 35 of the Hessian Public Security and Order Act, on the duration of deprivation of liberty, provides that a detained person shall be released as soon as the grounds for the police measure cease to exist or twenty-four hours at the latest after his or her arrest if he or she has not been brought before a judge before that lapse of time (Case Ostendorf v. Germany, 2013). Notwithstanding, when the group left the pub, the police noted that the applicant was no longer with them. He was then found by the police in a locked cubicle in the ladies' bathroom of the pub. He was arrested by the police there at approximately 2.30 p.m. and brought to the police station close to the football stadium and his mobile phone was seized. The applicant was released at approximately 6.30 p.m. on the same day, one hour after the football match had ended. His mobile phone was returned to him on 15 April 2004 (Case Ostendorf v. Germany, 2013).

In the S., V. and A. v. Denmark Case, on Saturday, 10 October 2009 there was a football match between Denmark and Sweden in Copenhagen. Before the match, the police had received intelligence reports of intentions among various club factions from Denmark and Sweden to instigate hooligan brawls. The applicants were detained under section 5(3) of the Police Act, by virtue of which the police may detain a person in order to avert any risk of disturbance of public order or any danger to the safety of individuals or public security, where the less intrusive measures set out in the Act are found to be inadequate to avert a risk or danger. Such detention must be as short and moderate as possible and should not extend beyond six hours where possible (Case S., V. and A v. Denmark, 2018). As a matter of fact, the applicants were never charged, no criminal investigation or proceedings were initiated against them, and their detention was not effected for the purpose of bringing them before a judge. On the contrary, they were detained purely for preventive purposes. Under domestic law, such a detention could as a general rule last no longer than six hours and would only be justified for as long as it was necessary to avert the risk or danger in question (Case S., V. and A v. Denmark, 2018).

Lawfulness

Where the "lawfulness" of detention is an issue, including the question whether "a procedure prescribed by law" has been followed, the Convention refers essentially to national law and lays down the obligation to conform to the substantive and procedural rules thereof. Namely, it is clear that, in general, the right to liberty and security of a person is of the utmost importance in a democratic society in terms of Article 5 of the Convention (Case S., V. and A v. Denmark, 2018). The mentioned article is very important, because it is related to the basic principle of modern criminal law - the presumption

of innocence (Radosavljević, 2010: 319). In particular, this means that the person to be remanded in custody must be treated with particular caution, bearing in mind the presumption of innocence. Otherwise, the state on whose behalf the public authorities took the detainee in custody may be obliged to compensate the person who was unjustifiably detained for the damage caused.

However, before there is any talk of a well-founded or unfounded detention order, it is necessary in one country to fulfil one general precondition, and that is the quality of the law, on the basis of which detention is ordered. What exactly does that mean? It is necessary for domestic law to meet the standards of the so-called "True laws" established by the Convention. More precisely, it is a standard that requires the precision of the law, which allows a person to predict the consequences of his actions or inactions. It is also understandable that, in addition to precision, which in any case enables predictability of the law, the existence of clear procedural provisions is required. These are, first of all, those norms concerning the conditions for ordering detention, its extension, and the deadlines concerning the duration of detention, with the existence of an effective legal remedy by which the applicant can challenge the "legality" and "length" of his detention. We can notice that these preconditions which are in the competence of the legislator and which the legislator, above all, should take into account. However, when a valid law is adopted, it is up to the persons ordering detention to take a sensitive approach to ensure that detention is applied in accordance with its purpose (Stanić, 2019: 273).

Absence of arbitrariness

Of course, the lawfulness is only the first step, but at this specific point, we have to underline the fact that lawfulness *per se* is not enough. There are a few more important things to pay attention to. In other words, compliance with the law is not enough and we need something more than that. In addition, any deprivation of liberty should be in keeping with the purpose of protecting the individual from arbitrariness (Case S., V. and A v. Denmark, 2018). Yet the question that arises here is: what does arbitrariness mean?

First of all, the European Court of Human Right has developed, in its case-law, a general principle that detention will be "arbitrary" where, despite complying with the letter of national law, there has been an element of bad faith or deception on the part of the authorities or where the domestic authorities neglected to attempt to apply the relevant legislation correctly (Case S., V. and A v. Denmark, 2018). Therefore, it is necessary that the regulations should be applied, having in mind the purposes for which they were adopted, avoiding any abuse during their application. Secondly, in the Court's view, the "obligation" which somebody failed to satisfy, must be very closely elaborated on. As a consequence, it is necessary, prior to concluding that a person has failed to satisfy his obligation, to make sure that the person concerned was made aware of the specific act which he or she was to refrain from committing and that the person showed himself or herself not to be willing to refrain from so doing (Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 19). Thirdly, detention must also be aimed at or directly contribute to securing the fulfilment of that obligation and not be punitive in character (Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 19; Case S., V. and A v. Denmark, 2018).

In the Ostendorf case, the applicant was ordered by the police, prior to his arrest, to stay with the group of football supporters with whom he had travelled from Bremen and who were to be escorted by the police to the football stadium. He was further warned in a clear manner of the consequences of his failure to comply with that order as the police had announced that any person leaving the group would be arrested (Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 19). Based on his behavior, the domestic authorities could reasonably

conclude that the applicant, by trying to evade police surveillance and by entering into contact with a hooligan from Frankfurt am Main, was attempting to arrange a hooligan brawl. By taking these clear and positive steps or preparatory acts, the applicant had shown that he was not willing to comply with his obligation to keep the peace by refraining from arranging and/or participating in the altercation at issue (Case Ostendorf v. Germany, 2013).

In the S., V. and A v. Denmark Case the Court noted that section 5(1) and (3) of the Police Act did not specify any criminal acts which the applicants should refrain from committing. As a matter of fact, it appears to be like that only at the very first sight. If we look a little bit deeper, we can draw another conclusion. However, in the context of hooligan brawls and the related risk of disturbance of public order and danger to the safety of individuals and public security, there are a number of provisions on punishable acts in the Danish law specifying which criminal acts the applicant should refrain from committing. These included the obligation not to instigate fights or (Case S., V. and A v. Denmark, 2018) exhibit any other form of violent behavior likely to disturb public order, as provided in section 3 of the Executive Order on Police Measures to Maintain Law and Order as well as in Article 134a of the Penal Code (Case S., V. and A v. Denmark, 2018).

In accordance with the aforementioned, the Court considers "that the findings of fact reached by the domestic courts in the present case should be able to satisfy an objective observer that, at the time when the applicants were detained, the police had every reason to believe that they were organizing a brawl between football hooligans in the center of Copenhagen in the hours before, during or after the football match on 10 October 2009, which could have caused considerable danger to the safety of the many peaceful football supporters and uninvolved third parties present at the relevant time. Indeed, as it was considered that the second and third applicants and the first applicant respectively had been prevented from instigating or continuing to instigate a brawl between football hooligans at Amagertorv Square at 3.50 p.m. and in front of Tivoli Gardens at 4.45 p.m. on the relevant day, the place and time could be very precisely described. Likewise, the victims could be identified as the public present at those places at the times mentioned" (Case S., V. and A v. Denmark, 2018).

Necessity

Preventive detention cannot reasonably be considered necessary unless a proper balance is struck between the importance of preventing an imminent risk of an offence being committed and the importance of the right to liberty in a democratic society (Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 19; Case S., V. and A v. Denmark, 2018). The nature of the obligation arising from the relevant legislation including its underlying object and purpose, the person being detained and the particular (Case Ostendorf v. Germany, 2013) circumstances leading to the detention as well as its duration are relevant factors in drawing such a balance (Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 19). Another said, the offence in question has to be of a serious nature, entailing danger to life and limb or significant material damage (Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 21; Case S., V. and A v. Denmark, 2018). Given the degree of interference with the right to liberty, it is quite logical that it is necessary in each case to explain the reasons for which detention is ordered. Precisely because of the mentioned importance, it is one of the elements that the European Court of Human Rights takes into account when assessing whether detention is determined in accordance with the provisions of the Convention. Thus, it is considered that it is not enough to order detention only on the basis of some usual formulations, which

are repeated, which are "laconic", but a meticulous explanation of every reason for ordering detention is required, in order to fully embody the idea of human rights (Stanić, 2019: 274).

When we sum it up, first of all, we should emphasize that the authorities must show convincingly that the person concerned would in all likelihood have been involved in the concrete and specific offence, had its commission not been prevented by the detention (Guide on Article 5 of the Convention – Right to liberty and security, 2020: 21). Therefore, it is necessary to establish beyond doubt that the person in question will be in breach of a specific obligation and that this can only be barred by preventive detention. Secondly, the necessity test requires that measures less severe than detention have to be considered and found to be insufficient to safeguard the individual or public interest. Thirdly, the duration of the detention is also a very important factor and in accordance with the law, detention should cease as soon as the risk passes (Mikić, 12-13; Case Ostendorf v. Germany, 2013; Guide on Article 5 of the Convention – Right to liberty and security, 2020: 21; Case S., V. and A v. Denmark, 2018).

In the Ostendorf case, the question arises whether the applicant's detention was "reasonably considered necessary" and only served the (preventive) purpose of ensuring that he would not commit offences in an imminent hooligan altercation. The Court "observes that according to the police's experience hooligan brawls are usually arranged in advance, but do not take place inside or close to the football stadium. The Court is therefore satisfied that seizing the applicant's telephone alone and possibly separating him from his group, would not have been sufficient in itself to prevent him from arranging a brawl since he could have had access to another telephone." (Case Ostendorf v. Germany, 2013) As for the duration of his detention of some four hours, the Court considers that the applicant had not been detained for longer than was necessary in order to prevent him from taking further steps towards organising a hooligan brawl in or in the vicinity of Frankfurt am Main on 10 April 2004 (Case Ostendorf v. Germany, 2013). Moreover, the detention lasted some four hours, and only until approximately one hour after the end of the football match, when the football supporters had left the stadium and its surroundings and a brawl had thus become unlikely. The police could reasonably consider in these circumstances that the applicant's detention for a relatively short duration was necessary to prevent him from committing an offence (Case Ostendorf v. Germany, 2013). He was to be released once the risk of such an altercation had ceased to exist and his detention was thus not aimed at bringing him before a judge in the context of a pre-trial detention and at committing him to a criminal trial (Case Ostendorf v. Germany, 2013).

In the S., V. and A v. Denmark Case the Court sees no reason to question the findings of fact reached by the Danish courts, because the European Court of human rights has consistently emphasized the fact that the national authorities are better placed than the international judge to evaluate the evidence in a particular case (Case S., V. and A v. Denmark, 2018). The applicants were detained because the police had sufficient reason to believe that they had incited others to start a fight with Swedish football fans in the center of Copenhagen, and thus caused a concrete and imminent risk of disturbance of public order or of danger to the safety of individuals or public security. It discerns no evidence of bad faith or neglect on the part of the national authorities. On the contrary, the police's intention was, first, to talk to the various groups in an attempt to calm them down. After the first fights, it was planned that only the instigators should be detained. The assessment in this regard was to be made on the basis of the actual behavior of those concerned, and the premise was that no persons would be detained who did not act as instigators. However, all three applicants were considered instigators. Because the Court considers that the findings of fact reached by the domestic courts in the present case should be able to satisfy an objective observer that, at the time when the applicants were detained, the police had every reason to believe that they were organizing a brawl between football hooligans in the center of Copenhagen. These findings were neither arbitrary nor manifestly unreasonable, and the Court lacks any

objective reasons, let alone cogent evidence, to call into question the assessment made at the national level (Case S., V. and A v. Denmark, 2018). It appears that in their implementation of the plan the police continuously assessed the situation. It appears from an examination of the domestic proceedings that the police took due account of the six-hour limit in their strategy. The continuing violence made it necessary to exceed the six-hour limit. The police started releasing detainees after midnight, when the situation in central Copenhagen had calmed down and the resumption of any fighting was deemed unlikely (Case S., V. and A v. Denmark, 2018).

Suggestions for Serbia

The measure of preventive detention, for the purpose of preventing persons prone to violence to undertake violent acts, and to possibly commit a criminal offense, does not exist in the positive legal order of the Republic of Serbia. Most similar to this measure is the institute provided for in Article 88 of the Law on Police (Official Gazette of RS, no. 6/2016, 24/2018 and 87/2018), which concerns the possibility for a police officer to restrict, in accordance with the law, temporarily, and for a maximum of eight hours from the decision, the freedom of movement of a person in a certain area or facility in order to prevent committing crimes or misdemeanors. According to Art. 17 of the Law on Prevention of Violence and Misconduct at Sports Events (Official Gazette of RS, no. 67/2003, 101/2005, 90/2007, 72/2009, 111/2009, 104/2013 and 87/2018) the Ministry of Interior may order all necessary measures to prevent violence and misconduct of spectators during sports events, and in particular to prevent arrival at the venue of a sports event or prohibit entry to a sports event, i.e. remove from the sports facility a person from whose behavior it can be concluded that the person is prone to violent and inappropriate behavior.

Also, according to Art. 89b of the Criminal Code (Official Gazette of RS, no. 85/2005, 88/2005 - corr., 107/2005 - corr., 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019) the court may impose, as addition to judgment, a security measure prohibiting the perpetrator of a criminal offense from attending certain sports events, when this is necessary for the protection of public safety. The measure shall be executed in such a way that the perpetrator of the criminal offense is obliged to personally report to an official in the regional police administration, i.e. police station, in the area where the perpetrators also find themselves staying in their premises during a sports event. The similar measure can be found in Law on Misdemeanours (Official Gazette of RS, no. 65/2013, 13/2016, 98/2016 - Constitutional court decision, 91/2019 and 91/2019 - other. law.). Anyway, we have to keep in mind that these measures, when we talk about their legal nature, are not the same with the preventive police detention. These measures are only imposed as a result of concrete criminal law procedure in a concrete case, together with the judgment. The preventive police detention is something different, imposed by the police, after careful assessment, in order to prevent disturbances of public order and peace.

First, having in mind the existing regulatory framework and the fact that it seems that existing framework can be used to adequately respond to fan violence, it seems quite logical that it is expedient to wait and see if this approach can come true. If we conclude that it is not enough, than we should take some measures, for example, preventive detention. Secondly, in the case of the introduction of preventive police detention, which would be applied to registered rioters in football stadiums, it seems to us that the framework provided by the European Court of Human Rights would be of great benefit to the legislator. Particular care should be taken here, because through this institute, the preparatory actions of the persons in question are actually assessed, which could lead to a kind of abuse. Therefore, the police should first unequivocally determine that a disturbance of public order and peace is

being prepared, specifically, that is, that the person should not act on precisely determined orders of police officers, which are aimed at preventing violence. The actions of the police should be reasoned in writing, and based on a comprehensive and complete determination of the facts and assessment of the situation in order to apply this measure. Certainly, an appropriate remedy should be available to the persons to whom it applies. Last but by no means least, it is undoubtedly important that the duration of this measure be limited in time, either for a certain period of a couple of hours or for a couple of hours before or after the match.

CONCLUSION

The good practices highlighted in this paper indicate that the prevention of football hooliganism depends on the efforts of a variety of institutions and agents. The prevention of football hooliganism requires a concerted and continuous response (Spaaij, 2005: 8). Over the past decades a large number of international, national and local initiatives have been carried out to advance the prevention of football hooliganism (Spaaij, 2005: 4). Among others, the initiatives which have been taken within the Council of Europe are of the utmost importance. Within this, the institute of preventive police detention looks like very interesting and useful tool which helps in achieving proclaimed standards. Regardless of its importance, we should be aware that there is a thin border between lawfulness and unlawfulness when this measure is applied. Therefore, it was interesting to see how this problem is resolved by the European Court of Human Rights.

Fans can be detained for the duration of a football match on the basis of stringent preconditions. However, for such a measure to be imposed there needs to be an individual risk assessment (Coenen, et. al, 2016: 70). We have seen that in the practice of the European Court of Human Rights, certain conditions are required, in order for preventive police detention to be in accordance with the principles of the rule of law. Therefore, in addition to the existence of a legal basis, the presence of lawfulness and the absence of arbitrariness and the existence of the necessity for such a measure are required. In fact, the key word is the measure, i.e. the need for a balance between respect for the rights and freedoms of the person to whom the measure applies and the need to preserve public order and peace, i.e. lives, health, and property. In that intention, caution is necessary and it is essential to have a good assessment of the specific situation and to understand this measure as the last resort. Only in that case will the proclaimed goals be fully achieved in accordance with rule of law postulates.

REFERENCES

1. Andonović, S. (2017). Pravo na sport kao ljudsko pravo. *Strani pravni život*, 61(3), 131-144.
2. (Council of Europe (2014) For a Safe and Tolerant Sport, Downloaded July 12, 2020, https://edoc.coe.int/en/violence-in-sport/5911-for-a-safe-and-tolerant-sport-the-european-convention-on-spectator-violence.html)
3. (Council of Europe, European Court of Human Rights (2020) Guide on Article 5 of the Convention – Right to liberty and security, Downloaded July 12, 2020, https://www.echr.coe.int/Documents/Guide_Art_5_ENG.pdf)
4. Guilianotti, R. (Ed.). (2013). *Football, violence and social identity*. Routledge.

5. Hajsok, D. (2018). *Pravni okvir preveniranja i sankcioniranja protupravnih ponašanja na sportskim natjecanjima* (Final thesis, Polytechnic of Međumurje in Čakovec.).
6. Herz, C. (2017). The impact of the European Convention on Human rights (ECHR) on preventive police detention as governed by German law. *Журнал Сибирского федерального университета. Гуманитарные науки*, *10*(6).
7. Kasalo-Banić, F. (2016). *Nogometni huliganizam i reakcija društva: politika Margaret Thatcher iz suvremene perspekive* (Graduate thesis, University of Zagreb. Faculty of Kinesiology.).
8. Marković, S. (2016). Mera bezbednosti 'Zabrana prisustvovanja određenim sportskim priredbama u praksi policije i pravosuđa. *NBP: Journal of criminalistics and law= Žurnal za kriminalistiku i pravo*, *21*(1), 133-160.
9. Mikić, V. Sudska kontrola dužine trajanja pritvora u Republici Srbiji u svetlosti primene člana 5 Evropske konvencije o zaštiti ljudskih prava i osnovnih sloboda, Fondacija centar za javno pravo, Downloaded July 12, 2020, *http://www.fcjp.ba/templates/ja_avian_ii_d/images/green/Vladimir_Mikic4.pdf*.
10. Nikač, Ž., Milošević, M. (2010). Borba protiv nasilja i nedoličnog ponašanja na sportskim manifestacijama, sa osvrtom na ulogu MUP RS, *Nasilnički kriminal: etiologija, fenomenologija, prevencija*, 233-255.
11. Radosavljević, T. (2010). Stav 3 člana 5 Evropske Konvencije za zaštitu ljudskih prava i osnovnih sloboda. *Strani pravni život*, (2), 317-334.
12. Simonović, B., Đurđević, Z., & Otašević, B. (2011). Violence at sporting events in the Republic of Serbia: National and international standards prevention and repression. *Nauka, bezbednost, policija*, *16*(3), 81-98.
13. Spaaij, R. (2005). The prevention of football hooliganism: A transnational perspective. In *Actas del X Congreso Internacional de Historia del Deporte. Seville: CESH* (pp. 1-10).
14. Stanić, M. (2019). Neophodnost određivanja pritvora i naknada štete u praksi Evropskog suda za ljudska prava-smernice za Srbiju. *Prouzrokovanje štete, naknada štete i osiguranje*, 269-281.
15. Šuput, D. (2010). European countries laws regulating fight against spectator violence in sport events. *Strani pravni život*, *54*(1), 233-263.
16. Tošić, I. Novaković, O. (2018). Vrste osiguranja u sportu (regulative u domaćem i uporednom pravu). *Prouzrokovanje štete, naknada štete i osiguranje,* 517-531.
17. Tsoukala, A. (2009b). Combating football crowd disorder at the European level: an ongoing institutionalisation of the control of deviance. *ESLJ*, *7*, lv.
18. Tsoukala, A. (2009a). *Football hooliganism in Europe: Security and civil liberties in the balance*. Springer.
19. Tsoukala, A., Pearson, G., & Coenen, P. T. (Eds.). (2016). *Legal Responses to Football Hooliganism in Europe*. The Hague: TMC Asser Press.
20. Tsoukala, A. (2007). Security Policies and Human Rights in European Football Stadia. CEPS CHALLENGE Paper, No. 5, 7 March 2007.

LEGAL SOURCES

1. (Council of Europe (1950) European Convention on Human Rights, https://www.echr.coe.int/Documents/Convention_ENG.pdf)
2. (Council of Europe (1985) European Convention on Spectator Violence and Misbehavior at Sports Events and in particular at Football Matches CETS No. 120, https://rm.coe.int/168007a086)
3. Criminal Code, Official Gazette of RS, no. 85/2005, 88/2005 - corr., 107/2005 - corr., 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019.
4. European Court of Human Rights, Case Ostendorf v. Germany, Application no. 15598/08, 7 March 2013, Strasbourg
5. European Court of Human Rights, Case S., V. and A v. Denmark, Application nos. 35553/12, 36678/12 and 36711/12, 22 October 2018, Strasbourg
6. Law on Misdemeanours, Official Gazette of RS, no. 65/2013, 13/2016, 98/2016 - Constitutional court decision, 91/2019 and 91/2019 - other. law.
7. Law on Police, Official Gazette of RS, no. 6/2016, 24/2018 and 87/2018.
8. Law on Prevention of Violence and Misconduct at Sports Events, Official Gazette of RS, no. 67/2003, 101/2005 - another law, 90/2007, 72/2009 - another law, 111/2009, 104/2013 - another law and 87/2018.

ON THE RIGHT OF THE DEFENDANT TO REMAIN SILENT

Željko Mirkov, PhD[1]
Basic Public Prosecutor's Office in Kikinda, Serbia

Abstract: In order to present the topic as clearly and as accurately as possible, the author planned and elaborated the structure of the paper so that the legal and historical aspect of the right to remain silent is discussed first. This right is then presented through the provisions of the valid Criminal Procedure Code of the Republic of Serbia, and in order to cover the topic as thoroughly as possible, the views of court practice are also pointed out. Regarding the position of theory and jurisprudence that the defendant's silence can be viewed exclusively as a denial of a criminal offence, the mutual relationship between these two forms of defence is analysed. The author also deals with the defendant's motivation behind the decision to remain silent and analyses the conditions under which such a decision may be a successful method of defence.

Keywords: right to remain silent, historical aspect, normative aspect.

INTRODUCTION

The procedural position of the defendant has always depended on the political, cultural and economic circumstances prevalent in a society, at the same time indicating the general position of the citizens, as well as the level of humanity and democracy of the society. In that sense, we have come a long way from the period when the defendant was considered the object of criminal proceedings to the present day understanding of the corpus of rights that make up the right to a fair trial. This concept consists of several rights and principles that have long been accepted in many countries, and its significance lies in the fact that an international legal standard, that binds national legislation and represents a model of an "ideal" criminal procedure, was introduced into the contemporary criminal procedure (Grubač, 2007: 6- 7).

One of the rights that are an integral part of the right to a fair trial is the right of the defendant to fully or partially deny the answer to the questions asked during the hearing: this right is referred to as "the right to remain silent" and essentially represents the absence of active defence (Škulić, 2014: 214).

At the national level, the right to remain silent has been instituted in all European countries, and today it represents one of the basic rights in the catalogue of the defendant's defence rights.

1 zeljko.mirkov@yahoo.com

At the supranational level, it is interesting to note that the European Convention for the Protection of Human Rights and Fundamental Freedoms[2] does not explicitly mention the right to remain silent. However, from the decisions of the European Court of Human Rights, it follows that the right to remain silent and the right against self-incrimination have become international standards that form the core of the notion of a fair trial in accordance with the provision of Art. 6 of said Convention, and that they are closely related to the presumption of innocence (Zaichenko v. Russia, 18/02/2010; Saunders v. the United Kingdom, 17/12/1996). On the other hand, the International Covenant on Civil and Political Rights provides for a number of rights that are a prerequisite for successful defence, and in the context of the topic, we emphasize that according to the provisions of Art. 14, p. 3 (g), anyone charged with a criminal offense has an equal right not to be compelled to testify against themselves or to plead guilty. This type of protection is called a privilege against self-accusation and does not only imply the right of the defendant to refuse to testify but also their right to refrain from presenting any other evidence in the criminal proceedings against their will (Bajović, 2010: 53). It is also necessary to point out that the privilege against self-accusation also belongs to witnesses in the procedure who are not obliged to answer questions if it is probable that they would thereby expose themselves or persons close to them to severe shame, significant material damage or criminal prosecution (Art. 95, p. 2 of the Criminal Procedure Code of the Republic of Serbia[3]). Thus, the right to a privilege against self-incrimination belongs to a wider circle of persons than the right to remain silent, which belongs exclusively to the defendant as a party to the proceedings. In addition, the right to defend oneself by remaining silent is derived from the privilege against self-accusation, and in that sense, it represents one of its constitutive elements.

The aim of the paper is to provide a complete, precise and scientifically supported presentation of the topic. In that sense, a historical and legal analysis of the evolution of this right will be presented, as well as its content in the sources of criminal procedural law previously applicable in our country. In addition, the normative aspect of this right in our current CPC will be presented, as well as the views of the judiciary, for the purpose of highlighting controversial issues. Although this right has a primary legal component, it is indisputable that silence in itself poses a complex issue, in the consideration of which answers may also be sought through the prism of psychology. In that sense, the paper will also deal with the motivation that may lead the defendant to opt for this type of defence and the analysis of the conditions under which the defence by remaining silent can produce a favourable outcome for the defendant.

THE BEGINNINGS AND EVOLUTION OF THE RIGHT TO REMAIN SILENT

The right to remain silent originated in England, and its development is intimately tied to the great struggle between rival systems of criminal procedure – the accusatorial common law courts and inquisitorial ecclesiastical courts (O'Reilly, 1994: 207). While common-law courts functioned based on the accusatory principle and gave the defendant an opportunity to attend their trial and present evidence in their favour, in trials held before ecclesiastical courts the defendant was obliged to answer the questions asked and was not informed on the prosecution's allegations, nor on existing evidence.

2 Law on the Ratification of the European Convention for the Protection of Human Rights and Fundamental Freedoms, Official Gazette of Serbia and Montenegro - International Agreements, Nos. 9/2003, 5/2005 and 7/2005 and Official Gazette of RS - International Agreements, Nos. 12/2010 and 10/2015.

3 Official Gazette of RS, Nos. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014 and 35/2019. Hereinafter: CPC.

An important stage in the development of the right to remain silent was the activity of a special royal court called the Star Chamber, which gained great importance during the Tudor dynasty. It was primarily responsible for crimes against the authorities. This court applied the methods of inquisitorial procedure, meaning that the criminal proceedings were held in secrecy, the court had wide discretionary powers, used secret informers and torture (O'Reilly, 1994: 413). Trials before this court were held without a jury, the procedure could be initiated without a formal lawsuit – solely based on public rumour, and the court was entitled to question any person under oath, not just the defendant. Although at one point the court became responsible for enforcing royal orders, it still had the authority to use torture, which became especially evident during the 16th century.

The kings of the Stuart dynasty continued to use this court to settle accounts with their opponents. In the mid-16th century, due to the dissatisfaction caused by the work of the Star Chamber Court, the inquisitorial rules became somewhat relaxed. However, at the beginning of the 17th century, the inquisitorial procedure was on the rise again and things escalated to the point where it was considered that the defendant who refused to answer questions actually admitted to committing a crime. The turning point in the establishment of the right to remain silent was the case against John Lilburne, accused of having brought seditious books into England. During the procedure before the Star Chamber Court, he refused to answer questions, believing that in that way he would only cause himself more harm. He was therefore detained in 1639 because his conduct was considered an insult to the court. During 1641, the Parliament deemed Lilburn's punishment illegal, abolished the Star Chamber Court and prohibited the use of inquisitorial procedure methods in criminal matters (Gray, 2013: 531).

However, the right to remain silent was not fully recognized until the enactment of Judge's rules in 1912, which contained the obligation of the police to inform the suspect during the arrest that they were under no obligation to say anything, but that everything they said could be used against them in the court of law. Such a provision is related both to the presumption of innocence and to the fact that the burden of proof lies with the prosecutor (Hostettler, 2009: 241).

On the other hand, in the continental criminal proceedings, the right to remain silent was not introduced immediately after the French Revolution and the abolition of torture, because there were the so-called *poenae inobedientiae*, i.e. penalties for disobedience if the questioned parties refused to answer (Damaška, 2001: 60).

In the 1960s, in Austrian legislation and the legislation of some Swiss cantons, there were still provisions according to which the defendant was obliged to answer questions "specifically, clearly and truthfully" (Damaška, 1962: 69, 119). It was only with the amendments from 1964 that the German criminal procedure legislation foresaw the possibility for the defendant to choose not to testify as a tactic of defence. For example, this right existed in French criminal procedure legislation until 1993, when it was repealed, and then the 2000 reform reintroduced the general obligation of the police and the court to inform the defendant on the right to refuse to testify (Knežević, 2013: 1702).

THE RIGHT TO REMAIN SILENT IN OUR CRIMINAL PROCEDURE LAW – LEGAL AND HISTORICAL ASPECT

The first code that completely regulated the criminal procedure in Serbia came into force on 10 April 1865, as the *Code of Judicial Procedure in Criminal Offenses for the Principality of Serbia*. Prior to the interrogation, the investigator was obliged to warn the defendant to answer the questions "nicely, clearly, decisively and truthfully" (Art. 143, p. 1), after which the defendant was asked to provide per-

sonal data. The defendant was not obliged to answer the questions asked, and the investigator could only warn them that in that way they could worsen their position, as they would miss the opportunity to state the circumstances that could help their case (Art. 152). An investigator who noticed that the defendant denied committing the criminal offense or refused to answer some questions "clearly out of cunning" would present the grounds for suspicion accusing them and thus show the defendant that their defence was not convincing (Art. 146, p. 1).

The Code of Criminal Procedure of the Kingdom of Yugoslavia was passed on 16 February 1929, and entered into force on 1 January 1930. It was modelled on the Austrian Code of Criminal Procedure from 1873 and corresponded to the progressive requirements of social practice and criminal procedure science of the time (Grubač, 2006: 59). After the defendant was informed of the criminal offense they were charged with, they were asked whether they wanted to state something in their defence, implying that the defendant was not obliged to answer the questions asked (Art. 152, p. 2). If the defendant chose to remain silent or refused to answer only certain questions, or even pretended to be "deaf, dumb or crazy", the investigating judge warned them that the proceedings could not be interrupted by using this tactic and that failure to present the facts that spoke in their favour would only complicate their defence (Art. 153). Even during the main trial, the defendant was not obliged to answer the questions asked, nor was it allowed to force them to answer (Art. 251, p. 1).

On 12 October 1948, the Criminal Procedure Code was passed, with decisions modelled on the Soviet procedural legislation of the time, which significantly interrupted the continuity with the previous Code. The new law introduced a completely new type of criminal procedure in which the protection of "revolutionary achievements" took precedence over the protection of individual civil rights (Grubač, 2006: 59). The investigative action "interrogation of the defendant" was undertaken in such a way as to respect the defendant's personality (Art. 157, p. 1), while the use of force, threats, deception or similar measures to obtain their testimony or confession was prohibited (Art. 157, p. 2). During the first hearing, general personal information was taken from the defendant. After that, the defendant was told what they were accused of and asked what they had to state in their defence (Art. 158, p. 2). If the defendant decided to answer the questions asked, they were to be allowed to testify on all the circumstances they were charged with and to present all the facts serving their defence (Art. 158, p. 4). The defendant was not allowed a defence counsel during the investigative stage (preliminary proceedings), and their right to defence was also significantly limited by the provision of Art. 110 which provided that the defendant may attend all investigative actions, except for the examination of witnesses and the examination of co-defendants. This practically meant that the defendant could only attend the search of the apartment and persons and the investigation, and be acquainted with the results of the performed expertise.

The Code of Criminal Procedure, passed on 10 September 1953, entered into force on 1 January 1954. The adoption of this Code meant a significant qualitative change in relation to the previous law. The provisions of the 1953 Code additionally protected the bodily integrity of the defendant and their right to freely testify as they wished before the procedural authority. Namely, in addition to the prohibition of using force, threats, deception and similar means against the defendant during interrogation in order to obtain their testimony or confession (Art. 212, p. 7), the provision of Art. 247, p. 3 provided that it was prohibited to offer medical interventions or other means to the defendant or a witness that could potentially influence their will to testify. The defendant was not obliged to provide their defence, nor answer the questions asked (Art. 212, p. 2), in which case they were warned that this could make it more difficult for them to gather evidence for their defence. The defendant had the same rights at the main trial as well – they were not obliged to testify on the indictment or to present their defence. If the defendant was not told what they were accused of prior to testifying, what the grounds for suspicion

against them were, that they were not obliged to present their defence and that they had the right to hire a defence counsel, such a testimony could not be have been considered the basis of a valid verdict. There were no significant changes concerning the main trial, but one remark should nevertheless be made. Even at the main trial, the defendant was not obliged to provide a testimony on the indictment and present their defence, but the failure of the editor from 1967 is reflected in the fact that the obligation of the presiding judge to inform the defendant about this fact was not foreseen. It was not sufficient to inform the defendant about this right during the investigative stage because they were not obliged to know that this provision also applied at the main trial (Vasiljević, 1971: 529).

On 24 December 1976, the new Criminal Procedure Code was passed and entered into force on 1 July 1977. Although formally new, this law was essentially the somewhat amended Criminal Procedure Code of 1953, whose principles, most important institutions, system and basic solutions remained unchanged.

The Criminal Procedure Code of FR Yugoslavia, adopted at the end of 2001, entered into force on 29 March 2002. It relied heavily on the previous 1977 Code, retaining good solutions while improving provisions in line with modern needs and eliminating the shortcomings pointed out by case law. Certain rights of the defendant were introduced into the rank of procedural principles and found their place in the introductory provisions of the legal text. For the first time, the defendant had to be explicitly warned that everything they said could be used against them as evidence (Art. 4, p. 2, item 2). At the hearing, the defendant was not obliged to present their defence, nor answer the questions asked (Art. 89, p. 2). At the main trial, the defendant was not obliged to testify on the indictment or present their defence, and their refusal to answer questions had to be interpreted as denial under the law (Art. 320, p. 2 and p. 3).

NORMATIVE ASPECT AND CASE LAW

Contrary to the testimony, given by the defendant in that capacity, about the facts that are the subject of the indictment, silence is a "passive manifestation without logical and cognitive content" (Stanković, 1988: 255). In essence, it represents a method of defence tactics (Ivanović, Baić, 2016: 164; Bošković, Perić, 2018: 270). In the case of defence, by remaining silent, the defendant deprives the procedural authority of all or some information, which could otherwise lead to the clarification of a critical event. In that sense, silence can be: a) complete, when the defendant refuses to answer all questions asked, and b) partial, when the defendant answers only some questions, explicitly refusing to answer others.

In criminal proceedings, defendants have a number of rights at their disposal, enabling them to successfully defend themselves, and in the context of our topic, we will point out the right of the defendant to be informed, without delay and always before the first hearing, in detail and in a language they understand, on the charges against them, the nature and reasons for the indictment, as well as on the fact that everything they say can be used as evidence in the proceedings (Art. 68, p. 1, item 1 of the CPC).[4] According to case law, there is no obligation of the procedural authority hearing the defendant to warn them that what they say can be used as evidence against another person, because such an obligation was not provided for by the CPC, i.e. it exists only in certain cases when a witness is examined (ruling of the Court of Appeals in Belgrade, Kž1. 496/2012, of 7 March 2012). Also, the defendant has the right to remain silent, deny an answer to a particular question, freely present their

4 When it comes to instructing the defendant about their rights, it should be stressed that it implies not only *communicating* the rights to the defendant, but also *enabling* the defendant to exercise them (Ilić, Majić, Beljanski, Trešnjev, 2014: 276).

defence, admit or not admit guilt (Art. 68, p. 1, item 1 of the CPC). Therefore, the defendant has the right to freely choose, without the influence of the authority conducting the procedure, how to present their defence, which can move in the direction of confession, denial of the commission of a criminal offense or silence on the allegations of the prosecution.

The testimony of the defendant is based on the principle of voluntariness, because it serves, above all, the purpose of their defence, and defence is the right, not the duty of the defendant (Brkić, 2014: 312). This right applies both during the investigative stage and during the main trial. At the main trial, the defendant is not obliged to testify on the indictment or answer the questions asked (Art. 392, p. 2 of the CPC), and the president of the chamber will instruct the defendant that they may testify on all the circumstances they are charged with and present all the facts in their favour and invite them to present their defence (Art. 397, p. 1 of the CPC). However, if the defendant refuses to present their defence or to answer certain questions, their testimony given earlier or part of that testimony will be read, or an optical or audio recording of that testimony will be reproduced. Therefore, the defendant's decision to defend themselves by remaining silent at the main trial will have no effect if they have already given their testimony during the investigation: in such a situation, the testimony from the earlier stage of the procedure will be read. According to case law, this is possible only if the defendant does not want to answer the questions asked, not if contact with the defendant could not be established for other reasons (Grubač, Vasiljević, 2014: 682). In the event when the defendant exercises the right not to present their defence at the main trial, and the court fails to apply the provision on reading the previous testimony and fails to state the reasons why they did not do so, there will be a significant violation of the provisions governing criminal procedure (ruling of the Court of Appeals in Kragujevac, Kž1. 598/2016, of 25 April 2016).

The procedural authority is not authorized to inform the defendant that confession is a mitigating circumstance and that silence may make it more difficult for them to gather evidence in their defence, as was previously the case in our law.[5] We believe that such a warning, especially if given after the defendant's statement that they wish to remain silent, would affect their will, which must be completely free in terms of choosing the method of defence and that it must not be externally influenced. We are of the opinion that, if it is stated on the record that the defendant wishes to exercise their right to remain silent, the procedural authority must then interrupt any discussion on the circumstances of the prosecution's allegations.

There is no doubt that the defendant's silence cannot be proof of their guilt, nor can it be an aggravating circumstance when imposing a sanction. Our case law explicitly abides by this interpretation. No conclusion can be drawn from the decision of the defendant to remain silent to the detriment of the defendant, with the explanation that they have nothing to say in their defence. The defendant's silence can be viewed only as denial of a criminal offense, and as such it cannot be considered a contribution to establishing the truth in the criminal proceedings (ruling of the Higher Court in Leskovac, K. no. 120/10, dated 10 May 2010, and decision of the Court of Appeals in Niš, Kž. 1, no. 1887/11, dated 6 September 2011).

THE RELATIONSHIP BETWEEN SILENCE AND DENIAL

The view that the silence of the defendant can only be viewed as denial of the criminal offense is also the view of legal theory (Brkić, 2014: 320; Bošković, Perić, 2018: 270), while, for example, the 2011

5 See Art. 212, p. 2 of the 1953 CPC.

CPC contained a provision according to which the refusal of the defendant to answer a question should be considered denial (Art. 320, p. 3).

Denial is nothing more than disputing a state of affairs for which one is accused, i.e. negation (Grasberger, 1958: 197). Thus, the denial of the defendant that they committed a criminal offense could be defined as a negation of charges filed against them by the indictment or a confession that the facts from the charges are partially or fully true, but with the statement of certain circumstances that exclude the existence of a criminal offense.

In general, having in mind the content of denial, it can appear in two forms: as substantiated and unsubstantiated, mere denial.[6] In emphatic denial, the defendant refuses to admit to the truthfulness of the indictment; this can be manifested through body language, for example, shaking one's head, or verbally: "No, I did not do it/You are wrong, it was not me." On the other hand, explanatory denial contains an excuse or reason as the defendant's response as to why they are not responsible for the commission of the criminal offense (Zulawski, Wilander, 2002).

It is wrong to assume that every confession of a criminal offense should be accepted as truthful, and every denial should be immediately rejected as false. Neither form of defence should be accepted uncritically, nor viewed in isolation from other available evidence. This should be kept in mind especially in situations where the defendant opts for explanatory denial, where the facts and allegations they make can be objectively verified. Even unsubstantiated denial, deprived of any information, in a situation where the court remains in irrefutable doubt related to some fact that is important for reaching a decision, may, thanks to the "in dubio pro reo" rule, bear the same consequences as if the accuracy of the denial has been established.

When we look at the relationship between silence and denial from a theoretical standpoint, we notice certain similarities, but also certain differences. Namely, what is common to silence and unsubstantiated denial is that they do not contain the circumstances that the defendant is charged with. Both types of defence must be considered denial, because confession must always be explicit.[7] However, if the defendant opts for explanatory denial, and after the verification is made the facts they presented in their favour prove to be untrue, then the explanatory denial becomes an indication of the defendant's guilt. On the other hand, a consistent decision of the defendant to remain silent can never become grounds for accusations against them, because negative conclusions on guilt cannot be drawn from silence. Thus, if we wanted to analyse the right to remain silent independently and separately in relation to other evidence, we would not be able to notice possible inconsistencies and illogicalities in its structure. A conclusion on the probative value of such a defence would be impossible, because "nothing can come from nothing" (*Ex nihilo nihil fit*). In that respect, unsubstantiated denial is identical in content to remaining silent. It is completely irrelevant whether the defendant will state that they did not commit the criminal offense and thus end the presentation of the defence or that they wish to remain silent: in no case is there any presentation of circumstances related to the commission of the criminal offense. On the other hand, a defendant who substantially denies the commission of a criminal offense, and is the real culprit, may be inconsistent in presenting their defence or may present contradictory or unrealistic circumstances. Then the credibility of their testimony will be assessed first by an analysis of the content of the testimony, but it will also be assessed in light of other evidence, whereby theoretical criteria for assessing the credibility of the testimony will be used. Stone (1995)

6 See: Simonović, 1997: 191-192; Данић, 2001: 113.

7 Analyzing the provision of Art. 88 of the CPC, it follows that the confession must also have other characteristics: there must be no doubt as to its truthfulness, it must be complete, non-contradictory, clear and it must not contradict other evidence.

indicates that the assessment of the credibility of the testimony is based on three criteria (according to Delić, 2008: 71-72). In short, the criterion of consistency/inconsistency refers to the internal contradiction of the testimony itself, as well as to the contradiction in relation to other established facts. The criterion of reality/unreality of the testimony is determined similarly, while probability/improbability is assessed based on ordinary life experience.

MOTIVATION FOR REMAINING SILENT AND WHEN SUCH DEFENCE IS USEFUL FOR THE DEFENDANT

It is a fact that all human behaviour is conditioned by some type of motive, so in each specific case, one should look for the reasons why the defendant opted for this particular type of defence. There is no silence in general, just as there is no man in general, and it is always manifested as a specific phenomenon, in specific people, in specific cases and motives (Stanković, 1988: 258).

Viewed from the psychological point of view, the silence of the defendant in criminal proceedings can be a kind of escape from an unpleasant situation. Therefore, silence can occur as a result of the initial fear of the prosecuting authorities or shame of admitting something immoral, e.g. the need to keep from the public some secrets or personal inclinations, characteristic of crimes against sexual freedom. For example, in his practice, the author of this paper had a case where the suspect was reluctant to present his defence because the criminal offense he was charged with was Cohabiting with a Minor from Art. 190, p. 1 of the Criminal Code[8], and as it became apparent that the underage girl was pregnant, this gave rise to another potential criminal offense – Sexual Intercourse with a Child from Art. 180, p. 1 of the CC.

Practice has shown that recidivists and perpetrators of serious criminal offences usually opt for this type of defence, and this attitude then represents a tactical move to thwart the efforts of law enforcement in establishing the truth, a sign of defiance or a desire to delay the procedure. The motivation of the defendant to remain silent may lie in their desire to get additional time to: a) analyse the situation and devise the most effective defence strategy; b) specify the parameters of the general plan of action and c) implement tactics (Ivanović, Baić, 2016: 164).

It should also be kept in mind that silence may also result from masochistic tendencies, neurosis or mental illness, so if there is any suspicion of the existence of these circumstances, psychiatric expertise should be ordered (Simonović, 1997: 191). There are also those defendants who choose to remain silent only about certain important facts and speak freely about other irrelevant topics.

In practice, it is common for defendants to state, only in general terms, that the allegations from the criminal charges are incorrect and that they do not wish to answer further questions. In this way, the defendants practically combine unsubstantiated denial as a form of testimony, with silence as a form of defence tactic. In the absence of other evidence, this represents a very successful method of defence. A defence counsel may advise the defendant to remain silent as a tactical move, until they get acquainted with other available evidence. Namely, before the first hearing, the suspect and the defence counsel have the right to read only the criminal complaint, the crime scene report and the findings and opinions of the expert witnesses (Art. 68, p. 1, item 6; Art. 71, item 2 of the CPC). However, after the suspect has been questioned, the public prosecutor is obliged to enable them and

8 Official Gazette of RS, Nos. 85/2005, No. 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019. Hereinafter referred to as: CC.

their defence counsel to review the files and examine the items that serve as evidence, within a period sufficient for the preparation of the defence (Art. 303, p. 1 of the CPC).

We should not forget members of criminal organizations who are sworn to silence and loyalty, not only in cases where they find themselves in the position of the defendant but also when they are the injured party in a criminal offence. The defendant will decide to remain silent even when they want to protect the real perpetrator of the criminal offense or an accomplice, although in those situations they can also decide to make a false confession.[9]

These are just some of the situations that lead to the silence of the defendant – it is virtually impossible to list them all, and in the search for a motive for a particular action, one should always look at the specifics of each individual case.

Stanković states that silence, although a passive form of defence, can be effective, if certain conditions are met: a) that the defendant is indeed the perpetrator of the offense they are charged with; b) that they are the only living soul with knowledge about the crime; c) that the defendant did not leave any traces that could be obtained by means (technique and tactics) of criminal investigation; d) that the criminal procedure authorities do not have (or will not be able to have) any valid, authentic evidence of legally relevant facts; and e) that the defendant remains consistent and unwavering in their silence throughout the criminal proceedings, even in their preliminary stage (1988: 257). Although we essentially agree with the above, we believe that it is necessary to make one addition regarding the second and third conditions: we believe that it is not necessary for the defendant to be the only person with knowledge of the crime, nor is the absence of clues necessary for this type of defence to be successful, especially when it comes to the criminal offense Domestic Violence from Art. 194 of the CC. Namely, in practice, it has been demonstrated that this right is often used by suspects in this criminal offense, and when the injured party is a privileged witness who is released from the obligation to testify[10], they may exercise the right to refuse to testify against their relative. Due to the very nature of the offense, it often happens that the event which is the subject of the procedure was not attended by other persons or those other persons are also privileged witnesses. Proving this offense is especially difficult if the criminal offense was committed in the form of a threat of an attack against a person's life or bodily integrity, that does not objectively produce any material change in the outside world and does not leave traces. If the defendant decides to remain silent and the injured party denies their testimony, the procedural authority is faced with a lack of evidence that a criminal offence has even been com-

9 The author of this paper had the following case in his practice: In his defense, the defendant denied committing the criminal offense Endangering Road Traffic from Art. 289, p. 1 of the CC, stating that the vehicle was actually driven by his father. The defendant's father was explicit that he was the one operating the vehicle and admitted to committing the criminal offense charged against his son. However, his claim was not supported by any material evidence, and on the other hand, the guilt of the defendant was supported by the testimonies of the injured parties, as well as the results of forensic examination and expertise of traces inside the defendant's vehicle. By inspecting the case file, it was not difficult to determine the reason behind the defendant's decision to use this defense method and his father's wish to be considered accountable for the crime. Namely, the defendant was previously given a suspended sentence for the criminal offense Violent Behavior from Art. 344, p. 2 in connection with p. 1 of the CC, and he committed this new criminal offense during the probation period, so there was a possibility of revoking the suspended sentence, which his father was also aware of, and this was his mere attempt to protect his son. After the son's verdict became final, an indictment was filed against the father for the criminal offense of Perjury from Art. 335, p. 3 in relation to p. 1 of the CC.

10 The following persons are released from the obligation to testify, in the sense of the provision of Art. 94, p. 1 of the CPC: 1) person with whom the defendant lives in marriage, extramarital or other type of permanent union; 2) blood relative of the defendant in a direct line, or in a collateral line up to the third degree inclusive, as well as a relative by marriage up to the second degree inclusive, and 3) adoptee and adoptive parent of the accused.

mitted. On the other hand, even when the injured party, for example, has been found to have bodily injuries, and the defendant and the injured party refuse to state who caused the injury and what the mechanism of the injury was, the procedural authority may remain in doubt as to how the injured party was injured. It is also possible for the person who was subjected to domestic violence to change their testimony, which is often an aggravating circumstance in prosecuting the defendant (Banović, Turanjanin, Voštinić, 2014: 198).

CONCLUSION

Today, the right to remain silent represents an international legal standard in securing the right to a fair criminal trial. It is one of the procedural guarantees within the privilege against self-incrimination.

This right originated in England, where, after being recognized in 1641, over time it gained its full meaning through the establishment of other rights (e.g. the right to counsel) and guarantees (e.g. the presumption of innocence). On the other hand, in continental law, the right to remain silent had a different course of development, and even as late as in the 1960s, there was still legislation that prescribed the obligation of the defendant to provide their defence.

In our law, the right to remain silent existed in all sources of criminal procedural law, but it is important to point out that it cannot be viewed in isolation from other rights and types of procedure. For example, the Criminal Procedure Code of 1953 envisaged this right, but significantly narrowed other defence-related rights, such as the right to a defence counsel and the right to attend the presentation of evidence, so it is debatable what the effect of defence by choosing to remain silent actually was.

According to the currently applicable CPC, the defendant must be informed on their right to not say anything, to refuse to answer certain questions, to freely present their defence and admit or not admit guilt, both before the first hearing and before the hearing at the main trial. No conclusions about the defendant's guilt can be drawn from their decision to defend themselves by remaining silent, and such a decision can only be considered as denial.

Silence and denial as defence methods do not contain circumstances which the defendant has been charged with as their starting point. However, if the defendant opts for explanatory denial, such a testimony will gain a new quality in content, and it can then be assessed in its consistency and logic separately, as well as in relation to other evidence.

The most typical motivation for choosing to remain silent is the initial fear of the prosecuting authorities, shame of admitting to something immoral, defiance or desire to delay the procedure, as well as the intention to thwart the efforts of the prosecuting authorities in establishing the truth. Under certain conditions, the defendant's decision to remain silent can be a successful form of defence, and when making such a decision, the defendant must keep in mind the circumstances under which the offense was committed, i.e. the existence of traces of a criminal offense and the presence of other persons as witnesses.

REFERENCES

1. Бајовић, В. (2010). Право на одбрану ћутањем. *Бранич*, 123 (3-4), 52-65.

2. Бановић, Б., Турањанин, В., Воштинић, М. (2014). Насиље у породици – кривичноправни и кривичнопроцесни аспекти. У Д. Коларић (Ур.). *Зборник радова: Насиље у Србији – узроци, облици, последице и друштвене реакције, Том I*, (190-201). Београд: Криминалистичко-полицијска академија.

3. Бошковић, М., Перић, С. (2018). *Криминалистичка психологија: Приручник за прикупљање личних доказа*. Нови Сад: Универзитет у Новом Сад – Центар за мултидисциплинарне студије форензике „др Арчибалд Рајс".

4. Бркић, С. (2014). Критички осврт на одредбе о главном претресу у Законику о кривичном поступку Србије из 2011. године. У Р. Кеча (Ур.). *Тематски зборник: Хармонизација српског и мађарског права са правом Европске уније* (313-339). Нови Сад: Правни факултет у Новом Саду, Центар за издавачку делатност.

5. Criminal Code of the Republic of Serbia. "*Official Gazette of the Republic of Serbia*", No. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019.

6. Criminal Procedure Code of the Republic of Serbia. *"Official Gazette of the Republic of Serbia"*, No. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014 and 35/2019.

7. Damaška, M. (1962). *Okrivljenikov iskaz kao dokaz u suvremenom krivičnom procesu*. Zagreb: Narodne novine.

8. Damaška, M. (2001). Nemo tenetur prodere se ipsum. U: *Dokazno pravo u kaznenom postupku: oris novih tendencija* (55-67). Zagreb: Pravni fakultet.

9. Данић, Р. (2001). *Испит окривљеног у кривичном поступку*. Ниш: Свен.

10. Делић, Н. (2008). *Психологија исказа појединих учесника у кривичном поступку*. Београд: Правни факултет.

11. Gray, A. (2013). The Right to Silence: Using American and European Law to Protect a Fundamental Right. *New Criminal Law Review*, 16 (4), 527-567.

12. Grassberger, R. (1958). *Psihologija krivičnog postupka*. Sarajevo: Veselin Masleša.

13. Grubač, M. (2006). *Krivično procesno pravo*. Beograd: Pravni fakultet Univerziteta Union i Službeni glasnik.

14. Grubač, M. (2007). Presumpcija nevinosti kao element prava na pravično suđenje u odlukama Evropskog suda za ljudska prava. *Revija za kriminologiju i krivično pravo*, 45 (1), 3-39.

15. Grubač, M., Vasiljević, T. (2014). *Komentar Zakonika o krivičnom postupku*. Beograd: Projuris.

16. Hostettler, J. (2009). *A History of Criminal Justice in England and Wales*. Sherfield Gables: Waterside Press.

17. Ивановић, З., Баић, В. (2016). *Тактика обезбеђења исказа*. Београд: Криминалистичко-полицијска академија.

18. Илић Г., Мајић М., Бељански С., Трешњев А. (2014). *Коментар Законика о кривичном поступку*. Београд: Службени гласник.

19. Кнежевић, С. (2013). Међународноправни стандарди права на усмену расправу пред кривичним судом. *Теме*, 37 (4), 1689-1704.
20. Law on the Ratification of the European Convention for the Protection of Human Rights and Fundamental Freedoms. „*Official Gazette of Serbia and Montenegro - International Agreements*“, Nos. 9/2003, 5/2005 and 7/2005 and „*Official Gazette of the Republic of Serbia - International Agreements*“, Nos. 12/2010 and 10/2015.
21. O'Reilly, G. (1994). England limits the right to silence and moves towards an inquisitorial system of justice. *Journal of Criminal Law & Criminology*, 85 (2), 402-452.
22. Simonović, B. (1997). *Pribavljanje i ocena iskaza pred policijom i na sudu*. Kragujevac: Pravni fakultet.
23. Stanković, D. (1988). *Smisao i besmisao šutnje*. Zagreb: Globus.
24. Vasiljević, T. (1971). *Sistem krivičnog procesnog prava SFRJ*, Beograd: Zavod za izdavanje udžbenika Socijalističke Republike Srbije.
25. Шкулић, М. (2014). *Кривично процесно право*. Београд: Правни факултет Универзитета у Београду и Београд: Досије студио.
26. Zulawski, D., Wilander, D. (2002). *Practical aspects of interview and interrogation*. Washington DC: CRC Press.

PROTESTS - PART OF FUNDAMENTAL HUMAN FREEDOMS

Mojca Rep, MSc[1]
District Court Celje; Higher Court in Ljubljana, Slovenia

Abstract: The corona virus has lately been responsible for the worldwide social turmoil. In Slovenia, the change of political authorities has further inflamed passions, which have recently led to regular peaceful Friday protests where the population expresses its disagreement with the current political option. Warnings that the authorities refuse to hear. Whether it is the legal protection of freedom of expression, the concepts of hate speech and offensive speech, the difference between hate speech, offensive and abusive speech, the field of press freedom, legal dimension of investigative journalism, and public interest in public radio and television, etc. Unfortunately, the European Court of Human Rights, with its case law, reduces the constitutional protection of freedom of expression to the level of minimum standards. In that regard, ordinary Slovenian courts also pose a major problem as the latter obstacle is rather hard for them to overcome.

Keywords: protests, freedom of speech/expression, fundamental human freedoms, European Court of Human Rights, judiciary

INTRODUCTION

In the 15th century, the invention of the press in Europe was in the hands of the existing social elite (Mills, 1964). The state and / or the church had control over the exchange of opinions and information in all areas of social life: political, religious, cultural and scientific. At that time, the press was primarily a means of enforcing and strengthening the power, ideology and legitimacy of the dominant or absolutist elites. In order to exercise control over public communication, the current government has used means such as censorship or previous restrictions, the granting of monopolistic permits to printers, and designation (Teršak, 2005). Until the 19th century, the policies of the ruling regimes used tools of concealment, secrecy and censorship in relation to the public. Censorship existed at the beginning of written history, or even before more sophisticated forms of directing and restricting communication emerged. The government's response to the invention of the press was the introduction of strict

1 mojca_rep@yahoo.com

censorship in order to prevent any criticism of the government. In the 17th century, new intellectual elites began to emerge, and in response to the abuses of the church, new reform movements were formed, and at the same time, new printing technology emerged. This also changed the strategy of the church, which began to use smarter and more effective propaganda instead of extremely restrictive control over the formation and dissemination of knowledge. In the 19th and 20th centuries, the ruling regimes began to realize the importance and value of popular support for their political activities. They began by trying to influence public opinion. Propaganda, communication with the public, and massive subsidizing of information actually became a more effective strategy for appeasing and gaining the support of public opinion than censorship (Splichal, 1997). Influenced by new political theories and philosophy of the Enlightenment, however, arguments emerged in the late 17th and early 18th centuries in support of the belief that freedom of the press was a necessary instrument in the fight against potential despotic government and its oppression of the people (Teršek, 2005). At the end of the 18th century, as a result of the political and social struggle against despotic power, freedom of expression and freedom of the press were legally recognized as fundamental rights in a democratic society, which applies to both Europe and the United States (Voorhoof, 1995). Freedom of the press is really essential as far as the nature of a free state is concerned; it is based on the absence of prior restrictions on publication and not on freedom from censorship for criminal reasons after publication. Every human has the undoubted right to expose to the public whatever opinion one wishes and banning this would mean destroying freedom of the press. However, if one publishes something that is indecent, evil, or illegal, one must accept the consequences of one's audacity (Teršek, 2018; 2005).

CURRENT TIME AND NEW FORMS OF CENSORSHIP

Democratic societies, as described above, have nevertheless eliminated direct censorship of the expression of opinions through mass communication media - not in absolute terms, but rather successfully from one country to another. Subsequent censorship also occurs in countries whose authorities claim to be democratic. It is mainly through punitive measures against the authors of expressed (unpopular) opinions and ideas, also with the help of civil compensation institutes. Subsequent censorship also occurs in the form of measures against publishers and editors in historical periods and at present more or less worrying in different countries. Above all, mass communication faces subordination to the principles of political and economic spheres. This subordination occurs through various forms of indirect control exercised by the state and private corporations, mainly through indirect censorship and propaganda, all the way to advertising and political marketing (Teršek, 2018; Splichal, 1997). In professional literature, freedom of expression is defined as an essential component for the functioning of democracy (Harris, O'Boyle, Warbrick, 1995). Throughout human history, the struggle for communication rights and freedoms was at the core of the political struggle for freedom and democracy in general (Splichal, 1992). Some theorists believe that freedom of expression establishes a kind of market for ideas, and in it, in the face of many and often conflicting opinions and ideas, the process of seeking the truth takes place (Teršek, 2005). Representatives of one of the relevant currents of mindsets believe that freedom of expression enables personal development and self-realization of the individual. Ronald Dworkin, for example, believes that freedom of expression should be derived from the right to human dignity and the right of every individual to be an object of equal protection and respect (Teršek, 2020; 2005). The most convincing thesis seems to be that freedom of expression guarantees the individual the right to participate in the democratic process (Clayton and Tomlinson, 2001). It should be emphasized that actual democratization means that not only the number of active

participants in communication processes increases, but so does the social base of communication (Splichal, 1992). First, any forcibly silenced opinion can, at least as far as we can know with certainty, be true. To deny such a possibility is to assume that we ourselves are infallible. Second, although a silenced opinion is erroneous, it can - and very often does - contain some part of the truth (Teršek, 2018; 2006). However, since a general or dominant opinion on any matter is seldom or never the whole truth about it, a conflict between different opinions is the only way to supplement it with the rest of the truth. Thirdly, even if the prevailing opinion on a matter is not only true, but at the same time the whole truth about it, most people will accept it only in the form of prejudice, without understanding and feeling for its reasonable foundations, if we do not call it into question firmly and committedly enough. Furthermore, the very meaning of the doctrine will (fourthly) threaten to either be in vain or become weaker and lose its decisive influence on character and behavior. Dogma, on the other hand, becomes merely a formal vow that only hinders and prevents any real and sincere beliefs coming from reason or personal experience, because dogma is capable of doing anything else. Thus, truth presupposes that freedom of expression is not an end in itself, nor is it a complete whole in itself, but represents a means of identifying and accepting certain opinions and ideas as truths (Teršek, 2006, 2005).

AND WHAT IS HAPPENING IN SLOVENIA?

At the beginning of 2020, mostly peaceful protests began in several Slovenian cities against the new Government led by the Slovenian Democratic Party (SDS) and Janez Janša. The new Government was formed with the support of the center-right party Nova Slovenija (NSi), center-left DeSUS parties and the Modern Center Party (SMC) after the resignation of the then Prime Minister Marjan Šarec. The protesters accused the Government of breaking pre-election promises of coalition parties, controversial previous actions of the party and the SDS government, and several new controversial moves by the Government. During the coronavirus epidemic in Slovenia, the implementation of protests was hampered by decrees aimed at limiting the spread of the epidemic. The third Janša Government took power during the outbreak of the new coronavirus disease epidemic in Slovenia. The period between and after the takeover was marked by a large number of controversial actions by the new government. The Government has set the highest possible salaries for ministers and state secretaries. Immediately after taking power, the Government replaced the leadership of the police, army and intelligence services. The new government politicized the National Institute of Public Health and in a short period of time replaced two acting directors during the epidemic (the second soon after he described some of the government's measures to contain the epidemic as unjustified). The Foreign Ministry sent a letter to the Council of Europe, claiming that most of the Slovenian media space is controlled by the media coming from the former communist regime, while the Minister of the Interior wrote on Twitter that he had also informed the Interior Ministers about the media struggle and left-wing political pole against the government that is successfully curbing the epidemic. Mr Janša, Government politicians and people close to the Government, publicly discredited and attacked a large number of journalists and journalistic organizations, which led to several warnings from Slovenian and international journalistic organizations. What is more, the official Twitter account of the Government crisis headquarters, which was supposed to inform the public about the epidemic, published an insulting comment that insulted the journalist and civil society government critics and led to a lawsuit by the institution of the offended. Police later refuted the official explanation for the insulting announcement that an unknown person had hacked into the account. A number of disclosures showed that government-related politicians tried to influence the procurement process by promoting certain suppliers in the procurement process (sometimes offering less suitable or more expensive products or delivering products with long

delays). Family or personal acquaintances between politicians and suppliers promoted by politicians were also found. The revelations triggered police investigation. Shortly afterwards, the director of the National Bureau of Investigation, who was in charge of criminal investigation of procurement irregularities, was dismissed. The dismissal was, according to some estimates, a breach of jurisdiction. Due to the dismissal, the employees of the National Bureau of Investigation published a public letter for the first time in history, in which they expressed their opposition to the dismissal. The Government also fired the head of the Office for the Prevention of Money Laundering who, in addition to the National Bureau of Investigation, was investigating suspicions of illegal financing of SDS-related media (I.M.; Tavčar, B., Š. J. Mirt Bezlaj; G. C., G. K.; Delo).

PUBLIC OPINION ON PROTESTS

In a survey conducted by Ninamedia (700 respondents) between 12 and 13 May, 52.2% of respondents assessed the protests as justified and 44.1% as unfounded (. In the Valicon poll conducted between 12 and 14 May (529 respondents), 57% of respondents strongly agreed with the protesters' demands, 27% strongly disagreed and 16% were undecided / unaware of what was happening (among those who were at least partially aware of the protests, 33% of respondents fully agreed with them, mostly 28% of respondents, mostly 12% disagreed, not 17% of respondents at all, and 11% were undecided or insufficiently informed). 54% of respondents thought that protest cycling was a predominantly appropriate way of protesting (32% thought it was completely appropriate), 36% considered it inappropriate (21% considered it completely inappropriate), and 10% were undecided. 63% of respondents thought they were familiar with the content of the protests (25% very well informed, 38% mostly familiar). Freedom of expression is an inescapable right because it allows for an informed understanding of the possible actions and policies of the authorities (Teršek, 2020). In order to acquire civic competence, citizens must have the opportunity to show their perceptions, to learn from each other, to engage in debates and reflections, to read, hear and seek the opinion of experts, political candidates and those in whom judgments are trusted, and to learn about public life in other ways conditioned by freedom of expression. Finally, without freedom of expression, citizens would quickly lose the ability to influence the agenda of government decisions. Silent citizens may be perfect subjects of an authoritarian ruler, but they are a real disaster for democracy.

INDISPENSABLE ROLE OF PROTESTS

Protests are not as simple as all advocates and their opponents know. But the right to express an opinion is a simple and well-known one. The mass media have the function of establishing and articulating the public, the function of socialization, the function of public control, and the function of legitimization. The mass media form their own media discourse, but they also intervene in all areas where different discourse appears (Teršek, 2020; Vreg, 2000). Politicians use the media to establish contact with the public, to communicate their political image to the public, their political programs and views on individual topics that are the subject of election campaigns (Teršek, 2006). On the other hand, through the media, the public provides politicians with "feedback" on their political efforts, a response to their ideas and views, as well as the evaluation of individual political candidates and parties. In this context, the role of the media is predominantly passive, especially as regards the direct access of political candidates to the addressees of the message. The reason for this lies in the fact that the normative framework in this regard is determined by institutions other than the media. While editorial policy can influence

the choice of information to be passed on to the public, it is about ideas or views that are formed independently of the media, and at the same time the media must be guaranteed independence. A greater degree of democracy, and thus the legitimacy of the political process, would therefore also be achieved by increasing the ability of citizens to influence political processes, also from the point of view of informing citizens. Habermas, e.g. noted that "there were sufficient reasons that relatively well-informed people were more likely to engage in discussions, to tend to mutually confirm their findings, and to influence the hesitant and less engaged" (Habermas, 1969). As information on social and political events is also expected to mean greater transparency, the level of legitimacy is increased in this way. At the same time, we should not overlook the fact that with the development of information technologies, the possibility of immediate and unhindered access to information and thus providing opportunities for individual information, the level of information, behavior and knowledge of politicians potentially increases as well as the quality of political decision-making or political decisions taken (Teršek, 2020). At the same time, the concept of democracy is changing with IT and is no longer based on a submenu of closed geographical space (Teršek, 2006; Ridderstrale, Nordstrom, 2004).

CASE LAW OF EUROPEAN COURT OF HUMAN RIGHTS (HEREINAFTER ECTHR)

Freedom of expression occupies a central place in the constitutional hierarchy of values. It is associated with a democratic form of government and, on the other hand, also represents one of the preconditions for self-realization and autonomy in the decision-making of each individual. Article 10 of the European Convention for the Protection of Human Rights (hereinafter ECHR) (Council of Europe) sets out the right to freedom of expression and the conditions under which it may be restricted. Interference with justice must be very restrictive, especially when it comes to political debates and other matters of public interest. As the Convention itself does not answer the question of what the level of protection of an individual right is and what the right actually represents, the answer must be found primarily in the case law of the most important body of the Council of Europe, the European Court of Human Rights (ECtHR). The field of free assessment of the evidence of states in various cases is wide, where are the limits of the right and what criteria has been developed by the ECtHR through its practice in assessing the admissibility of interference with the right. Slovenia was also convicted before the ECtHR for violating the right to freedom of expression. Currently, this is the only case of a conviction of Slovenia for violating Article 10 of the ECHR (Council of Europe). The proceedings began with an appeal against the Republic of Slovenia lodged with the Court on 8 April 2010. The complainant emphasized that the Member of Parliament and that the article at issue had contributed to the debate in the public interest, and that the disputed allegations were a response to the Member's homophobic stereotypes. Next, the article was written in a satirical style. The domestic courts did not take into account the context nor the disputed conduct of the Member of Parliament. The government argued that domestic courts had already carefully considered both colliding rights. The article allegedly incompletely presented the speech of S.P. and contained insulting remarks about the deputy's personal and intellectual qualities, for which there was no real basis. The domestic courts also examined the speech of S.P. and assessed that it alone did not encourage prejudice against homosexual people. With regard to the satirical style, the Constitutional Court assessed that the article as a whole was intended to inform the public about the parliamentary debate and that it could not therefore be confirmed that it was a satire. The importance that the ECtHR gives to freedom of expression and freedom of the press for a modern, democratic society can be summarized in three basic points: a) freedom of expression is one of the foundations of a democratic society and one of the central conditions for the development

of society and self-improvement ; b) freedom of expression enables every individual to participate in the public exchange of cultural, political and social information and ideas of all kinds; c) freedom of the press is one of the means of identifying and forming opinions on the ideas and actions of political leaders (ECtHR Handyside v. the United Kingdom). Third, freedom of expression is the lifeblood of democracy. The free flow of information and ideas informs the political debate. It is a safety valve: people are more willing to take decisions directed against them if they can influence them in principle. As for the truth argument, it can be said to have less impact on the case law of the ECtHR than, for example, the constitutional case law of the Supreme Court US and Canadian courts (Teršek, 2005; 2007; European Court of Human Rights).

CURRENT CASE OF SLOVENIAN JUDICIARY

DECISION of the CC RS, no. Up-584/12 In the present case, the Constitutional Court assessed whether the regular courts had established a fair balance between the right to freedom of expression of a recognized satirist and the right to honor and good name of the plaintiff. The complainant, A. H., a well-known satirist and host of the satirical television show Hri-bar, allegedly insulted the plaintiff, the editor-in-chief of all entertainment programs on TV Slovenia, in three television shows. The editor censored the satirical show and the presenter responded by making statements in interviews with other media in which he stated about the editor that he was "turbo anus", "homo erectus", "a man without honor", "without knowledge and ability". The editor filed a claim for damages against the presenter and succeeded with it before the court of first instance. The court ruled that the presenter insulted the editor with his statements in a satirical show and in interviews. The presenter appealed against the first-instance judgment, and the High Court upheld the appeal against the illegality of very sharp, harsh and ruthless statements in the case of discussions of general or of public importance and statements constitute a critique of conduct or position and not an attack on personality. Unlawfulness, however, will not be ruled out when the statements are merely an insult to another. It is also important that the fear of punishment due to certain value judgments does not paralyze the public debate (i.e., the deterrent effect). The judgment of the Constitutional Court in question was adopted only a good month after the judgment of the ECtHR in the case of Mladina d.d. against Slovenia. In its judgment, the Constitutional Court refers for the first time to the case of Mladina d.d. and this time decides unanimously in favor of the right to freedom of expression. In the present case, the first-instance court in any case did not take into account the criteria established in the practice of the Constitutional Court and in the practice of the ECtHR. With regard to all the complainant statements, the court considered them to be objectively offensive and, already on the basis of this decision, considered that they inadmissibly infringed the right to honor and good name of the plaintiff. The Court did not take into account the context in which the statements were made, nor the style. The High Court partially corrected the judgment of the Court of First Instance by granting protection under the right to freedom of expression to statements made in the context of a satirical broadcast. With regard to the statements made in the interviews, the High Court also did not take into account all the circumstances of the case. Practically, all traditional European democracies have been condemned before the ECtHR for interpreting the restriction on freedom of expression too extensively Teršek, 2005; 2007). Nevertheless, some countries persistently reiterate unacceptable encroachments on freedom of expression, which the ECtHR has just as persistently condemned as a violation of Article 10 of the ECHR (Council of Europe) and ruled in favor of the complainants. Therefore, the national court, whether regular or constitutional, must be careful not to infringe the ECHR, taking into account the views of the ECtHR. Judges must put themselves in the role of a European judge and ask themselves how that judge would decide.

CONCLUSION

Although social life is intertwined with many forums for public communication, the media and their simultaneous description and co-determination of social reality can be defined as that part of the public sphere that is of particular importance to society. With regard to the institutes of direct democracy and democratic self-government, where the institute of elections is central, the media are the most important means of transmitting information that raises the quality of public decision-making (enabling the so-called "informed choice"). At the same time, the media enable the formation of public opinion, as they offer a (conditionally) independent forum for public communication. In connection with the question of the legitimacy of the political management of society, the media enable the public to express their opinions and ideas and thus influence the functioning of state power. At the same time, they can develop their power to such an extent that they achieve a dominant influence on social life. The media are, in fact, the central means of exercising public control over the social environment and it seems the most important mechanism for controlling that segment of social reality which is predominantly or entirely of a political nature. The media are the main bearer of the function of determining the topics to be discussed in public discourse (i.e. the "agenda-setting function"), thus determining the framework of a legitimate public debate. Just as the media can directly influence the selection process among citizens, they can also have a positive impact on the learning process of citizens. Citizen participation in political processes, which would increase control over political elites, is one of the key goals of democratic societies. Active public participation is one of the foundations of democracy, as without public participation in political processes, democracy loses legitimacy. Therefore, the development of means of political participation is one of the key problems in theory based treatment of the public. Freedom of expression is one of the essential foundations of a democratic society and one of the basic conditions for its progress and for the development of every human being, even in protests. This applies not only to information or ideas that are accepted with public approval or that are positively accepted as non-offensive or irrelevant, but also to those ideas and information that offend, shock or upset the country or any part of its population. These are the demands of pluralism, tolerance and openness of spirit, without which there is no democratic society.

REFERENCES

1. Constitutional Court decision no. Up-584/12. Accessed on 22 June 2019 on https://www.us-rs.si/odlocba-ustavnega-sodisca-st-up-584-12-z-dne-22-5-2014/.
2. Council of Europe. Convention for the Protection of Human Rights and Fundamental Freedoms. Accessed on 31 October 2019 on http://www.varuh-rs.si/fileadmin/user_upload/word/Temeljni_dokumenti_VCP/Konvencijo_o_clovekovih_pravicah_in_temeljnih_svoboscinah.pdf
3. Delo (27. 4. 2020). V več krajih po državi shodi protivladnih protestnikov. Delo. Accessed on 30 April 2020 on https://www.dnevnik.si/1042928066
4. European Court of Human Rights, Case of Mladina d.d.d Ljubljana v. Slovenia, Application no. 20981/10. Accessed on 22 June 2019 on https://hudoc.echr.coe.int/eng#{%22itemid%22:[%22001-142424%22]}
5. G. C., G. K. (1. 5. 2020). Opoldne shodi, zvečer v Ljubljani kolesarilo 3500 protestnikov. RTV Slovenija. Accessed on 3 May 2020 on https://www.rtvslo.si/slovenija/opoldne-shodi-zvecer-v-ljubljani-kolesarilo-3500-protestnikov/522420

6. Habermas J. (1969). Javno mnenje. Kultura, Beograd.
7. Harris, D.J., O'Boyle M.,Warbrick C. (1995). Law of the European Convention on Human Rights. Oxford University Press, Oxford New York.
8. Ninamedia, Current issues. Accessed on 10 July 2020 on http://ninamedia.si/arhivi/700.
9. I.M. (3. 7. 2020). Protesta za in proti vladi potekala mirno #foto #video. Siol net. Accessed on 4 July 2020 on https://siol.net/novice/slovenija/pahor-sprejel-protestnike-ki-ne-predstavljajo-protestnikov-in-organizatorjev-protestov-529212.
10. Mills, W. C. (1964). Elita vlasti. Kultura, Beograd.
11. Ridderstrale J., Nordstrom K.A. (2004). Karaoke kapitalizem. Vodenje za
12. Človeštvo. GV založba, Ljubljana.
13. Splichal S. (1992); Izgubljene utopije?: Paradoksi množičnih medijev in civilne družbe v postsocializmu. Znanstveno publicistično središče, Ljubljana
14. Tavčar, B., Š. J. Mirt Bezlaj (19. 6. 2020). Protestniki sporočajo: »Vztrajali bomo dokler bo treba«. Delo. Accessed on 21 June 2020 on https://www.delo.si/novice/slovenija/pred-protestom-trg-republike-tokrat-v-celoti-zagrajen-322113.html
15. Teršek, A. (2005). Svoboda javnega komuniciranja. Pravna fakulteta v Ljubljani, Zbirka Manet.
16. Teršek, A. (2006). The Human Rights Ombudsman of the Republic of Slovenia and Faculty of Law Ljubljana: *Besede so dejanja, govor jih poganja – diskriminatorni in sovražni govor, International conference organized by*, 27. september 2006, Ljubljana. Accessed on 15 May 2019 on https://www.ip-rs.si/fileadmin/user_upload/Pdf/clanki/Tersek_Svoboda_izrazanja.pdf
17. Teršek, A. (2007). Svoboda izražanja v sodni praksi Evropskega sodišča za človekove pravice in slovenski ustavnosodni praksi. Informacijsko dokumentacijski center Sveta Evrope pri NUK, Ljubljana.
18. Teršek, A. (2018). Svoboda izražanja, mediji in demokracija v postfaktični družbi : filozofske, teoretične in praktične refleksij. Lexpera, GV založba, Ljubljana.
19. Teršek, A. (2020). Svoboda izražanja : komentar 39. člena Ustave Republike Slovenia. Lexpera, GV založba, Ljubljana.
20. Valicon, Research Novanormalnost. Accessed on 10 July 2020 on https://www.valicon.net/sl/novanormalnost/

COMPLIANCE OF HUNGARIAN REGULATIONS ELATING TO TRANSIT ZONES WITH THE UROPEAN CONVENTION ON HUMAN RIGHTS AND THE LAW OF THE EUROPEAN UNION

David Janoši, LLM[1]
Academy of National Security, Belgrade, Serbia

Abstract: Treating a potentially large number of asylum seekers as a national security issue, Hungary adjusted its legal system to an effort to prevent the transit, movement and stay of the asylum seekers in this country. In this regard, Hungary has adopted a set of legal mechanisms that restrict the overall treatment of asylum seekers, which directly reflects the organization of the functioning of police and other security authorities. One of the mechanisms is the establishment of transit zones near several border crossings on the southern border, where all asylum seekers must be accommodated until the end of the procedures in which their requests are decided, with a ban on leaving the transit zone in the direction of Hungary. This controversial legal mechanism has been subjected to review by the European Court of Human Rights and the European Court of Justice, which have taken differing views on the legality of transit zones.

Key words: transit zones, the *Right to Asylum,* European Court of Human Rights, *European Court* of Justice

INTRODUCTION

Mass migration of the population from African and Asian countries into Europe, which has lasted for a decade, and which started to escalate in 2014, has caused heterogeneous approach of the European countries to the stated situation. Unlike most countries, which at the beginning of the stated escalation officially negated security connotation of the mentioned movement deciding to block the settlement and transit of the stated category of foreign countries at their territory, Hungary soon pointed

1 david.1.janosi@gmail.com

out itself among the group of the European countries that represent "anti-immigrant policy" (Janoši, Lečić. 2017:31) by considering the stated appearance a kind of endangering the national security. Determined primarily to disable mass illegal entrance of the foreign citizens into its territory, on the 17th June 2015, the Hungarian Government adopted a "Regulation on Emergency Measures to Oppose Immigration Pressure" (Hungarian Government Decree, 1401/2015), which set a legal frame to build a physical obstacle in the form of a fence along the Serbian and Hungarian border in order to prevent illegal crossing from the Republic of Serbia into Hungary, choosing an approach in the protection of the state border, which was widely applied in certain parts of the world. Besides the stated form of the physical closing of the border, Hungary soon adopted a set of amendments of its laws which intensified the penal policy towards the offenders of the regulations that regulate the movement and stay in Hungary. At the same time the police and security services were given the larger authorization in the plan of discovering and stopping the organized and sporadic illegal entrances into the Hungarian territory. However, Hungarian authorities did not stop on the establishing the measures addressing the opposition to illegal migration, but the set of regulation, which generally observed, complicated the conditions and procedures for asylum approval in Hungary, was issued at the same time. In that sense they started from the assumption that after disabling illegal migration, a significant number of potential illegal immigrants would decide to officially apply for the asylum in Hungary on the basis of the misuse and unilateral interpretation of the international treaties from the field of the human rights and international humanitarian law. In that way Hungary approached to extensive interpretation of the potential security implications of the mass migrations, where, respecting the predominant attitudes that primarily connected the stated phenomenon to the increased danger from terrorism (Lečić, 2017: 107-109) significantly wider context was added to the migrations.

Inter alia, although, at the beginning, it only stuck to the thesis of endangering potential of the illegal migration, Hungary in its Strategy on National Security from 2012 (Hungarian Government Decree, 1035/2012) in the negative context carried out the assumption that its role of an exclusively transit country would fade out, respectively the stated country would become final destination to settlement of the population from Africa and Asia. Besides the stated projection, at the time when the Hungarian Strategy on National Security was adopted it was not possible to predict that Hungarian "anti-immigrant" policy would also imply restrictive interpretation of the norms of the international law which guarantee the right to asylum. However, the realization of the stated project of physical closing of the border which as it was expected led to drastic decrease of number of cases of the illegal crossing of the section of the Hungarian state border[2] opened the space to, observed in the widest sense, engage the Hungarian state apparatus in the creating and applying new procedures towards the seeker of the asylum.

To be specific, on 7th September 2015, the Hungarian Parliament adopted the Law on Solving the Problem of the Mass Immigration (Official Gazette HU, 124/2015), which actually represented a set of amendments of ten laws in total, which had already existed in the Hungary. On that occasion, the modification of the Asylum Law, the Law on the State Border and the Law on the Protection of the Agricultural Land, established the general legal frame for establishing transit zones whose existence and functioning soon became the subject of the proceedings of the two most significant international judicial instances in Europe. Namely, widely observed, newly adopted rules in Hungary directly referred to human rights that enjoy the international protection, whereby the question of the mass migration on the European political scene and widely became a political issue to a large degree. In that sense, the cooperation of the two stated circumstances opened the space for *ad hoc* interpretation in individual cases, which inevitably leads to arbitrariness and political misuse (Simović, Avramović, Jugović,

2 Official data of the number of the solved illegal crossings of the Hungarian state border are available at: https://web.archive.org/web/20150904103504/http://www.police.hu/hirek-es-informaciok/hatarinfo/elfogott-migransok-szama-lekerdezes

2013: 1539). The impression that the issue of legality of functioning of the Hungarian transit zones still remained in the domain of politics was still there even after the procedures which reassessed the compliance of Hungarians regulations in question with the international documents that the stated country obliged to respect, was ended in under the European Court of Human Rights and European Court of Justice.

Although the issue of the current transcontinental migrations into Europe was thoroughly envisaged in domestic and foreign literature from the point of view of several disciplines, the need for the analysis of the Hungarian concept of the transit zones was implied since the stated unique solution was subjected to legal evaluation of the two most significant European judicial instances and as such, with certain modification, it is potentially applied in the organization of work of the law enforcement agencies in other countries that are located on the so called migration routes. For that reason, this paper will elaborate the legal frame which established transit zones in Hungary. Then the analysis of the decision of the European Court of Human Rights and European Court of Justice, which reassessed the compliance of the Hungarian normative solutions with the European Convention for Protection of Human rights and basic liberties and the law of the European Union, will be analyzed.

GENERAL LEGAL FRAME FOR ESTABLISHING TRANSIT ZONES IN HUNGARY

Since the functioning of the transit zones in Hungary is directly connected to the procedures of asylum granting to foreign citizens, at the beginning it is necessary to take into account the general legal frame which regulates the area of refugees' rights in the stated country. Firstly, in 1989, Hungary joined Convention Relating to the Status of Refugees (1951) and The Protocol to the Convention (1967), which made the stated multilateral treaties integral part of the internal legal order of Hungary. Firstly, the stated treaties define general notion of refugees. Besides that they also define the minimal standards guaranteed to all refugees. So the Article 1 of the Convention states that a refugee is each person who has justified fear of being persecuted due to their race, religion, nationality, belonging to a social group or due to their political beliefs and who find themselves out of the country whose citizenship they own, and who does not want or fears to ask protection of that country. Besides that, the same article specifies that the refugee is also a stateless person that is out of the country they had permanent place of residence, but under the stated circumstances cannot or fears to come back to that country. The same article also specifies that the stated Convention stops applying if the person from the category mentioned above voluntarily accepted the citizenship of the county, previously lost, if they gained new citizenship and enjoy the protection of the country whose citizenship they gained, if they voluntarily came back to the country that they previously left due to the fear that they would be persecuted and so on. The provisions of the stated Convention will not apply when there are serious reasons to think that somebody committed war crimes and crimes against peace, or if they committed a felony towards the international law outside the country that accepted them, before they were accepted as refugees, or if they are found guilty for acts opposed to the aims and principles of the Organization of the United Nations. Besides the fact that the two stated international treaties contain thorough principles of the refugees' rights, their interpretation spawned controversy when it comes to the titular of the asylum rights (Kreća, 2012:600), and which in the certain form can be recognized in adopting certain institutes by Hungary. To be specific, there are difficulties in finding answers to the question whether the asylum is the right which is decided by the state, or whether the titular of the

stated right is an individual, according to the principle that under certain circumstances individuals can be addressees of the norms of the international law (Etinski, Đajić, 2014: 145).

Besides the stated multilateral international treaties, by entering into force of the Lisbon Treaty in December 2009, as a member of the European Union, Hungary was obliged by the provisions of the Charter of the Basic Rights of the European Union, which in the Article 18 in the general form guaranteed the asylum right, with the reference to the provisions of the stated Convention and the Protocol On The Convention, in accordance with the Treaty On the EU and The Treaty On The Functioning of the EU. Besides that, the stated field was also arranged by certain number of regulations of so called *EU secondary* legislation, among which the most significance on this subject has the Directive 2008/115/EC, Directive 2013/32/EU, and the Directive 2013/32/EU of the European Parliament and of the Council on the mutual procedures for recognition and revocation of the international protection. Guided by the legal frame that was set by the Hungarian Constitution, relevant international treaties, and by the law of the European Union, Hungarian Parliament adopted the mentioned Law on Solving the Problem of the mass immigration that defines new procedures for the treatment of the state authorities in the plan of implementation of the administrative procedures for asylum granting, in the middle of which there are the provisions on the establishing the transit zones. Therefore the newly adopted Article 5 of the Hungarian Law On The State Border, firstly, generally stipulates that in the border area that is 60 m wide, if we look from the state border, they can build objects that would be used for the works of the protection of the public and national security, defence, security of the state border, as well as implementation of the asylum granting. In accordance with that, the Article 15/A specifies that the stated objects can be formed as transit zones for the accommodation of all the asylum seekers and others who demand protection in the sense of the regulations referring to the refugees' protection (further: applicants). The same article specifies that the applicants can be released from the transit zone to the Hungarian area if the supervisor brings a decision on the recognition of the international protection, if all the conditions for the conducting a procedure for the asylum granting are fulfilled and if four weeks have passed since the appliance.

In addition to the provisions of the Law on the State Border mentioned above, a legislator by the amendments of The Asylum Law specified that the asylum request is submitted in the transit zone. Taking into consideration the fact that at the time when the these provisions came into force, protecting fence was built along the major part of the south area of the Hungarian border, all the applicants that intended to enter Hungary through so called Balkan route, were left the possibility to submit their request only in transit zones, while it continued to apply the Article 5 of the same law that predicted significantly "more liberal" conditions for the seekers, on the other categories of the applicants. However, less than two years later, in March, 2017 new amendments of the Asylum Law were adopted (Official Gazette HU, 39/2017). They authorised Hungarian police to "see off from the country" all caught foreigners who stay illegally on the Hungarian territory leaving them a possibility to formally submit the request for asylum granting in some of the transit zones in the south part of the state border. In that sense, Hungary practically directed all potential asylum applicants from the category of immigrants from the states of Asia and Africa to apply for the asylum in the transit zones. With setting deadlines for conducting an administrative procedure of a request in accordance with the emergency principle, it is specified that the applicants wait for the ending of the procedure in the transit zone. That means that entrance to the territory of Hungary is possible only if the decision is positive or in the case when four weeks have passed since the application. It is interesting that the adopting of the stated formulation Hungary specified a fiction that the transit zones are located outside its state territory (Tóth, 2019: 109) although they are located inside internationally recognized borders of Hungary. Besides the fact that the administrative procedure is conducted inside the transit zone, stated amendments of the Law from 2015 specify that the communication with the court (within the control of the legitimacy of the

decision made during the administrative procedure) will carry out in the following way: the applicants stay in the transit zone, while the court authorities are left the possibility to decide whether they will conduct the hearing by going into the transit zone or via a video link. On the other hand, "professional administrative bodies", defined by the law (actually the security services – Counter Terrorism Centre and the Constitution Protection Office), whose opinion in the form of the administrative act is the basis for the final (complex) administrative act, does not participate directly in the administrative procedure conducted in the transit zone. In the case when the absolute decision, by which the request of the applicant is not accepted, is made, the Hungarian police officers will see off the applicants to the "exit gate" of the transit zone and the foreigner practically enters the territory of some of the countries that Hungary borders in the south. The applicant can leave the transit zone at any moment on their own initiative, but only in the direction of the country from which they entered the transit zone, whereby that can have a negative effect on the exercise of rights of an applicant, considering the fact that they lose the right to file legal remedies.

More detailed functioning of the transit zones is closely specified by a bylaw act of The Ministry of Interior from 2017 (Decree of The Ministry of Interior, 3/2017). The rules referring to the work of the transit zones unequivocally indicate that this is a restrictive space that functions constantly, on a twenty-four-hour basis. Therefore, the management of the transit zones is delegated to "the body authorized for the refugees' issues", which is actually Migration and Asylum Office of the Hungarian Ministry of Interior, which was renamed into the *National Directorate-General for Aliens Policing* in 2019. It still remained a part of the Ministry of Interior. Besides that, the Hungarian police are constantly and directly included in the work of the transit zones, primarily according to the plan of providing entrances and exits into the state spaces, as well as with the aim to keep the order within the transit zones. In that sense, the entrance into the transit zone is possible only on the approval, which has practical significance mostly in the cases of the NGOs that deal with the protection of human rights. Several provisions deal with the issue of disposal and preserving the personal belongings and valuables of the accommodated persons. It is specified that all relevant rules connected to the stay in transit zone must be prominently displayed in five languages in total. The possibility to gain health and social services for a period of twenty-four hours is guaranteed. The minimum referring to accommodation and hygienic conditions and nutrition is also guaranteed. Furthermore, the accommodated persons are guaranteed the possibility to access certain sports contexts, media, and rooms provided for religious service. The annex of the stated bylaw act specifies the house rules that are applied in the transit zones.

Considering the stated law and bylaw regulations that refer to the functioning of the transit zones in Hungary, you get the impression that this is a *sui generis* solution, adjusted to the international standards directed to the protection of human rights on one side, and on the other to the endeavor of Hungary to disable the misuse of the same rights, which can be detected in practice, as much as possible. In that sense, it is evident that the applicants are, conditionally speaking, voluntarily subjected to the procedure within they are accommodated in the conditions that due to relatively strict security measures remind of the conditions present in the institution for conducting sanctions. Because of that the transit zones are characterized as "deprivation of liberty" by some critics (Nagy, 2019:127). However the applicants can leave the transit zone at any time, losing the right to file a legal remedy in case when their request is rejected. Leaving aside strict process and material rules that Hungary uses to disable and discourage the asylum applicants to seek the asylum at the territory of the European Union, transit zone can be characterized as an efficient mechanism against uncontrolled movement of the foreign citizens through the interior of the state territory, that is its unauthorized leaving in the direction of other countries that adjusted the border control to the provision of the Schengen Agreement.

THE PROCEEDING UNDER THE EUROPEAN COURT OF HUMAN RIGHTS

Considering the fact that during the disclosure of suggestion of the amendments of several laws that establish transit zones, it was obvious that those were kinds of restrictive measures that made the conditions for asylum granting in Hungary more difficult, it was not surprising that in a short period of time the issue of the legal compliance of the newly adopted Hungarian regulations on the asylum with the provisions of the international contracts directing the protection of the human rights and with the European Convection on the Protection of Human Rights and *Fundamental Freedoms* (further: the Convention) was raised. Namely, in order to put the rule of law in the function of the human dignity, the institutional and procedural guarantees in the form of the procedures for the asylum granting are necessary (Zekavica, 2019: 26). However, the procedural guarantees in the form of the procedures for the asylum granting in Hungary became the subject of the legal evaluation due to the doubt that they violate the *Right* to *liberty* and security, which is, observed in the wider sense, integral part of a human dignity.

Since the Hungarian Parliament ratified the Convention and eight Protocols to the Convention in 1993, the stated mechanism of the protection of human rights became the integral part of the Hungarian legal order (Halmai, Tóth, 2008: 161). As the issue of the transit zones is primarily disputable because under the described circumstances, they accommodate the asylum seekers during the period of the processing of their requests, the concept of the transit zones can potentially be connected to the violation of the Article 5 of the Convention. Namely, the article mentioned above, named "The Right to Liberty and Security" at the beginning positively specifies that everybody has the right to personal liberty and security. Then the circumstances under which somebody may be deprived of liberty are listed. After the analysis of the stated article it can be noticed that domestic courts are left little space to evaluate how to solve the conflict between the individual liberty rights and the protection of a public interest by some of the types of the deprivation of liberty (Greer, 2006: 251). And indeed in 2015, two citizens of the People's Republic of Bangladesh addressed the European Court Of Human Rights (hereinafter: the court) pointing out, inter alia, the potential violation of the Article 5 of the Convention by Hungary (*Ilias and Ahmed v. Hungary*, Application No. 47287/15). In that sense, they claimed that their retention in the transit zone was actually a kind of "illegal custody" especially if their vulnerable status is considered[3]. Namely they claimed that their accommodation in the space of the transit zone was deprivation of liberty without a legal basis. The main argument of the Hungarian Government as a defendant was that the submitters of the application could voluntarily leave the transit zone in the direction of Serbia at any time, due to which it cannot be considered that they were deprived of liberty. Finding primarily the analogy with the case Amur against France the Court pointed that the retention in the international zone includes the limitation of liberty which is not comparable to custody in any case. By reference to the stated case the court firstly took into consideration the standard, according to which a national law of the state party has to satisfy the condition of predictability concerning the duration of the restriction measure (Beširević et al., 2017: 105). Besides that the court pointed out the circumstances that the criterion whether somebody is deprived of liberty contains both subjective and objective components. While the subjective element is generally marked as a "specific situation in which a person find themselves" as well as the act of not accepting, objective element regards the kind, duration, effects and the way of conducting a measure, as well as the pos-

3 Besides that the applicants pointed out the violation of the Article 3 (Prohibition of torturing and inhuman and humiliating treatment and punishment) and 13 (the Right to an effective remedy). However, since the stated segments are not directly connected to the conditions of retention in the transit zone, they will not be investigated.

sibility of leaving the area, the degree of supervision and movement control, that is the degree of the isolation of a person. The court further pointed out that the difference between deprivation of liberty and restriction of movement concerns the degree and the intensity of a restriction. In that sense, it is further pointed out that the fact that the applicants could voluntarily leave the space does not necessarily mean that the right to liberty was not violated. The court considered that the applicants in this case did not voluntarily decide to stay in the transit zone, especially taking into consideration that on the one hand they were not allowed to enter Hungary, while on the other hand in the case of coming back to Serbia on their own initiative, they would permanently lose the formal status of asylum seekers. Following the assessment that the measure of the accommodating of the asylum seekers into transit zones de facto a kind of a custody, the court concluded that in the case in question the Article 5, the paragraph 4 of the Convention, which guarantee the procedure of the review the legality of the deprivation of liberty, were violated.

Unsatisfied with the stated verdict, Hungary brought a dispute for a revision to the Grand Chamber in the estimated deadline. On that occasion it amended the argumentation with the statement that the submitters of the application could voluntarily leave Serbia and find alternative directions towards the assumed destination in Western Europe. Furthermore, it is explained that the duration of waiting in the transit zone depended on the complexity of a case, cooperation of the applicants with the Hungarian state authorities and consistency of their statements.

Engaging into the subject of the dispute the court stated that the assessment of the objective criteria for determining the grounds of the lawsuit, it is necessary to take into consideration a few parameters. Therefore, the court pointed out that the first parameter refers to legal regime in effect (retention of persons in the transit zone), its purpose, relevant duration and valid procedural mechanism of protection. In that sense, the court noticed that the explanation of the Hungarian Government which says that the accommodation in the transit zone was conducted so the applicants could wait for the ending of the procedure on deciding about their requests was in order. Thereby, the duration of the stay of the applicants in the transit zone was influenced by the fact that they made a complaint against the decision of Hungarian authorities on their "expulsion". Then it points out the right of the state to control the entrance of foreigners into its territory, inter alia, by setting the conditions for respecting certain demands, connected to what is being pointed out that Hungarian state bodies did not carried out any actions towards the individuals, but conducting "regular inspection". The court noticed that the applicants stayed in the transit zone for a period of time that was shorter than specified time maximum of four weeks and that in the stated time frame the requests of the applicants were processed through both administrative procedures and juridical proceedings, although the total treatment of the Hungarian governmental bodies was conducted in somewhat difficult, in "crisis" conditions that is. The court also, as a relevant circumstance assessed the existence of the positive legal regulations that specify certain maximal deadline of the retention in the transit zone.

As a second parameter for the assessment of the fulfillment of the conditions for applying the Article 5, the court pointed "the nature and the degree of legal limitations that were imposed to applicants". First of all, the Court saw nothing disputable in the fact that the applicants were not allowed to leave the transit zone in the direction of Hungary, while waiting for the implementation of procedure of asylum granting. It is pointed out that the applicants while staying in the transit zone could communicate with the other asylum seekers and that with the permission of the Hungarian authorities could be visited by a lawyer. However, the court noticed that the accommodation capacities limited the movement of the applicants to a significant extent. That is why their stay in the transit zone reminded of custody regime, although, according to the court's assessment the stated limitations of the movement cannot be characterized as unnecessary and excessive in the procedure of the request examination. It is also

noted that meanwhile, after the submission of the application, a significant number of the persons, in certain cases voluntarily, left the transit zone and came back to Serbia without any problems. Thus the difference between Hungarian transit zones located at the very border and airport transit zone, whose permission the Court had already had a chance to discuss about in the "Case of Amuur" (**Amuur v. France**, Application no 19776/92), was pointed out. In that sense, it was also pointed out that the applicants were not forced to board the plane, but they could walk to the territory of Serbia that is nearby simply and without major difficulties. Serbia is a signatory of the Convention Relating to the Status of Refugees and they had already been at its territory. Therefore, the applicants were not in danger of being relocated to another country where their security would be seriously endangered.

Guided by the presented argumentation, Great Chamber reached the verdict in November 2019, according to which the Article 5 of the Convention was not violated during the retention of the applicants in the transit zone.

PRELIMINARY RULING PROCEDURE BEFORE THE COURT OF THE EUROPEAN UNION

As an institution with the tradition of almost seventy years, the Court of the European Union has evaluated into one of the main institution of the European Union over time. (Đajić, 2012:195). One of the jurisdictions of the Court of the European Union (hereinafter: The EU Court) is deciding on the previous issues on the request of the courts of the member states, on the interpretation of Union's law. In a kind of a procedure that is not a typical law proceeding, the decision made by the EU Court actually represents one phase of the procedure which has begun and which will end before the national court (Lepotić, 2018:143). In December 2019, the stated possibility was used by Administrative and Labour Court in Szeged, demanding that the EU Court reach a preliminary verdict by interpreting the relevant articles of the Directive 2008/115/EC that specifies the issue of the procedure of the returning the citizens of the third countries with the illegal stay, as well as the Directive 2013/32/EU and the Directive 2013/33/EU, which specify the issue of the procedure and the standard in the plan of gaining the international protection. The demands were addressed to the EU Court within two separate administrative disputes, litigated before the Hungarian court mentioned above. They were about the decisions of the state administrative bodies of Hungary, according to which the two citizens from Afghanistan and the two Iranian citizens, whose asylum request in Hungary, was previously legally rejected, had to leave the territory of Hungary. However, in comparison to the subject of the European Court of Human Rights a new circumstance appeared in the meantime. Serbia started to invoke the provisions of the Readmission Agreement, concluded with the EU 2007, rejecting to accept the foreign citizens who were returned to Serbia from the Hungarian transit zones, after their asylum request was rejected. For that reason, Hungarian state bodies started to accommodate the stated category of the foreign citizens in special parts of the transit zone Röszke, near the border crossing of the same name, applying the same principle of accomodation and treatments as towards the applicants who demanded the international protection.

By conducting the initiated procedure, EU Court noticed that in the case of the transit zone two situations can be distinguished (Judgment *ECLI:EU:C:2020:367*). In the first one, it is necessary to establish whether the accommodation of the asylum seekers in the transit zone, to which the two Directives from 2013 are applied, can be treated as illegal custody. In the second situation it is necessary to establish whether the accommodation of the foreign citizens in the transit zones is allowed in case when their asylum request was legally rejected. In those cases the Directive 2008/115/EC is applica-

ble. Analysing the first situation, the EU Court actually examined the compliance of the provisions of the Hungarian Law on Asylum with the two Directives. The factual situation in the transit zones was also analysed. When it comes to the compliance of the regulations, the EU Court especially looked back at the provision which specifies that the asylum applicants in the case of voluntary leaving the transit zone lose the right to continue the procedure of gaining an international protection. Because of that the stated circumstance is relevant in the estimation whether the transit zones can be treated as a mechanism which deprives the asylum seekers of their liberty. Besides that, the circumstance that the Serbian authorities, applying the Readmission Agreement, are not obliged to accept the foreign citizens who left the territory of Serbia, which in the case of the citizens of Afghanistan and Iran, came in the form of practise, was especially pointed out as something in favour of the circumstance that the accommodation in the transit zones is a kind of illegal deprivation of liberty.

When it comes to the practise of the competent bodies of the Hungarian Government to treat the citizens of the third countries as persons illegally staying at the territory of Hungary and accommodate them into special parts of the transit zones, EU Court noticed that in those cases, the duration of custody is not predictive in advance, and that it exceeds the deadline of four weeks that is specified for the asylum seekers. The EU Court noticed that the two cases in question cannot be subsumed under the provisions on custody, specified by the Directive 2008/115/EC. There is no other legal basis for the accommodation of the stated category of the persons in the transit zone in unlikely long period of time.

Besides the stated point of view of the EU Court reflected on the epilogue of the started juridical proceedings before the Administrative Court and Labour in Szeged, the same verdict initiated the reaction of the highly positioned officials of the Hungarian Government in the form of prediction that in the following period they would abolish the current concept of the transit zones. The asylum seekers would be addressed to apply the requests in Hungarian diplomatic consular representative bodies abroad, probably referring to diplomatic consular representative bodies in the countries that are located in the so called migrant route.

CONCLUSION

It is evident that the establishing transit zones within a procedure for asylum granting in Hungary, to a certain extent, represents the modification of the existing solutions, applied in the international transit zones at the airports. The European Court of Human Rights correctly noticed that fact, comparing Hungarian transit zones to the case Amur against France. In that sense, it is evident that Hungary within the implementation of its strict "anti-Semitic" policy found a specific solution, which as such had not existed in the European law space before.

Although the proceedings before the European Court of Human Rights and the Court of the European Union had to take into consideration relatively changeable circumstances such as refusal of the Republic of Serbia to accept the foreign citizens who were rejected the asylum in Hungary, there is an impression that the stated legal procedures were influenced by different political currents that see and interpret the mass migration into Europe in their own way.

By the analysis of the stated, it can be concluded that the concept of the transit zone is a pragmatic solution, applicable in the cases of the prevention of the uncontrolled movement and transit of the asylum seekers through the territory of a certain country, and firstly the potential misuse of the asylum seekers. By fictional initiating a proceeding of the international protection in a certain country, they would actually try to provide undisturbed transit through its territory. The motives can be different. In that sense, transit zone can be very efficient in the countries that due to certain international

commitments (such as obligations of the Schengen Agreement) do not strictly control the exit from their own territory, or they are limited due to unfavourable space and relief conditions. Consequently, considering the practice of the two courts mentioned above, the establishing of the transit zones can be acceptable (with certain legal modification) in some countries on the so called migrant routes, and which are not members of the European Union. Therefore, inevitably respecting the provisions and principles of the valid norms of the international public law, which protect the extremely vulnerable category of people who were forced to leave their country for different reasons, the establishment of the transit zone could be justified in the cases when the correlation between mass inflow of asylees and the appearance of endangering the security (e.g. terrorism), as well as in the cases of the detection of the false asylees who actually try to accomplish the aims which are opposed to the aims of the international humanitarian law.

REFERENCES

1. Beširević, V., et al. (2017), *Komentar konvencije za zaštitu ljudskih prava i osnovnih sloboda*, Beograd: JP ''Službeni Glasnik".
2. Đajić, S. (2012), *Međunarodno pravosuđe*, Beograd: JP ''Službeni Glasnik".
3. Etinski, R., Đajić, S. (2014), *Međunarodno javno pravo – šesto izmenjeno izdanje*, Novi Sad: Centar za izdavačku delatnost Pravnog fakulteta u Novom Sadu.
4. Greer, S. (2006), *The European Convention on Human Rights,* New York: Cambridge University Press.
5. Halmai, G., Tóth, G.A. (2008), *Emberi Jogok*, Budapest: Osiris Kiadó.
6. Janoši, D., Lečić B. (2017), *Regionalna bezbednosna saradnja – primer Višegradske grupe.* Naučni časopis za bezbednosne nauke – Nacionalna Bezbednost, 6/2017, 21-33.
7. Kreća, M. (2012), *Međunarodno javno pravo*, Beograd: Pravni fakultet Univerziteta u Beogradu.
8. Lečić, B. (2017), *Aktuelne migracije ka Evropi i problem terorizma*. Kultura polisa, posebno izdanje – 2017, 95-116.
9. Lepotić, B. (2018), *Savetodavna mišljenja prema Protokolu 16 Uz Evropsku konvenciju za zaštitu ljudskih prava i osnovnih sloboda i prethodne odluke Suda pravde Evropske unije*. Strani pravni život, 2/2018, 141-153.
10. Nagy, B. (2019), *Magyarország birai előtt. Menekültügyek az Emberi jogok europai bíróságán, az Európai Unió bíróságán és más fórumokon.* Állam és Jogtudomány, 4/2019, 120-134.
11. Simović, D., Avramović, D., Jugović, S. (2013), *Evolucija i preobražaji ljudskih prava*. Teme – časopis za društvene nauke, 04/2013, 1527-1553.
12. Tóth, J. (2019), *A menedékjogi eljárás buktatói.* Állam és Jogtudomány, 4/2019, 105-11.
13. Zekavica, R. (2016), *The rule of law in the function of human dignity*. NBP Journal of Criminalistics and Law, 2/2019, 17-28.
14. - Directive 2008/115/EC of the European Parliament and of the Council
15. - Directive 2013/32/EU of the European Parliament and of the Council
16. - Directive 2013/32/EU of the European Parliament and of the Council

17. - A Kormány 1401/2015. (VI. 17.) Korm. határozata a rendkívüli bevándorlási nyomás kezelése érdekében szükséges egyes intézkedésekről (Hungarian Government Decree), Official Gazette of HU 83/2015.

18. - 2015. évi CXL. törvény Egyes törvényeknek a tömeges bevándorlás kezelésével összefüggő módosításáról, Official Gazette of HU, 124/2015.

19. - A Kormány 1401/2015. (VI. 17.) Korm. határozata a rendkívüli bevándorlási nyomás kezelése érdekében szükséges egyes intézkedésekről, (Hungarian Government Decree), Official Gazette of HU 1401/2015.

20. - 2017. évi XX. törvény a határőrizeti területen lefolytatott eljárás szigorításával kapcsolatos egyes törvények módosításáról, Official Gazette HU, 39/2017.

21. - 3/2017. (III. 23.) BM rendelet a menekültügy szervezeti rendszeréről szóló 52/2007. (XII. 11.) IRM rendelet módosításáról, Official Gazette of HU 3/2017.

22. - A Kormány 1035/2012. (II. 21.) Korm. határozata Magyarország Nemzeti Biztonsági Stratégiájáról, (Decree Hungarian Government), Official Gazette of HU 1035/2012.

23. - *Amuur v. France*, Application No. 19776/92

24. - *Ilias* and *Ahmed v. Hungary*, Application No. 47287/15

25. - Judgment of the European Court of Justice - *ECLI:EU:C:2020:367*

26. - https://web.archive.org/web/20150904103504/http://www.police.hu/hirek-es informaciok/hatarinfo/ elfogott-migransok-szama-lekerdezes

DEVELOPMENT OF ADMINISTRATIVE PROCEDURE IN DOMESTIC AND COMPARATIVE LAW AND ITS SIGNIFICANCE FOR POLICE ACTIVITIES

Aleksandra Vasiljević, MSc[1]
State Attorney's Office of the Republic of Serbia

Abstract: The establishment and development of the legal state among other things involves subjecting administration to the norms of objective law. This means that the administration has as much power as it is entrusted by the law and that it can exercise its power in accordance with the procedure stipulated by the law.

Faced with the need for rules guiding the administrative proceeding, many countries of the modern world have resorted to codification of such rules. Some of them, although fewer in number, failed to do so. However, if we observe the trends and needs, what one should not rule out is the possibility that codification of administrative procedures will take place in these countries as well in the near future.

As for Serbia, it has an almost century-long tradition of codifying its administrative procedure rules. As a result, a brand-new Law on General Administrative Procedure has been passed as part of a public administration reform, which is expected to assist the administration - and consequently the police, as an administrative body - in the execution of duties and in facing numerous challenges.

Keywords: administration, administrative procedure, legality, administrative dispute, administration control.

INTRODUCTION

The process of subjecting the administration to the norms of objective law, as a condition *sine qua non*, accompanied the establishment and development of the legal state. Gradually, certain areas of social life and the rights of citizens became regulated by legal guidelines, which resulted in better protection

1 aleksandramadrid@gmail.com

of the citizens' rights. However, this protection was not complete, given the fact that the said rights could only be achieved through free activities of administrative bodies as there were no pre-defined rules of administrative proceeding. In this way, the free activity of the administration was based on a number of recognized theories, such as 'the theory of Justified Illegality', 'the theory of Extraordinary Circumstances', 'the theory of Unpredictability', 'the War Powers Theory', etc. This prolonged the need for introducing regulatory norms in the administrative proceeding (Langrod, 1960:3-5). In the course of further development of the legal state, judicial control of the management of administration originated from the institute of administrative dispute. This control, in Anglo-Saxon law, was as a rule assigned to courts of general jurisdiction. In the continental countries of Europe, especially in France, special administrative courts were established to control the legality of administrative acts. Thus, the rules of administrative procedure were gradually established through judicial and administrative court practice, but there was still no codified administrative procedure. Opponents of codification justified their position by claiming that predefined rules of administrative proceeding would hamper the creative role of the administration.

Development of administrative proceedings in comparative law

It can be said that there are two approaches to the issue of codification of administrative proceeding in terms of comparative law.

The first approach is characterized by absence of codification of administrative procedure. The states that take this approach have series of scattered regulations on administrative procedure and the rules on administrative procedure derived from administrative and judicial practice, which are increasingly reminiscent of the court proceedings (Braibant, 1974-1975:375). This system is characteristic of the United Kingdom and until recently it was present in France. It should be noted, though, that the administrative tribunals (as quasi-judicial authorities) in the United Kingdom have established certain basic principles of administrative procedure. As far as France is concerned, things have also been changing. After the initial move towards codification of the administrative procedure in France and after the establishment of a commission in the 1990s whose task was to deal with these issues, many rules of French administrative procedure have now been codified (Petrović, Prica, 2013:343). France is the symbol of a country in which the rules on administrative proceeding are contained in the practice of administrative courts, sector laws or laws that apply to all administrative areas, but regulate only certain issues (e.g. the obligation of the administration to elaborate on its decisions or the possibility of accessing the case files, etc.). However, the country has recently embarked upon codification of general administrative procedure. Thus, in 2013 a new law was passed giving the government the authority to codify the rules of general administrative procedure in a decree (Tomić, Milovanović, Cucić, 2017:20).

The other system is characterized by a codification of administrative procedure. Austrian and German theorists of the nineteenth century were the first to think about the problem of establishing the rules on administrative procedure. Yet, Spain was the first country to codify the rules of administrative proceedings in 1899 (Braibant, 1974-1975:376). Austria codified the administrative procedure in 1925, although the draft of this codification had been prepared much earlier, in 1911. The war slowed further activity on this plan, so that it was not until 1925 that several laws, now collectively known as "the laws on the reform of administration", were adopted, thereby codifying the administrative proceeding. These laws include: 1) Administrative Law on Rules of Administrative Procedure (Einführungesgetz zu den Verwaltungsverfah-Rensgesetz-EGVG); 2) Law on General Administrative Procedure (Allgemeines Verwaltungsverfahrensgesetzen-AVG); 3) Law on Misdemeanor Procedure

(Verwaltungsstrafgesetz-VStG); 4) Law on Administrative Execution and Execution Procedure (Verwaltungsvollstreckungsgesetz-VVG), (Adamovich, 1954:205). The rules on administrative procedure imposed by these laws were very similar to the court proceedings. The codification of the administrative procedure in Austria, at that time, had a great impact on the codification of the administrative procedure in other countries: Czechoslovakia (1928), Poland (1928) and Yugoslavia (1930). During this period, the codification of the administrative procedure was performed in some federal units of Germany: Thuringen (1926) and Bremen (1934). In this way, during the period until the Second World War, several states codified rules on administrative procedure, including our country.

Following the Second World War, there was a tendency towards democratization of administration and towards better protection of rights of parties before administrative bodies. In many countries, the necessity and conditions for the codification of administrative proceedings were examined and this issue was the subject of discussion in many international scientific gatherings dedicated to the issues of administrative law study (Wiener, 1981:332-336). In this period, specifically in 1950, Austria introduced minor changes in its administrative procedure. In 1946, the US passed the Federal Administrative Procedure Act. This act did not fully resolve all problems of administrative proceedings, but it was an important step in the struggle to subject administrative activities to regulations (Langrod, 1960:36). In 1958, Spain passed a number of laws aimed at modernizing the administration, and in particular to make the administrative proceedings as efficient as possible (Wiener, 1981:63). Codification of the rules on the administrative procedure was performed in Yugoslavia (1956), Hungary (1957), Poland (1960), Czechoslovakia (1953 and 1960), and Israel (1958).

In 1958, Tribunal and Enquiries Act was passed in the United Kingdom, setting out the rules on administrative procedure, and then the 1966 Tribunal and Enquiries Act, defining the rules on procedures pertaining to public surveys (Boussard, 1969:84-87). As for Switzerland, the codification of administrative procedure took place in some of the cantons: Basel (1958) and Zurich (1959), and the Federal Law on Administrative Procedure was passed in 1968 (Wiener, 1981: 64. 75. 127-139).

After World War II, Romania passed the Law on Administrative Procedure in 1970, Norway in 1967, Bulgaria in 1970 (Wiener, 1981: 353-367).

Sweden completed codification of its administrative procedure in 1971, and Germany achieved codification of administrative procedure by passing the Law on Administrative Procedure in 1976. This act entered into force in 1977.

It should be pointed out that, following the Second World War, a considerable number of states embarked upon codification of the rules on administrative procedure. This was done with the aim of providing a certain guarantee to the parties, in the sense that the administrative authorities would make objective and sensible decisions, but also that the administration would be provided with the optimal conditions for performing its function, in the sense that arbitrariness should be eliminated from its work. It is especially important to emphasize that administrative procedures are required not only because the administration makes decisions, but because it makes a lot of decisions (Wiener, 1981:32).

However, it should be taken into account that the need for codifying the rules on administrative procedure has given rise to conflicting opinions, as there are views that a codified procedure would create too rigid frameworks for the functioning of administration. Opponents of codification consider that it is not necessary in the situation where there is judicial control of the work of administration, and where court decisions also provide certain directives for the work of the administration (Denković, 2010: 266).

Opponents of codification consider that the codification of the administrative procedure hampers the effectiveness of the administration functioning. Conversely, those who advocate codification insist that it is dangerous and unfounded to value effectiveness above legality. France's opponents of the codification of administrative procedure insist that the administrative-court practice has in a way already 'encoded' the entire administrative procedure. However, codification advocates believe that the rules of administrative procedure that derive from administrative-court practice are insufficiently accessible and remain known to a narrow circle only. Judicial control has its limits, because there are more administrative acts that are not subject to judicial control than those that are. In this sense, it has been pointed out that the subsequent judicial control of the administration frequently only proclaims justice (Wiener, 1981:32-35; Braibant, 1974-1975:382-384).

It is not contested that protection of the right of the parties can exist even without codified rules on administrative procedure, especially in the states that cherish such a tradition, but it would be a mistake to claim that the codification in these countries is unnecessary. The codification of the administrative procedure undoubtedly bears upon the work of the entire administration and makes it less dependent on higher authority directives.

It is undisputable that codification of the administrative proceeding is aimed at establishing the methodology that provides general rules for the work of administration. However, this does not rule out the possibility that a certain administrative activity may be regulated by a special law, because specific nature of this activity calls for a specific procedure, in which case the general rules on administrative procedure are of supplementary nature.

From the aspect of comparative law, codifications of administrative procedure are not identical and differ from one another, although they have a shared tendency to formalize the administrative proceeding as much as possible in order to protect the rights of the parties as much as possible and ensure respect for the principle of lawfulness in the work of the administration. Regardless of the differences that exist among the codifications, it may be noted that they contain the rules which regulate the following issues: basic principles; rules on jurisdiction; rules on the procedure; rules on the form and content of an administrative ac; rules on the execution of the administrative act; legal means in the administrative procedure (Braibant, 1974-1975: 382-383).

Development of administrative procedure in Serbian law

As early as 1805, the governing 'soviet' was established in Serbia, serving as a supreme court of a kind, although it was in fact a political body through which the regional elders sought to restrict the power of Karadjordje. However, the 1835 Constitution and 1838 Constitution authorized the State Council to control the activities of the administration and even occasionally addressed appeals of citizens. Such practice of the State Council gradually led to the introduction of the administrative dispute, which was formally introduced by the Constitution of 1869. Detailed rules on the procedure were set out in the Law on Proceedings before the State Council of 1870.

After the end of the First World War in 1918, the Constitution of 1921 and the Law on State Council and Administrative Courts of 1922 retained the administrative dispute, so that the practice of the State Council and administrative courts, together with the legal provisions contained in certain texts of positive law, contributed to increasing definition of certain rules on administrative proceeding through administrative court practice. These rules had to be observed by the administrative bodies given that

their infraction entailed sanctions, i.e. the State Council and administrative courts revoked such administrative acts as unlawful.

Following the example of Austria, the Kingdom of Yugoslavia codified the rules on administrative procedure in 1930. Legal rules on the general administrative procedure of 1930 were observed even after the Second World War on the basis of the Law on Invalidity of Legal Regulations passed before 6 April 1941 and during enemy occupation (*Službeni list SFRJ (*Official Gazette of SFRY*)*, No. 86/1946).

Following the Second World War, our country was among the first states in the region to pass a new Law on General Administrative Procedure in 1956. This law and its provisions significantly contributed to the esteem of our legal system. In the meantime, the Law was amended several times: in 1965, 1976, 1978 and 1986. Its harmonization with the legal system of the Federal Republic of Yugoslavia (FRY Constitution of 1992) was achieved in 1996 (Official Gazette of FRY, No. 55/96) and in 1997 (Official Gazette FRY, No. 33/9731/2001). Following the dissolution of Yugoslavia, the implementation of this law continued until recently as a set of regulations in Serbia, although with minor alterations (Law on General Administrative Procedure, (Official Gazette of FRY, No. 33/97 and 31/2001 and Official Gazette of RS No. 30/2010). It was a rare example of the long-term validity and application in the legal system of Serbia. Undoubtedly, the reason for this lay in the quality of its provisions and an almost century-long tradition in the codification of administrative procedure. Its consistent implementation resulted in legal certainty and a high degree of protection of participants in the procedure.

However, the challenges that our country had to face together with other states demanded improvements to the law (Vasiljević, 2016: 215-223). Thus, Serbia passed the new Law on General Administrative Procedure which entered into force on 9 March 2016, and a projected application date of 1 June 2017, with the exception of provisions of Articles 9, 103, and 207, which were to be applied upon expiry of 90 days of its entry into force, i.e. on 8 June 2016 (Official Gazette RS, No. 18/2016).

The importance of rules on administrative procedure for policing

It is important to point out that one of the basic functions of the bodies that constitute the system of state administration, and thereby the police as part of this system, is the implementation of laws and other regulations and general acts, i.e. enforcing their implementation.

It is of vital importance for the state that the legally regulated system which constitutes the law of interior affairs is applied in the social reality. By implementing this law, the state – through the agency of police – provides protection of life, security of person and property of citizens, prevents and detects criminal offences and their perpetrators, maintains public order and peace and performs other security tasks (Miletić, Jugović, 2019: 49-79). In this regard, the police are authorized to adopt normative acts, administrative acts and to undertake administrative actions and measures in the implementation of internal affairs law. The police act within a legal framework respecting the principle of legality in their work means that they must adopt the specified acts and perform administrative actions and measures in accordance with the appropriate laws that they apply (Vasiljević, 2009:33).

The law of internal affairs, applied by the police, is contained in a large number of laws and bylaws that are – above all – of material law nature. However, it should be noted that the manner in which material law is applied in a specific case has also been legally regulated. Such legal norms are categorized in legal theory as formal legal norms, referred to as actions. Norms governing the rules of conduct

of the actors of administrative functions when deciding in administrative matters are included in the regulations on general and special administrative procedures.

According to domestic Law on General Administrative Procedure, the administrative procedure is a specific set of rules that the state authorities (including the Ministry of Internal Affairs) and organizations, bodies and organizations of autonomous provinces and bodies and organizations of local self-government, institutions, public enterprises, special bodies through which regulatory functions are achieved, and which legal and natural persons entrusted with public powers apply when acting in administrative matters.

General administrative procedure is applied in all administrative areas (even in the field of internal affairs) unless the legal regulations expressly prescribe a special procedure. This means that, in addition to the general administrative procedure, we may have special administrative procedures (foreign exchange, customs, tax, etc.). However, when there is a special administrative procedure, the largest number of rules on the general administrative procedure is also applicable. In this way the general administrative procedure constitutes a basis but also an addition to special administrative procedures. Special administrative procedures are therefore specialized in respect of the general administrative procedure, and the general administrative procedure is of a subsidiary nature in respect of special administrative procedures. This means that the rules of the Law on General Administrative Procedure shall apply to all procedural matters that have not been regulated by a special law. In other words, a special administrative procedure precludes the implementation of the general administrative procedure, and the general procedure complements the rules of the special one (Vasiljević, Vukašinović-Radojičić, 2019:281-285).

Generally speaking, regulating the manner of application of material norms to specific cases (rules on proceeding) is aimed at ensuring legal certainty of natural and legal bodies and at lawful actualization of the legal order.

The existence of and compliance with the rules on the general administrative procedure when implementing the law from the field of internal affairs by the Ministry of Internal Affairs (police) is of multiple significance. First, it should ensure equal treatment of all subjects; second, it should prevent arbitrary and unconscientious actions of authorities in the implementation of regulations; third, it is a firm guarantee that entities will be able to exercise their rights and legal interests based on the law; fourth, it constitutes grounds for using coercion in cases when the subjects to which the legal norms pertain do not want to comply.

Europeanisation of administrative procedure

There are two principal agents of the process of Europeanisation of administrative procedure in Serbian national law. These are the European Union and the Council of Europe.

The European Union operates in several different ways:

1) There are principles and rules that are applied by the European Union institutions within the Union but also in the territory of candidate countries. These principles and rules are the basis and model for all administrative actions.

2) Within the European Union itself there is something that is referred to as "European Administrative Space". It consists of the principles contained in written sources of law, but also of some unwritten

principles. The written sources include the EU Charter of Fundamental Rights adopted in Nice in 2000. Its significance is reflected in the fact that it established the right to good administration. This means that every person has the right to have his or her affairs handled impartially, fairly and within a reasonable time. The European Code of Good Administrative Conduct of the European Ombudsman of 2001 has had an important role in shaping the European Administrative Space. The principles of good governance that make up the European Administrative Space are observed and implemented by the European Union courts. In this way the principles of the European Administrative Space have been shown to be convenient to be taken over by national legislations (Davinić, 2013: Đerđa, 2012: Košutić, Rakić, Milisavljević, 2013:150-152; Schwarze, 2006: Isaac, 1989: Kent, 1992: Weatherill, 1995: Vukadinović, 1995: Rakić, 1997).

3) The Court of Justice has - in its decision - contributed to great importance of respect for the principles of good governance. That is why the Member States have seen the national administrative procedural law approaching to the principles of the European Administrative Space (Vukašinović-Radojičić, 2015: 105-119).

As regards the Council of Europe, its influence is reflected in the creation of administrative standards through recommendations and resolutions, but also through international treaties. The most important documents of this kind include the European Convention for the Protection of Human Rights and Fundamental Freedoms. The Court of Justice implements this Convention in such a way as to protect the fundamental rights as part of European law. However, the main protector of the human rights and freedoms based in this Convention is the European Court of Human Rights, although only after the decisions of the national administrative and other courts, even including constitutional courts.

There is another way in which influence is being exerted on the Europeanisation of national administrative procedure law. It is the activity of Sigma, which is an organizational part of the OECD, financed by the European Commission. It has established a range of administrative procedure principles and developed a detailed list of questions to check the contents of laws on general administrative procedure, thereby influencing the process of accessing the European Union (Vukašinović-Radojičić, 2013:29-49). There is no doubt that the ultimate verification - from the perspective of European standards - awaits the Serbian national administrative procedure law before European courts (Vasiljević, 2019:367-385).

CONCLUSION

The principle of legality is one of the most important principles of administrative actions. This principle means that the administration has as much authority as entrusted by the law and that the powers endowed to it by the law may be executed only in keeping with a procedure prescribed by the law. Thus, governance becomes a form of law implementation. In this sense, the legality of administration is operationalized among other things by means of what is called the administrative procedure.

As pointed out above, a significant number of states in the modern world have codified the rules of administrative procedure. There is a small number of those which have not done so. However, bearing in mind their legal tradition, it would be a huge scientific mistake to claim that there is no protection of the rights of parties to administrative proceedings in these countries. There are certainly rules on proceedings in these countries, yet they have not been codified, but this may easily happen in the near future. There is an increasing tendency and a growing necessity to do so.

As regards Serbia today, at the beginning of the 21st century, following a turbulent history and given its rich legal tradition, it has reverted to the old-new values by adopting the new Constitution in 2006 and a number of systemic administrative law regulations, including the new Law on General Administrative Procedure, and has been working to create important social prerequisites for better quality of administrative procedure law which is implemented in the work of administrative authorities including the Ministry of Internal Affairs (police) as part of the system.

REFERENCES

1. Adamovich, L. (1954). *Handbuch des Osterreichischen Verwaltungsrecht*, Bd. I, Wien, Springer Verlag, str. 205.
2. Boussard, J. (1969). *L'enquète publique en Angleterre*, Presses universitaires de France, Paris, str. 84-87.
3. Braibant, G. (1974-1975). *Institutions administratives comparées*, Fascicule II, Fondation nationale des sciences politique, Paris, pp. 375.
4. Давинић, М. (2013). *Европски омбудсман и лоша управа*, Београд.
5. Денковић, Д. (2010). *Добра управа*, Београд, Правни факултет Универзитета у Београду, стр. 266.
6. Ђерђа, Д. (2012). *Основе управног права Европске уније*, Ријека.
7. Isaac, G. (1989). *Droit communautaire général*, Paris.
8. Kent, P. (1992). *European Community Law*, London.
9. Кошутић, Б. - Ракић, Б. - Милисављевић, Б. (2013). *Увод у право европских интеграција*, Београд. стр. 150-152.
10. Лангрод, Ж. (1960). *Управни поступак и управно право*, Завод за јавну управу, Београд, стр. 3-5.
11. Милетић, С., - Југовић, С. (2019). *Право унутрашњих послова*, Криминалистичко полицијски универзитет, Београд, стр. 49-79.
12. Петровић, М. – Прица, М. (2013). *Увод у велике правне и управне системе*, Ниш, стр. 343.
13. Ракић, М. Б. (1997). *Хармонизација југословенског права са правом Европске уније*, Београд.
14. Schwarze, J. (2006). *European Administrative Law*, London.
15. Томић, Р. З. - Миловановић, Д. - Цуцић, В. (2017). *Практикум за примену Закона о општем управном поступку*, Београд, Министарство за државну управу и локалну самоуправу, стр. 20.
16. Васиљевић, А. (2019). Начела општег управног поступка, Правни живот, Београд, бр. 10. том II, str. 367-385.
17. Васиљевић, Д. (2016). Концепт ванредних правних средстава по новом Закону о општем управном поступку Републике Србије, Правни живот, Београд, бр. 10. том II, стр. 215-223.
18. Васиљевић, Д. (2009). Contribution to issues regarding law enforcement in a legal state in the function of crime supression, NBP-Journal of criminalistics and law, 14 (2), str. 33.

19. Васиљевић, Д. - Вукашиновић-Радојичић, З.. (2019). *Управно право*, Криминалистичко полицијски универзитет, Београд, стр. 281-285.
20. Вукадиновић, Д. Р. (1995). *Право европске уније*, Београд.
21. Вукашиновић-Радојичић, З. (2015). *Правна питања службеничких односа*, Београд, стр. 105-119.
22. Вукашиновић-Радојичић, З. (2013). *Европски службенички системи*, Београд, стр. 29-49.
23. Закон о неважности правних прописа донетих пре 6. априла 1941. и за време непријатељске окупације, Службени лист СФРЈ, БР. 86/1946.
24. Закон о општем управном поступку, Службени лист СРЈ, бр. 55/96.
25. Закон о општем управном поступку, Службени лист СРЈ, бр. 33/97 и 31/2001.
26. Закон о општем управном поступку, Сл. лист СРЈ, бр. 33/97 и 31/2001 и Сл. гласник РС, бр. 30/2010.
27. Закон о општем управном поступку, Службени гласник РС, бр. 18/2016.
28. Weatherill, S. (1995). *Law and Integration in the European Union*, Oxford.
29. Wiener, C. (1981). Service public ou autogestion: d' un mythe à l' autre? У књизи: Service public et liberté. Mélanges offert au Professeur Robert – Edouard Charlier, Editions de L' Université et de l' enseignement moderne, Paris, str. 332-336.

CRISIS-MANAGEMENT AND CRIMINAL-PEDAGOGY IN PRISONS

Peter Ruzsonyi, PhD[1]
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

Abstract: The criminal justice process includes: finding out information about the committing criminal offense; investigation; arrest of the suspect; imposition of a sentence; in many cases the enforcement of imprisonment and finally the reintegration of the ex-prisoner. The citizens' sense of security depends on the completeness of this process. Nonetheless, during the analysis of the "contemporary security challenges" the law enforcement profession deals undeservedly little with imprisonment and the reintegration of detainees. This is a huge mistake, because prison systems are in a global crisis and their effectiveness is highly questionable. The paper strives to describe and analyse the typical causes of the crisis as well as to propose measures to improve the situation: the development of physical conditions is certainly important, but the pedagogical training of the staff and the organization and conduct of the daily life of prisoners – according to unified penological principles (criminal-pedagogy) – must be the focus of the activity.

Keywords: prison-crisis, officers' training, criminal-pedagogy, reintegration, organizing principle

INTRODUCTION

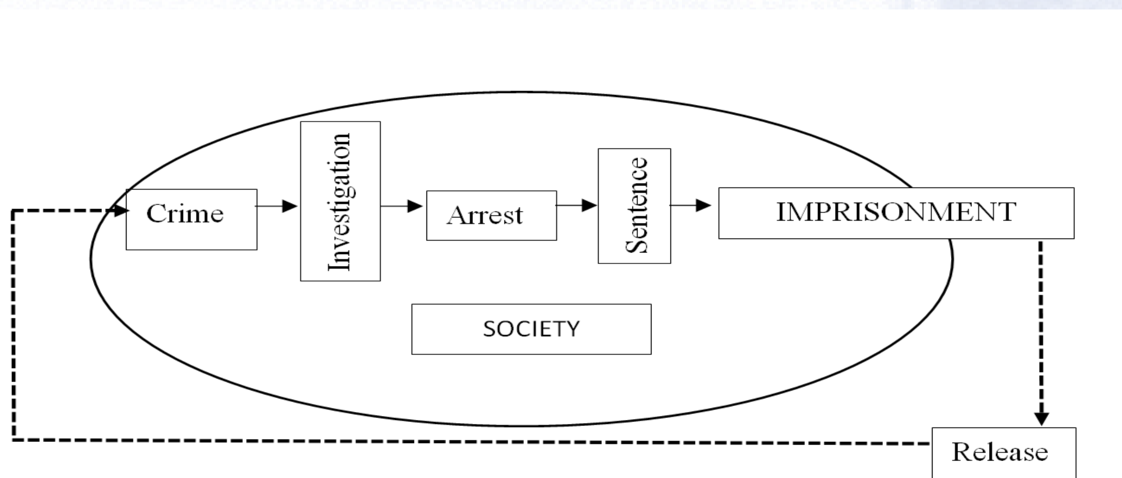
Due to the emergence and rapid spread of the COVID-19, prisons have become one of the defining contemporary security challenges of the present age almost all over the world within a few months. It would be a mistake, however, to think that the situation in prisons was solely a consequence of the coronavirus. The process has been going on for decades, but the average citizen could hardly notice - and I fear they do not even want to notice - the problems in prisons, as most of the time they do not even want to know what is going on within the prison walls. A bigger problem is that in some countries both the criminal justice system and the law enforcement profession pay undeservedly little attention to the state of prisons and the treatment of prisoners. It is no exaggeration to say that countless

1 ruzsonyi.peter@uni-nke.hu

prison systems are now clearly in crisis and the problem is much more complex and significant than the current health emergency. At the same time I would like to make it clear that this crisis situation - in my interpretation - is an uncertain status from which the situation can turn for the better and for the worse. Ergo a condition that professionals need to pay attention to and do everything possible to ensure that this crisis situation does not turn into an extremely critical condition, which can mean a serious disturbance, an emergency and, and the possible inoperability of the system.

Numerous evidence-based researches prove that the vast majority of prisons today are no longer able to perform their basic function: to facilitate the effective reintegration of prisoners (World Population Review, 2020).

Figure 1: The archaic process of criminal justice



Source: Drawn by the author

"Classical" prisons based on centuries-old traditions are largely located on the periphery of society — both philosophically and physically. We should not be surprised that the re-offending and recidivism among the released who had been exiled from society is generally very high (Yukhnenko, Sridhar & Fazel, 2019). How could the released prisoners be prepared to be reintegrated into the real world by moving them away from the real world? In my opinion there is very little chance for this in the case of prison systems operating in the "classical" form. Another major obstacle to effective reintegration is that when prisoners leave the prison gate they usually find themselves outside society. Without a supportive environment and a financially stable family background they hardly have a chance to provide themselves with work, accommodation and a normal livelihood. Of course, recidivism is not compulsory in their case either, but its risk is certainly very high.

In the present study we review the characteristics of the prison crisis on an international level, the impact of the COVID-19 epidemic on prisons and finally draw attention to a new possibility to use criminal-pedagogy as a possible alternative to reform the prison systems.

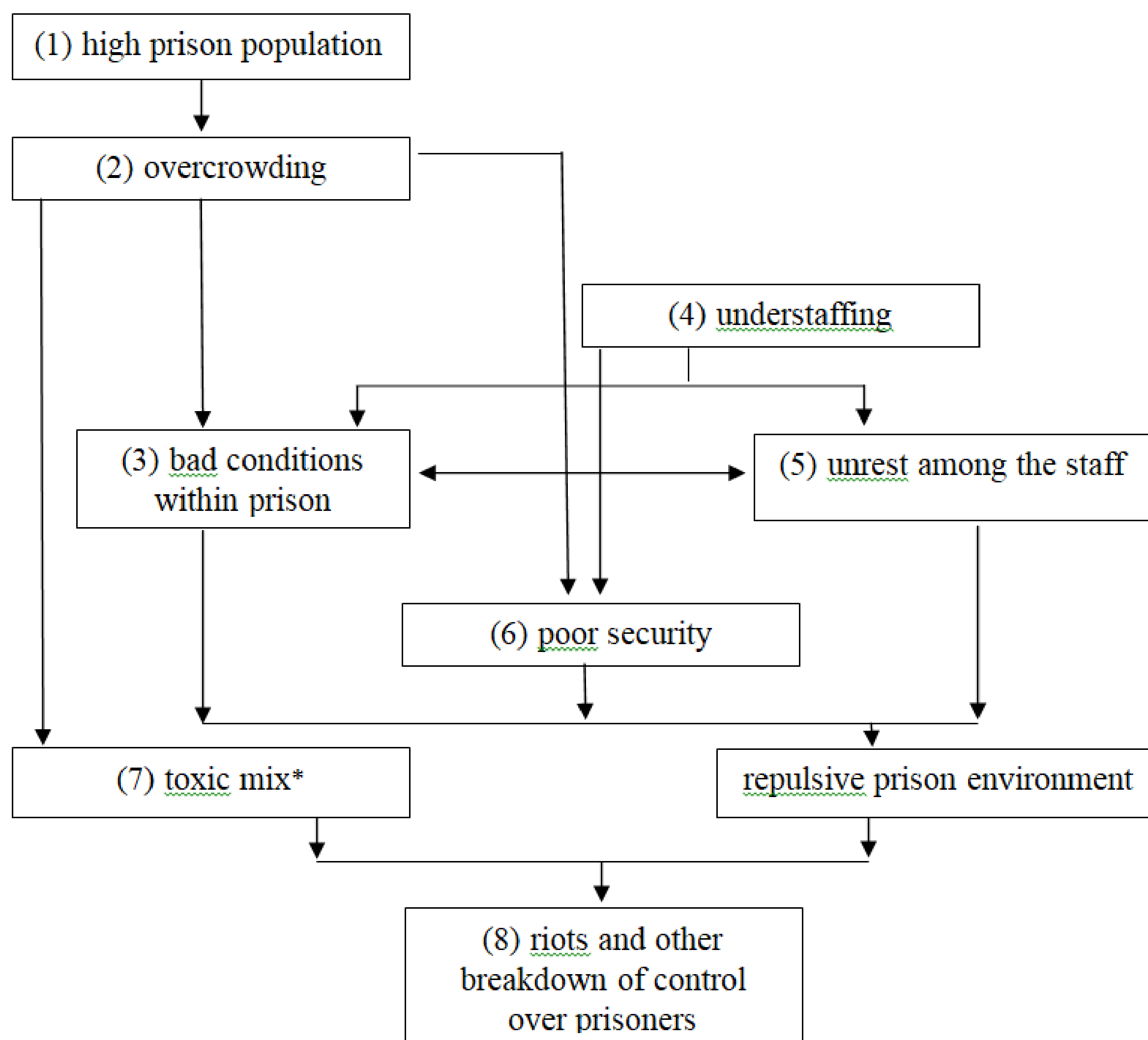
WORLDWIDE CRISIS IN THE FIELD OF IMPRISONMENT

This type of crisis has been increasing nowadays. Catherine Heard – the director of the Institute for Criminal Policy Research World Prison Research Programme – said: "Prison has a poor track record

of reducing reoffending or equipping people for a worthwhile life on release. (…) Data show, many of the countries where the number of prisoners has grown the most in recent years also have some of the worst levels of overcrowding. We shouldn't be surprised when overcrowded, under-resourced prisons produce violence, despair, and more crime." (Walmsley, 2018) Russian prisons are, for example, famous for their overcrowded conditions. The Kresty penal institution in Saint Petersburg is said to be one of the most overcrowded prisons in the world. The designed capacity is 3000 members, but the real number is never under 10,000. Every inmate has 4 m2 of their own space, and 15 minute long shower per week. (Ürmösné, 2018)

The experts from Great Britain and the United States of America are more critical and outspoken. Prins's opinion is, that "the American criminal justice system is in a state of crisis" (Prins,1996: 493). Generally, the physical conditions of the prisons are outrageous. The government has been issued an unprecedented warning that inmates are being driven to take their lives as inspectors reveal conditions "worse than they've ever seen" (Bulman, 2018).

Figure 2: *The orthodox account of penal crisis*



* Toxic mix: a combination of different types of difficult prisoners within a single institution.
Source: Cavadino, Dignan & Mair (2013: 11)

Ricciardelli and his co-authors state that "it must be recognized that prison, in its past or present form, has not been deemed successful for the rehabilitation of prisoners, the deterrence or prevention of future criminal behaviors and providing retribution – serving justice to those who were victimized by crime" (Ricciardelli et al, 2014: 117).

Krason's judgement is that criminal law and criminal justice in the United States may reasonably be said to be in a state of crisis. The purpose of imprisonment – and more broadly of punishment – seems to be obscured (Krason, 2013).

The United Nations has the most comprehensive insight into the evolved prison crisis. Its report summarizes the recent situation: "A large number of prison systems around the world are at a stage of crisis, the serious effects of which harm prisoners, their families and societies as a whole. The reality in many prisons tends to be not only far from international standards, but also risks undermining the ultimate purpose of a sentence of imprisonment: the protection of society from crime." (United Nations, 2018) Elsner's opinion is to be followed: handling this serious situation is becoming more and more difficult, because many experts agree that the penal systems worldwide are in a state of crisis these days (Elsner, 2006).

Cavadino and his co-authors offered the orthodox interpretation for the root causes of prison crisis. According to their opinion the 'crisis' has seven interlinking factors which culminate in grave problems for the prison system. To start, (1) the high prison population leads to both (2) overcrowding and (3) bad conditions (for both staff and inmates). In turn, this leads to (4) understaffing, (5) staff unrest and (6) poor security. The authors suggest that these factors symbolise the end product of the crisis; (7) the toxic mix of prisoners which ultimately lead to (8) riots and disorder. (Cavadino, Dignan & Mair, 2013: 11)

A crisis or near-crisis situation has developed in other fields related to prisons. Some authors, institutions and research groups have named additional issues:

1. The mental health of prisoners has been steadily deteriorating for decades (Kupers, 1999; James & Glaze, 2006; Haney, 2006; Council of State Governments Justice Center, 2015).

2. A relatively recent but significant problem is the drastic increase in the number of elderly detainees (Aday, 2003).

3. Race- and ethnicity-based prison gangs' activity (van der Kolk, 1987; Hunt, Riegel, Morales & Waldorf, 1993; Western, 2002; McDonald, 2003; Hill, 2004, 2009; Valdez, 2005; Knox, 2005; Skarbek, 2012).

4. Prevention and control of COVID-19 in prisons – various health organizations began relatively early to prevent and control the spread of the coronavirus epidemic within prisons. It is unfortunate, however, that in the first months their opportunities were mostly limited to emphasizing the dangers of the situation and reassuring the detainees and their relatives. The World Health Organization Regional Office for Europe (2020: 1) declared, that "prison health is part of public health so that nobody is left behind. As part of public health response, WHO worked with partners to develop a set of new materials on preparedness, prevention and control of COVID-19 in prisons and other places of detention."

5. Economic crisis – Christine S. Scott-Hayward (2010) pointed out in a comprehensive analysis that in the US "the fiscal crisis began in December 2007 has spurred lawmakers to reconsider who

is punished and how. High recidivism rates among formerly incarcerated people have also given officials cause to re-evaluate existing policies" (p. 2). The author outlined a gloomy picture of the measures expected to alleviate the economic crisis saying that "the ongoing strategies include reducing personnel costs, downsizing or eliminating programs, and closing facilities. States are also turning toward other administrative efficiencies as a means of cutting costs, including changes in food services, implementing new technology, and exploring strategies to save on energy costs" (p. 10). Despite the difficulties, however, the Centre on Sentencing and Corrections in its 2010 study takes an optimistic approach. According to their opinion, the only way forward is if "for correction agencies, this means operating facilities in the most efficient ways possible and reducing costs by identifying offenders who can be safely supervised in the community at less cost than in a prison cell. The fiscal crisis will continue to prompt states and the federal government to re-examine their policies and practices. Through efforts to reduce spending, policy makers are learning about less punitive, more effective ways to treat individuals who commit crimes, especially nonviolent crimes." (p. 29)

6. Prison riots – one of the most tragic consequences of the COVID-19 outbreak were riots caused by the vulnerability, fear and despair of prisoners. The situation was most favourable in Europe. Probably due to the swift and decisive action of our continent's penitentiary organizations it was only in Italy that a prison uprising took place in the first period after the outbreak (11 March) which resulted in the deaths of several people when the authorities were still completely unprepared and when, moreover, Lombardy was the the centre of infection in Europe.

In prisons of the American continent the situation has developed significantly worse, with prisons becoming more disorderly and unsafe (Blomberg & Lucken, 2000; Hagan, 1995). Rupert Colville, the spokesperson of the UN High Commissioner for Human Rights announced on 5th May, 2020 that "thousands of inmates and prison officials have already been infected across North and South America. In many countries, the increasing fear of contagion and lack of basic services – such as the regular provision of food due to the prohibition of family visits – have triggered protests and riots. (…) Some of these incidents in detention centres have turned extremely violent. The latest happened on 1 May, in Los Llanos penitentiary in Venezuela, where a revolt by prisoners reportedly resulted in 47 inmates losing their lives. Four days earlier, on 27 April, a riot broke out in the Miguel Castro, Castro prison in Peru leaving nine inmates dead. On 21 March, 23 inmates died after security forces intervened to supress rioting in La Modelo prison in Colombia. Other incidents, including attempts to escape, have been registered in detention centres in Argentina, Brazil and Colombia, Mexico and the U.S." (Colville, 2020:1) Infection rates and the risk of infection in the US have reached almost inconcievable proportions. According to calculations by Robert P. Alvarez, employee of the Institute for Policy Studies "in Tennessee, where a person in prison is nearly 5,000 percent more likely than someone walking the streets to contract the coronavirus, and 255 percent more likely to die from it. Or Marion Correctional Institution in Ohio, which has a nearly 90 percent infection rate." Mr. Alvarez stressed that "it isn't just the incarcerated who are at risk — it's the people who work in prisons. In Indiana, for example, someone who works at a prison is 1,116 percent more likely than your average Hoosier to be infected" (Alvarez, 2020: 1). In Brazil, 1,389 of prisoners have escaped from four semi-open prisons in São Paulo state after Easter prison holidays were cancelled and restrictions on visitors tightened because of coronavirus (Ponte, Marc 16, 2020: 1). In Venezuela, a riot at a prison in Portuguesa state left at least 46 people dead and 60 injured (Reuters, May 2, 2020: 1).

Extreme conditions have also developed in Australia. According to Kriti Sharma "for the 43,000 people in Australia's overcrowded prisons, social distancing is impossible. Lockdowns put people with psychosocial or cognitive disabilities – already at risk of being manipulated or abused by others – at heightened risk of violence, especially since independent oversight of facilities is limited." (Sharma,

2020: 1) Thalia Anthony, a professor at the University of Technology Sydney, assesses the situation in a similar way: "Australia's overcrowded prisons are unable to guard against the rapid spread of diseases. It is a combined product of the facilities and inadequate sanitation and health services in prisons." (Anthony, 2020: 1)

The situation is also tense in Africa. In countries such as the Democratic Republic of Congo, prisons are frequently characterised by overcrowding, cramped conditions, malnutrition, poor hygiene, inadequate sanitation and limited access to health care. In addition to human rights and humanitarian concerns, situations such as the COVID-19 pandemic, heighten the risk of riots and breakouts, and endangering public health and security (United Nations News, May 5, 2020: 1).

As a summary we can state that alarm has been sounded all over the world for imprisonment. Unfortunately, the "treatment" factor is completely missing in the authors' expounding. Undoubtedly, the quality of the daily routine of prisons, the level of the cooperation between the staff and inmates and a sort of comprehensive organizing principle of prison life determine (reduce or extend) the prison ambience and the level of prison crisis. In such a frustrating and shocking situation, experts and researchers have to seek new and innovative recommendations. One of the new methods should be the utilization of the potentials of criminal-pedagogy.

INTRODUCTION OF CRIMINAL-PEDAGOGY

The concept of criminal-pedagogy as a science is certainly in need of an introduction, especially when it comes to countries it is not as well-known as – for example – in Hungary.

Definition of criminal-pedagogy

Criminal-pedagogy is a special scope of general pedagogy which deals with shaping of the personality through correctional education of persons who are in danger of criminality; who commit antisocial misconducts; criminals who are sentenced to imprisonment or putting to juvenile approved school or juvenile reformatory. During the pedagogical procedure it tries to provide for aligned developing of cognitive and social competencies. Its primary goal is promoting a constructive way of life. The constructive way of life means that a human being's lifestyle is personally effective and socially useful at the same time. This type of behaviour modification based on the prisoners' needs system (Ruzsonyi, 2001, 2009). One of the relevant specialized scientific fields of criminal-pedagogy is the closed-institution pedagogy (dealing with prisoners and juvenile delinquents) and its most important part is the correctional pedagogy (dealing with prisoners) (Ruzsonyi, 2014).

THE ROLE AND RESPONSIBILITY OF CRIMINAL-PEDAGOGY

Successful reintegration is very much a realistic goal, which reflects the sharing of these concepts. Undoubtedly the professional efforts that are pedagogically valuable can only be the results of a structure in which the topmost place is dedicated to reintegration (Macallair, 1993) – or, in other words, establishing a constructive way of life – and which contributes to and supports creating conditions that are necessary for the reintegration of the subjects. Thyssen was absolutely right when claiming that prison systems should do more than just make prisoners develop new habits and behavioural customs: they should directly influence the inner workings that motivate them. In order to achieve a signifi-

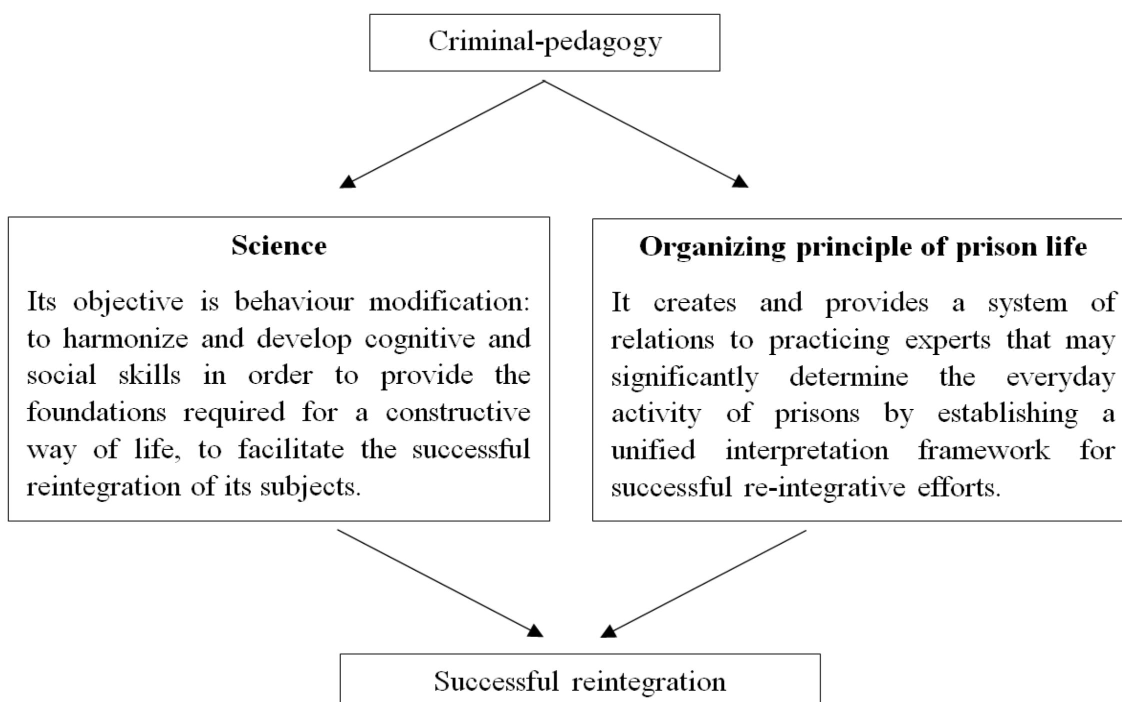
cant improvement in one's personality, it is vital to secure the voluntary cooperation and responsible decision-making of the subjects and at the same time respect their self-esteem and sovereignty while avoiding harming their privacy (Thyssen, 2003).

However, the emphasis of the fact of re-educating, and by this, correcting prisoners is not the goal, and neither is education, which in itself cannot be an independent goal, but only a tool which can be used to refine characteristics that lie within people. It is crucial to add, though, that while it is an extremely versatile tool, pedagogical personality-improvement cannot become an exclusive tool. The system to be offered should be a complex in which the employment of inmates, the psychological aid, education, spiritual and vocational training provided to them all have important roles. Taking into account the facts above, criminal-pedagogy can enjoy being the "first among equals" as it is capable of creating a supporting environment within prisons which provides further options for the resocialization of prisoners.

Undoubtedly, criminal-pedagogy is not a panacea, but there is a certainty that neglecting such a field will result in severe long-term setbacks which would reduce the prisoners' chances for successful resocialization and reintegration.

Creating new methods requires an aspect – and professional reasons – which can integrate the prisons' pedagogical methods with the use of social and psychological devices dedicated to solving the conflicts between prisoners and their environment; the creation of a self-sustaining and constructive way of life; general and vocational trainings, spiritual care and the contribution of civilian organizations alike. It is important to note that the needs associated with security and the prisoners' personalities have to be harmonized in a goal-oriented manner in order to avoid any damaging overlaps and harmful effects associated with a zero-sum game (Ruzsonyi 2018: 121). The theory of criminal-pedagogy and the related practice might contribute to this effort.

Figure 3: The double function of criminal-pedagogy



Source: Drawn by the author

In summary, it is a fact that rehabilitation is effective in reducing the criminal behaviour in at least some of the offenders. Imprisonment – and even criminal-pedagogy – is not a cure-all for all criminals but an important and in many cases necessary tool for crime prevention.

The evidence from the meta-analyses suggests that effective correctional treatment programs appear to follow some basic principles. In order to effectively reduce recidivism, it appears that treatment programs should necessarily:

(1) Be carefully designed to target the specific characteristics and problems of offenders that can be changed in treatment (dynamic characteristics) and those that are predictive of the individual's future criminal activities (criminogenic) such as antisocial attitudes and behaviour, drug use, anger responses;

(2) Be implemented in a way that is appropriate for the participating offenders and that utilizes therapeutic techniques that are known to work (e.g., designed by knowledgeable individuals, programming provided by appropriately educated and experienced staff, use of adequately evaluated programs) and require offenders to spend a reasonable length of time in the program considering the changes desired (deliver sufficient dosage);

(3) Give the most intensive programs to offenders who are at the highest risk of recidivism;

(4) Use cognitive and behavioural treatment methods based on theoretical models such as behaviourism, social learning or cognitive behavioural theories of change that emphasize positive reinforcement contingencies for prosocial behavioural and are individualized as much as possible (See more: Dowden & Andrews, 2009; Landenberger & Lipsey, 2005).

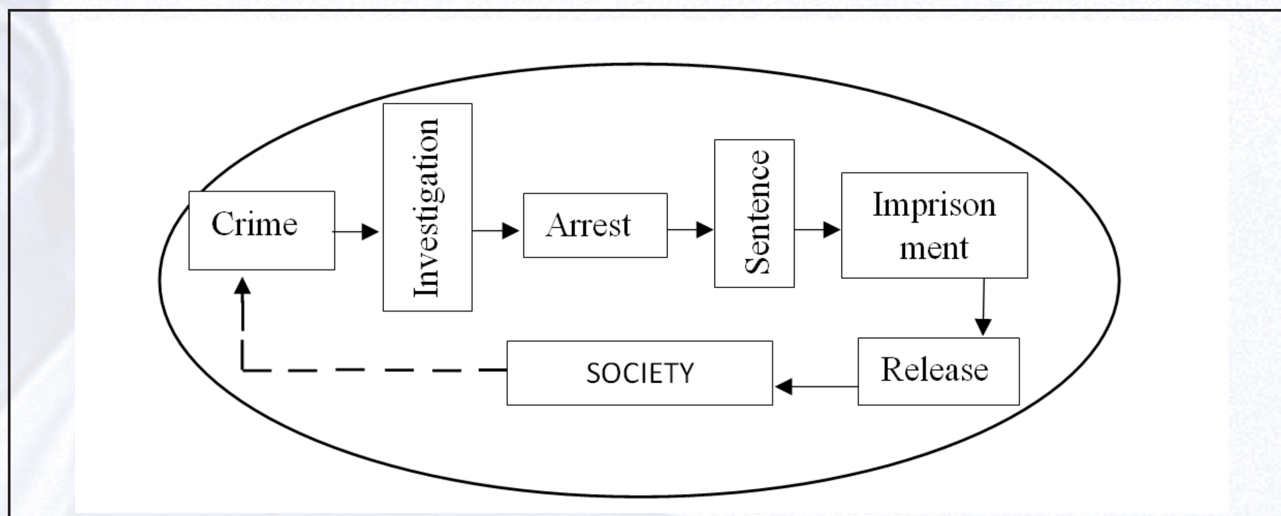
It is unquestionable that the above would result in successful rehabilitation/reintegration, but there is one important deficiency. The overall organizing principle of these elements is missing from the previous scientific approach. Yet it is convincing that criminal-pedagogy is ready and capable of coordinating and harmonizing all the supportive initiatives and methods and reducing the negative influences at the same time.

CONCLUSIONS

I am confident that this study has proven that the professional renewal of prisons - and thus the response to one of the key security challenges of the present - can only be carried out after studying the development and current state of the crisis situation within penal systems on a scientific basis. In an absurd way, the COVID-19 worldwide epidemic has helped and accelerated facing with problems; psychological "prison walls" have become more permeable. The direct impact of the pandemic is, of course, devastating: the high level of infection within prisons, the large number of deaths of staff members and detainees, and the prison uprisings that also claim human lives are tragic. It is unfortunate that such serious events and, inextricably, a further deterioration of conditions had to take place in order for the existence of prisons and the conditions there to reach the stimulus threshold of society. At the same time the growing public interest on the matter is encouraging: the public has become aware of the current situation and conditions in the prisons and many questions have been raised as a result. I hope that this change of attitude will encourage the criminal justice profession in the narrower and broader sense to be critical of the situation, to find quick solutions to acute problems, and at the

same time to seek scientific and professional answers to the crisis that has gradually deepened over the decades.

Figure 4: The optimal functioning of the criminal justice system



Source: Drawn by the author

The COVID-19 epidemic highlighted the weaknesses of the prison system. After the epidemic – hopefully – it would be a mistake to restore all the procedures and conditions that contributed to the pre-epidemic situation. Imprisonment cannot be the end of the judicial process. The effective reintegration of released prisoners depends on the existence of at least two basic conditions. (1) Internal condition: prisons cannot be "man-warehouses" that serve only retaliation and deterrence. Prisons need to operate in a way that promotes long-term change in the behaviour of detainees in order to develop a constructive lifestyle (behaviour modification). One – but certainly not the only – promising way to do this is to apply the scientific findings of criminal-pedagogy as a system-organizing principle. (2) External condition: prisons as institutions of society deal with offenders who remain members of society during their sentence and who try to reintegrate into the same society after their release. Prisons alone are not able to perform their social function, they need help and support from the narrower and wider environment all the time. The combined fulfilment of these two conditions does not in itself guarantee the effective resocialization of the prisoners but at least creates a realistic chance of it.

REFERENCES

1. Aday, R. (2003). *Aging prisoners: Crisis in American corrections*. Santa Barbara, CA: Praeger Publishers.
2. Alvarez R.P. (2020, May 20). A Simple Solution for the Coronavirus Crisis in Prisons. *Institute for Policy Studies*, Accessed on July 8, 2020 https://ips-dc.org/solution-coronavirus-crisis-prisons
3. Anthony, T. (2020). Prisons face coronavirus crisis. Sydney: *University of Technology*, Accessed on July 8, 2020 https://www.uts.edu.au/news/business-law/prisons-face-coronavirus-crisis
4. Blomberg, T.G. & Lucken, K. (2000). *American Penology: A History of Control*. New York: Aldine de Gruyter.

5. Bulman, May. (2018, January 19.). Prison crisis laid bare as Government ordered to act over inmate death and „dramatic decline" in conditions. *Independent*, Accessed on July 1, 2020 http://www.independent.co.uk/news/uk/home-news/prison-crisis-laid-bare-as-government-issued-unprecedented-warning-over-dying-inmates-as-inspectors-a8166676.html/
6. Cavadino, M., Dignan, J., & Mair, G. (2013). *The Penal System An Introduction*. London: SAGE.
7. Center on Sentencing and Corrections (2010). *The Continuing Fiscal Crisis in Corrections Setting a New Course*. New York: Vera Institute of Justice, Downloaded July 1, 2020 https://static.prisonpolicy.org/scans/vera/The-continuing-fiscal-crisis-in-corrections-10-2010-updated.pdf
8. Colville, R. (2020, May 5). COVID-19: Americas / prison conditions, *UN High Commissioner for Human Rights*, Accessed on July 2, 2020 https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25864&LangID=E
9. Council of State Governments Justice Center (2015). *Launch of national initiative offers counties research-based support to address growing mental health crisis in jails*, Downloaded July 9, 2020 http://csgjusticecenter.org/mental-health/posts/launch-of-national-initiative-offers-counties-research-based-support-to-address-growing-mental-health-crisis-in-jails
10. COVID-19: UN teams step up efforts to protect rights in prisons, as revolts intensify worldwide. *United Nations News* (2020, May 5), Accessed on July 8, 2020 https://news.un.org/en/story/2020/05/1063292
11. Dowden, C., & Andrews, D.A. (2009). The Importance of Staff Practice in Delivering Effective Correctional Treatment: A Meta-Analytic Review of Core Correctional Practice. *International Journal of Offender Therapy and Comparative Criminology*. Downloaded July 1, 2020 http://www.sagepub.com/vaughnstudy/articles/corrections/Dowden.pdf.
12. Elsner, A. (2006). *Gates of Injustice: The Crisis in America's Prisons*. Upper Saddle River, New Jersey: Prentice Hall.
13. Hagan, J. (1995). The imprisoned society: Time turns a classic on its head. *Sociological Forum*, 10(3), 520-524.
14. Haney, C. (2006). *Reforming Punishment: Psychological Limits to the Pains of Imprisonment*. Washington, DC: American Psychological Association Books.
15. Hill, C. (2004). Gangs. *Corrections Compendium*, 29, 8-23.
16. Hill, C. (2009). Gangs/security threat groups. *Corrections Compendium*, 34, 23-37.
17. Hunt, G., Riegel, S., Morales, T. & Waldorf, D. (1993). Changes in prison culture: Prison gangs and the case of the "Pepsi Generation." *Social Problems*, 40(3), 398-409.
18. James, D.J. & Glaze, L.E. (2006). *Mental Health Problems of Prison and Jail Inmates*. Washington, DC: U.S Department of Justice, Bureau of Justice Statistics.
19. Knox, G.W. (2005). *The problem of gangs and security threat groups (STG's) in American prisons today: Recent research findings from the 2004 prison gang survey*. Downloaded July 2, 2020 http://www.ngcrc.com/corr2006.html
20. Krason, M. S. (2013, May 1). On Our Dysfunctional Criminal Justice System. *Crisis Magazine*. Downloaded July 4, 2020 http://www.crisismagazine.com/2013/on-our-disfunctional-criminal-justice-system

21. Kupers, T. (1999). *Prison Madness: The Mental Health Crisis Behind Bars and What We Must Do About It*. San Francisco, CA: Jossey-Bass.
22. Landenberger, N.A., & Lipsey, M.W. (2005). The positive effects of cognitive-behavioral programs for offenders: A meta-analysis of factors associated with effective reatment, *Journal of Experimental Criminology*, 1(4), 451-476.
23. Macallair, D. (1993). Reaffirming rehabilitation in juvenile justice. *Youth & Society*, 25(1), 104-125.
24. McDonald, K. (2003). Marginal youth, personal identity, and the contemporary gang: Reconstructing the social world? In: L. Dontos, D. Brotherton, & L. Barrios (Eds.), *Gangs and Society: Alternative Perspectives* (pp. 62-74), New York: Columbia University Press.
25. Prins, K. (1996). *A State Initiative forward Restorative Justice: The Minnesota Experience*. Monsey, NY.: Restorative Justice Press.
26. Prisões de SP promovem maior onda de rebeliões desde 2006. *Ponte* (March 16, 2020), Accessed on July 6, 2020 https://ponte.org/prisoes-de-sp-promovem-maior-onda-de-rebelioes-desde-2006/
27. Prisoners take guards hostage in Brazil's coronavirus-hit Manaus. *Reuters* (May 2, 2020), Accessed on July 8, 2020 https://www.reuters.com/article/us-brazil-prison-rebellion/prisoners-take-guards-hostage-in-brazils-coronavirus-hit-manaus-idUSKBN22E0KB
28. Ricciardelli, R., Crichton, H., & Adams, L. (2014). Stuck: Conditions of Canadian Confinement. In: M. Deflem (Ed.), Punishment and Incarceration: A Global Perspective. *Sociology of Crime, Law and Deviance Series* 19, (pp. 95-120), Bingley, UK: Emerald Group Publishing.
29. Ruzsonyi, P. (2001). Bűn – büntetés – reszocializáció. Belügyi Szemle, 49(2), 39-62.
30. Ruzsonyi, P. (2009). Kriminálpedagógia és reintegráció. In: Borbíró A., Kiss A., Velez E., & Garami L. (Eds.), *A kriminálpolitika és a társadalmi bűnmegelőzés kézikönyve II*. (pp. 299-324.) Budapest: IRM.
31. Ruzsonyi, P. (2014). Pönológiai alapvetések. In: Ruzsonyi, P. (Ed.), Tendenciák és alapvetések a bűnügyi tudományok köréből. (pp. 199-227) Budapest: Nemzeti Közszolgálati és Tankönyv Kiadó Zrt.
32. Ruzsonyi, P. (2018). *Criminal Pedagogy and the Reintegration of Prisoners*. Budapest: Dialog Campus.
33. Scott-Hayward, C.S. (2010). *The Fiscal Crisis in Corrections: Rethinking Policies and Practices*. Vera Institute of Justice.
34. Sharma, K. (2020, April 16). Coronavirus is a Ticking Time Bomb for Australia's Prisons. *Human Rights Watch*, Accessed on July 2, 2020 https://www.hrw.org/news/2020/04/16/coronavirus-ticking-time-bomb-australias-prisons
35. Skarbek, D. (2012). Prison gangs, norms, and organizations. *Journal of Economic Behavior and Organization*, 82(1), 96-109.
36. Thyssen, O. (2003). Punishment, confinement and care. In: The 9th EPEAInternational Conference on Prison Education – *Conference Report*. Langesund: Norway, 17-25.
37. United Nations Office on Drugs and Crime (2018). *Addressing the global prison crisis STRATEGY 2015-2017*. Downloaded July 4, 2020 https://www.unodc.org/documents/justice-and-prison reform/UNODC_Strategy_on_Addressing_the_Global_Prison_Crisis.pdf

38. Ürmösné, S.G. (2019). Amazing penal institutions and the dwelling circumstances of inmates. *Internal Security,* 11(2)*, 179-190.*

39. Valdez, A. (2005). Mexican American youth and adult prison gangs in a changing heroin market. *Journal of Drug Issues*, 35(4), 843-868.

40. van der Kolk, B. (1987). The role of the group in the origin and resolution of the trauma response. In: B. van der Kolk (Ed.), *Psychological Trauma* (pp. 153-172). Washington, DC: American Psychiatric Publishing.

41. Walmsley, R. (2018). *World Prison Population List*, 2018. The Institute for Criminal Policy Research (ICPR) at Birkbeck: University of London. Downloaded July 1, 2020 http://www.prisonstudies.org/sites/default/files/resources/downloads/world_prison_population_list_11th_edition_0.pdf.

42. Western, B. (2002). The impact of incarceration on wage mobility and inequality. *American Sociological Review*, 67(4), 477-498.

43. World Health Organization Regional Office for Europe (2020). *Prevention and control of COVID-19 in prisons and other places of detention*, Downloaded July 9, 2020 https://www.euro.who.int/en/health-topics/health-determinants/prisons-and-health/focus-areas/prevention-and-control-of-covid-19-in-prisons-and-other-places-of-detention

44. World Population Review (2020). Recidivism Rates By Country, Downloaded July 6, 2020 https://worldpopulationreview.com/country-rankings/recidivism-rates-by-country

45. Yukhnenko, D., Sridhar, S. & Fazel, S. (2019, November 13). A systematic review of criminal recidivism rates worldwide: 3-year update. *Welcome Open Research*: US National Library of Medicine National Institutes of Health, Downloaded July 8, 2020 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6743246/

THE FUTURE OF POLYGRAPH IN HUNGARY

Árpád Budaházi, PhD[1]
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

Abstract: Domestic history of polygraph reaches back to 1978, to the very first application of polygraph examination in criminal proceedings in Hungary. Originally, was used in homicidal cases, then - as the years passed - the range of cases grew wider. The new Statute of Criminal Procedure, which entered into force in Hungary in 2018, placed instrumental credibility examination of testimonies among the evidence acts. Instrumental control of testimonies, which was effectively tantamount to polygraph examination may prove or confute the latter. However, some new measures have appeared in the past decades alongside the polygraph. Still, it is questionable whether these or new measures have led to the implementation of the instrumental credibility examination in the new Statute of Criminal Procedure instead of the polygraph. The aim of this study is to answer the questions about the future of the polygraph and possible alternatives.

Keywords: Polygraph, testimony, lie detection, graphometer, Layered Voice Analysis, Brain Fingerprinting

INTRODUCTION

The Statute of Criminal Procedure (XC. Statute of Criminal Procedure 2017, henceforth referred to IV SCP) entered into force on 1st July 2018 and introduced several innovations regarding certain legal institutions. (For details see Fantoly, 2019) One of these innovations is that instrumental control of testimonies became part of evidentiary procedures. This legislative measure is mainly due to the fact that polygraph tests, the most widespread method of instrumental testimony control, have gained recognition in the last few decades. On the other hand, the requirements of efficiency and opportuneness required from IV SCP give grounds for listing polygraph tests as a type of evidentiary procedure, since instrumental control of testimonies, just like some other evidentiary procedures, aim to orientate and facilitate investigations and the discovery of evidence. (Hautzinger, 2019) It is undecided whether the dominance of polygraph tests will be permanent or other not-validated methods, like Layered Voice Analysis or graphometer tests, can be used in criminal procedures.

1 budahazi.arpad@uni-nke.hu

THE RECENT PAST AND PRESENT OF INSTRUMENTAL CONTROL OF TESTIMONIES

The previous statute of criminal procedure (XIX Statute of Criminal Procedure 1998, henceforth referred to III SCP) regulated only polygraph tests among the methods suitable for instrumental control of testimonies. Polygraph tests had been used for two decades in Hungarian criminal cases, thus it seemed logical from the part of the legislator to include the most important provisions regarding the usage of the method in a statute of criminal procedure. As other validated methods were not available in Hungary there was no need to widen the scope of instrumental control methods in the statute. As stated in III SCP polygraph tests were performed by a consultant and the subjects could be witnesses of legal age or an accused of legal age. According to a guaranteed regulation, the condition of the performance of the test was the statement of consent of the tested subject (III SCP 180. § Subsection 2, 181. § Subsection 4, 182. § Subsection 2, 453. § Subsection 7). Although no other procedures than polygraph tests were named in the statute, some other methods were used in criminal cases, albeit very rarely. Two lie-detection methods – based on handwriting – were used, the computerized graphometric tests and graphometer. According to the practice, a consultant was appointed to perform the tests and the regulations concerning consultants were applied during computerized graphometric tests and graphometer tests. Although these two tests did not require the voluntary participation of the tested person, the statement of consent was required by law, as is the case with polygraph testing. The statement of consent is vital since a high level of cooperation is needed both in the case of polygraph tests and lie-detection tests based on handwriting. If the tested person does not comply with the instructions of the investigator, the procedure is interrupted or even not started. During a polygraph test, the tested person has to sit still for hours. The situation is the same with graphometer or computerized graphometric tests: if the tested person does not want to cooperate, he/she will not write even if it could be sanctioned. IV SCP does not give the opportunity to employ sanctions as it would hurt the voluntary principle, and the high level of cooperation is based on the intention of the tested person, thus sanctions would be ineffective. As Imre Kertész puts it: the undisturbed test itself proves not only the consent but much more: active cooperation. (Kertész, 1992)

IV SCP started a new era with its regulations; by introducing the notion of instrumental control of testimony it has created a present that is the beginning of the future. It is only the legal background, which does not imply significant changes in the practice. I do not consider it problematic since methods other than polygraph tests have not been validated yet. IV SCP has the intention of standardizing as it uniformly regulates the methods used in instrumental control of testimony. When instrumental control of testimony is applied, it can be performed only by a consultant, who can be questioned as a witness about the procedure and its findings (IV SCP 212. § Subsection 2). The questioning mainly concerns the environment of the examination, the reliability of the lie detection method and its operating principles.

Based on the 79. § Subsection 8 of the Government Decree on the Detailed Rules of Investigation and Preliminary Procedure (henceforth referred to Decree), the consultant is required to produce a memorandum about the instrumental control of testimony, which also includes its findings. This memorandum is part of the investigation files, that is, the memorandum produced according to the Decree substitutes the questioning of the consultant as a witness if authorities do not require further information about the investigation. The questioning of the consultant as a witness can take place mainly during hearings and rarely during investigations. In April 2018 I started an empirical research with a questionnaire, 131 of which was returned until 14th May, 2019. The respondents, 67 of the policemen/women who returned it, worked as investigators or examining officers. Only three out of

these 67 investigators questioned consultants of instrumental testimony control as witnesses during investigatory stage. The questioning of a polygraph consultant as a witness can be justified for example if the defense in a criminal proceeding does not accept the findings of the test because it claims that the accused was not in the right state to be tested, e.g. he/she was under the influence of a drug. Since the method and the reliability of polygraph tests are well known (at least by the authorities) the questioning of a consultant as a witness can be useful in the case of other instrumental methods, when the consultant is required to present the applied procedure to the investigative authority. Consultants are very rarely questioned as witnesses during hearings.

According to IV SCP 87. § Subsection 2 a witness under the age of 18 cannot be examined by the instrumental control of testimony. This regulation is based on the assumption that a successful control requires physical and mental maturity. It is especially true in the case of polygraph testing since it requires a certain level of maturity so that the tested person can be aware of the situation. The legislation can also be interpreted as the fulfilment of the obligation of forbearance in the case of witnesses under 18, who require special treatment e.g. protection against stressful procedures. Based on IV SCP 96. § Subsection 2 'the court, the public prosecutor's office and the investigative authority properly implement the 87. § Subsection 1 and 2 to promote the accused under 18 to exercise rights and undertake obligations.' As a consequence, the testimony of an accused under 18 cannot be controlled instrumentally.

INSTRUMENTAL CONTROL OF TESTIMONY AS EVIDENTIARY PROCEDURE

According to IV SCP, the instrumental control of testimony is part of the evidentiary proceeding. Its codification implies that the result of the instrumental control of testimonies ideally is a memorandum by the consultant, which can be used as means of evidence by the court, since the aim of the evidentiary procedure is to acquire means of evidence. But the practice of the court shows that the result of the instrumental control of testimonies is not accepted as means of evidence. This practice of the court developed when the III SCP was in force and instrumental control of testimonies was not an evidentiary procedure. According to the opinion of the Criminal Chamber of the Supreme Court 4/2007 BK, the list of the means of evidence does not include polygraph tests and the contribution of consultants. It established that polygraph tests cannot be used in court proceedings but minutes about the contribution of a consultant can be the subject of a hearing. The ruling of the High Court of Hungary on a particular case - Bhar.II.1271/2013/8 - supports the opinion 4/2007 BK, as it does not exclude the result of polygraph tests from the subjects of hearings i.e. they can be read during the procedure. Its aim seems to be that any factual data derived from legal means of evidence (typically from testimonies) are to be confirmed as established data. A consultant performing polygraph tests can be questioned as a witness similarly to official people questioning an accused person or witnesses but only about the circumstances of the testimony. As the ruling of Nyíregyháza Court of Law suggests, the result of polygraph tests can be made the subject of a hearing (Nyíregyházi Törvényszék, Nyíregyháza Court of Law 1.B.88/2013/81.). On the other hand, the ruling of the High Court of Hungary on a particular case (Bfv.III.953/2012/34.) mentions that as a result of polygraph tests not the truthfulness of the evidence (the content of the testimony) but the authenticity of the testifying person can be judged. It serves only as an aid, which helps orientation as the testimony itself is the subject of independent evaluation, i.e. the findings of polygraph tests cannot result in evidence. It is supported by the opinion of the Court of Appeal in Budapest (5/2014. IX.29. BK), which prescribes that expert opinions on the results of

polygraph tests cannot be qualified as means of evidence since they are not included in the itemized listings of III SCP. (For details see: Budaházi et al.) I have consulted several judges during the last few months. All of them were of the opinion that in spite of the regulations of IV SCP no modification is expected in judicial practice concerning polygraph tests.

The fact that instrumental control of testimonies became part of the evidentiary procedure suggests that it – first of all polygraph tests - has an important role in orientating investigations. I also agree with the judicial practice according to which the results of instrumental control of testimonies can strengthen or weaken testimonies. Primarily the authenticity of the testimony of the accused denying the perpetration of crime can be strengthened or weakened similarly to the result of re-enactment or presentation for identification. The questioning of the consultant is only an opportunity for the authorities, as the memorandum about the result of the test contains the most important conclusions. As I have mentioned above, the witness testimony of the polygraph consultant does not result in means of evidence, its aim is to clarify the circumstances of the examination, the procedure of the testing and its reliability. But it might lead to evidence as it can be followed by a confession. According to István Krispán, about one third of the accused make a confession after polygraph testing in homicide cases. (Krispán, 2005) In some cases polygraph tests can provide the investigative authorities with material means of evidence, when the location of the corpse can be identified as a result of the test. (Krispán & Pusztai, 2016)

VALIDITY PROBLEMS OF POLYGRAPH TESTS

There have been many validity studies in recent decades all over the world. If we examine the experiments we find some really favorable results for the polygraph, as in, for example, Sándor Bollók's conclusion. He only indicates a rate of error of 0.5 %. This result was reached at the beginning of the 1980s with a card test and participation of 150 high school students. (Bollók, 1987) Another experiment is detailed by Christopher J. Patrick and William G. Jacono. During this experiment forty-eight subjects were examined, twenty-four of whom were psychopaths. The validity of the polygraph examination was established as 73.2% based on this experiment. The reason of the unfavorable result could be that they also examined psychopaths. In case of psychopaths the false positive rate was 62.5%. This means that in 62.5% of all the honest answers were falsely qualified as deceiving. (Patrick-Jacono, 1989)

Regarding the question of validity - with the reservations detailed above - the validity examinations carried out in real cases seem more authentic. The validity of the polygraph is set at maximum 85% by Baskin, Edersheim and Price. (Baskin-Edersheim- Price, 2007) According to Kaye, the validity of the polygraph can be between 83% and 97%. (Kaye, 1987) In the United States an experiment was carried out with 2000 subjects. According to the results, false positive results were established eighty-five times. (National Research Council, 2003) This amounts to 4.25%. A Canadian Journal determines this rate between 12% and 23%. (Meijer-Verschuere-Merckelbach-Crombez, 2008) According to John J. Furedy and Ronald J. Heslegrave, the above rate is between 64% and 90%. (Furedy-Heslegrave, 1988) According to István Szíjártó, the validity data mentioned in different journal articles is between 70% and 90%. (Szíjártó) However, some authors publish higher numbers. (Budaházi, 2015)

Among the methods suitable for instrumental control of testimonies only polygraph tests are accredited in Hungary. The National Accreditation Authority (henceforth referred to as NAA) accredited the polygraph testing of the Hungarian Institute for Forensic Sciences in 2016. By issuing the accreditation certificate, the NAA guarantees the permanent quality of the process of polygraph testing and attests

that the procedure conforms to the standards. Prior to accreditation polygraph testing consultants participated in an accreditation training organized by the American Polygraph Association (henceforth referred to as APA) (Gárdonyi, 2019) As a result of the training the examination methodology of consultants employed by state authorities changed in several respects. Hungarian consultants adopted the validated test types used in the US. Furthermore, the numerical evaluation system became part of polygraph testing, thus increasing the objectivity of the polygraph method.

Thanks to APA training, the methodology of polygraph testing at state institutions developed during the last few years but polygraph examiners working for private enterprises did not take part in this training and they are not accredited by the NAA. Polygraph tests can be performed by anyone - special qualifications are not required, so that reliability of the examination gives reason for concern if the examiner who performs the examination in a criminal case is not employed by a state institution. The investigative authority primarily requests consultants employed by state institutions to perform polygraph tests but the accused or sometimes the witness usually request experts of non-state institutions to perform the test in order to be able to present the result of a test to the acting authority in a criminal case. It may cause problems if the testing does not meet the professional requirements as it makes the control testing performed by a state institution difficult or even impossible. According to Gergely Gárdonyi, polygraph examiners working for private companies 'are not independent financially from their customers and thus their impartiality is questionable', which gives reason to concern. In those cases when polygraph examiners are not appointed by the investigative authority the accused is free to neglect the unfavourable result and may fail to present it to the authorities. In this case it is important that the consultant of the state institution performing polygraph tests should be aware that the person was tested earlier.

In the event of polygraph testing in non-criminal cases it is doubtful whether the examination has real stakes, and an environment similar to criminal cases when the accused is threatened by long sentences in prison or penitentiary can be created. It is the responsibility of consultants that they can undertake the testing only if polygraph can work, i.e. fear responses can be triggered in the tested person. Fear responses can be generated, for example, if someone is afraid that he cannot get the desired job and denies something in his/her past that is incompatible with a favourable result.

Both in criminal and non-criminal cases the examiner or any other person must not exercise influence on the subject prior to testing as any false suggestive data can be recorded in the memory and alter the result. (Nyitrai, 2017) The assessment of the tested person is also an important requirement as it must be decided whether he/she is physically and mentally suitable for the examination. Consultants must be aware of several circumstances that might influence and distort the result.

INSTRUMENTAL CONTROL OF TESTIMONIES BESIDES POLYGRAPH

Research on the digitalization of handwriting has been going on since 1987 at the Institute of Graphology. During the graphometrical examination developed at the Institute questions are asked – similarly to polygraph tests – and the yes – no answers have to be given in writing. (Agárdi, 2018) In the last few decades computerized graphometrical examinations have been used in criminal cases but much less frequently than polygraph tests. The method is used only in Hungary and its validation took place only in Hungary. (Agárdi et al., 2009) While the computerized graphometrical examination is a kind of computer-based handwriting examination, graphometer examines the conscious and subconscious functions of the brain by using software. The first graphometer was constructed when polygraph tests

were known and widespread in Hungary. The instrument was developed by László Szidnai, a forensic graphology consultant and András Kiss, an IT engineer in 1994. (Farkas, 2005) The instrument has been used in forensic examinations since 2000. This method, similarly to computerized graphometrical examination, is not used abroad and has not been validated yet. LVA was developed by an Israeli company in 1997. (ANIMA POLYGRAPH, 2020) LVA is more widespread and better known abroad than in Hungary, where it is mainly used in the business world but a few years ago the Hungarian National Protective Service also started using it. Validation attempts have been made both in Hungary (Kis & Takács, 2018) and abroad, but the method has not been validated as thoroughly as polygraph testing.

Beside polygraph examinations these three methods are available in Hungary and all of them have been used in criminal cases. Their use is much less frequent than that of polygraphs, which is due the fact that their reliability is mainly dependent on the experience of the consultant, there are no objective data available and they are less known and not widespread methods. In the case of their application the authorities acting in criminal cases must evaluate the results of the examination with reservations and must not believe in the infallibility of the method. It does not mean that there are no alternatives to polygraph testing but further validation procedures are needed to prove their reliability.

CONCLUSION

Polygraph testing, the best known method of instrumental testimony control, has advantage over other methods since in the last few decades it has been validated several times and has been used in several millions of examinations. It is also the advantage of polygraph testing that it is used all over the world, which cannot be said about other methods.

Polygraph testing is not infallible, errors may happen, but the chance of mistakes is slight and authorities have learnt to use this method based on experiences of past decades. In the case of other instruments, the long experience of authorities is missing and there is no abundance of available objective testing data so it takes some time for them to be widespread. Although IV SCP theoretically allows the usage of methods other than polygraph tests authorities have not begun using other instruments in large numbers of cases. This does not seem likely to change in the near future. The instrumental control of testimonies has a role in evidentiary procedures but the memorandum containing the findings of the instrumental control of testimonies is not classified as means of evidence, it is a file containing data that disproves or supports a given testimony.

Instrumental control of testimonies is possible in cases other than criminal ones. They are primarily aptitude tests but the application of an instrument may be useful in other areas. In these cases lie detection is typically carried out by a polygraph but there are some reasons for concern because the examination performed by a non-state institute may not meet professional requirements. Although the stakes are not as high as in criminal cases, when the tested person is threatened by a jail sentence, the loss of a workplace or the failure of a job application it may have serious consequences, so it seems justified to regulate who and under what conditions is be eligible for using the polygraph and establishing the results of the examination.

REFERENCES

1. Agárdi, T. (2018). Az agy nem hazudik. Műszeres valóság-ellenőrzés – komputeres grafometriás vizsgálat. *Magyar Rendészet*, 2, 11-26.
2. Agárdi, T., Kovács, Zs., Hamperger, A., Holéczy, Zs. & Nemes, A. (2009*). Alternatív hazugságvizsgálati módszer kifejlesztése.* Közép-magyarországi regionális Innovációs Ügynökség innovációs nagydíj pályázata (KM-CSEKK-2006-00261, manuscript)
3. Az ANIMA Polygraph szervezeti és humán biztonsági kockázatelemző technológiája (2020), Downloaded April 20, *http://www.polygraph.hu/hangelemzes-szervezeti-human-biztonsag-kockazatelemzo-technologia.html*
4. Baskin, J. H., Edersheim, J. G. & Price, B. H. (2007). Is a Picture Worth a Thousand Words? Neuroimaging in the Courtroom. *American Journal of Law Medicine*. 2-3, 239-269.
5. Bollók, S. (1987) A poligráf – a szakértő szemével. *Belügyi Szemle*. 6, 41-47.
6. Budaházi, Á. (2015). *Polygraph Examinations. Blessing or Curse*. Saarbrücken: Lap Lambert Academic Publishing.
7. Budaházi, Á., Fantoly, Zs., Kakuszi, B., Bitter, I. & Czobor, P. (2020). *A műszeres vallomásellenőrzés fejlődési irányai. Budapest: Ludovika Egyetemi Kiadó (manuscript)*
8. Farkas, L. (2005): A tudományos grafológia néhány területe. *Pécsi Határőr Tudományos Közlemények IV. Tanulmányok a „Határőrség a minőség útján" című tudományos konferenciáról,* 243-253.
9. Fantoly, Zs. (2019). Gondolatok az új magyar büntetőeljárási törvényről. In: H. Kádár (Ed.), *A magyar és a román büntetőeljárási törvénykönyv vitatott és problémás kérdései* (pp. 23-40), Kolozsvár, Romania: *Forum Iuris Könyvkiadó*
10. Furedy, J. J. & Heslegrave, R. J. (1988). Validity of the Lie Detector – A Psychophysiological Perspective. *Criminal Justice and Behavior.* 2. 219-246.
11. Gárdonyi, G. (2019). A poligráfos vizsgálat jogi és szakmai környezetének változásai, a szakterület kihívásai. *Rendőrségi Tanulmányok.* 3, 83-93.
12. Hautzinger, Z. (2019). Gondolatok a kriminalisztika elméleti rendszeréről. *Jura.* 1, 84-93.
13. Kertész, I. (1992). Diogenész lámpása vagy elektronikus vallatópad? *Magyar Jog*. 11, 649-657.
14. Kaye, D. H. (1987). The validity of tests: caveant omnes. *Jurimetrics Journal*. 4, 349-361.
15. Kis, Gy. & Takács, Sz.(2018). A hazugságok típusai. *Magyar Rendészet.* 2, 45-51.
16. Krispán, I. (2005). Tájékoztatás és sugalmazás – avagy mire jó a poligráfos hazugságvizsgálat. *Belügyi Szemle.* 1,102-111.
17. Krispán, I. & Pusztai, L. (2016). Egy gyanús eltűnés poligráfos vizsgálatának módszertana és tanulságai. *Belügyi Szemle.* 7-8, 141-150.
18. Meijer, E. H., Verschuere, B., Merckelbach, H. L. G. J. & Crombez, G. (2008). Sex offender management using the polygraph: A critical review. *International Journal of Law and Psychiatry*. 31 (5), 423-429.
19. National Research Council (2003). *The Polygraph and Lie Detection. Washington: The National Academies Press.*

20. Nyitrai, E. (2017). A szervezett bűnözés elleni küzdelem büntetőjogi és kriminalisztikai eszközei, Doctoral Dissertation, PTE ÁJK Doktori Iskola.
21. Patrick, C. J. & Jacono, W. G. (1989). Psychopathy, Threat, and Polygraph Test Accuracy. *Journal of Applied Psychology*. 2, 347-355.
22. Szíjártó, I. (1998). Poligráf a büntetőeljárásban. *Belügyi Szemle*. 7-8, 30-45.

INTERNATIONAL LAW AS FRAMEWORK OF JUDICIAL COOPERATION IN CRIMINAL MATTERS

Academician Miodrag Simović, PhD
Judge of the Constitutional Court of Bosnia and Herzegovina;
Faculty of Law, University of Banja Luka, Republic of Srpska, B&H;
Academy of Sciences and Arts of Bosnia and Herzegovina

Amna Hrustić, MSc
Faculty of Law, Zenica University, B&H

Abstract: New forms of crime, mutual connection between perpetrators of criminal offences and the widely present element of foreignness in the commission of criminal offences condition the increasing cooperation of states in the prosecution and extradition of both the perpetrators and cases related to the commission of criminal offences. However, there are a number of criminal offences generally agreed to be international criminal offences. These criminal offences are not within the exclusive jurisdiction of international courts, so the perpetrators can be tried for them before national courts as well according to one of the principles of the establishment of competence. The Hague Tribunal and the Rwanda Tribunal have primacy over national courts, while the International Criminal Court has complementary jurisdiction over the States Parties to the Rome Statute. We can talk about two models of international cooperation: vertical and horizontal, where vertical cooperation is between states and international courts, while the horizontal is cooperation between states.

Keywords: international cooperation, the Hague Tribunal, the International Criminal Court, primacy, complementarity.

INTRODUCTORY REMARKS

Crimes that have occurred throughout history, primarily those stemming from various armed conflicts, proved the need to form international criminal tribunals. The formation of international courts and tribunals has produced an important, primarily procedural problem of competences: who has primacy in deciding on the criminal responsibility of the people accused of committing criminal of-

fences, if it is both international and national courts that have the jurisdiction to adjudicate the same offences? Of course, the problem does not exist where national courts have exclusive jurisdiction for certain criminal offences (e.g. piracy, international terrorism cases which do not constitute crimes against humanity or war crimes, large-scale drug trafficking, etc.) (Cassese, 2005: 410); it rather occurs where there is competition jurisdiction, when one or more states claim the right to criminal jurisdiction for certain criminal offences (under one of the principles of territorial validity of the national criminal law), while at the same time an international tribunal has jurisdiction in the matter (Simović, Blagojević & Simović, 2013: 85-97).

In case there is competition jurisdiction between one or more states, the problem is twofold also because there are neither general international rules nor general customary rules which would give precedence to one principle over the other. On the other hand, when it comes to competition jurisdiction between national courts and international criminal tribunals, this issue is resolved by contract rules or binding resolutions. So, for instance, the International Criminal Tribunal for the former Yugoslavia (ICTY) and the International Criminal Tribunal for Rwanda (ICTR) have primacy over national courts, while the International Criminal Court (ICC) has complementary jurisdiction, meaning that precedence is given to national courts.

PRIMACY OF THE ICTY AND ICTR

The ICTY Statute establishes international jurisdiction for a certain type of criminal offences[1] as parallel to the jurisdiction of domestic courts (of successor states of the former SFRY) (Simović, Blagojević & Simović, 2013: 278). Article 9 of the ICTY Statute and Article 8 of the ICTR Statute prescribe that those international tribunals have primacy over national courts and that at any stage of the procedure, the international tribunal may formally request national courts to defer to the competence of the international tribunal in accordance with the statute and the rules of procedure and evidence of the international tribunal.

Provisions of Article 10, paragraph 2 of the ICTY and ICTR statutes also envisage subsidiary jurisdiction. This means that a person who has been tried by a national court for acts constituting serious violations of international humanitarian law will be tried again by the international tribunal only if: a) the act for which he or she was tried was characterised as an ordinary crime, or b) the national court proceedings were not impartial or independent, were designed to shield the accused from international criminal responsibility, or the case was not diligently prosecuted.

The ICTY Rules of Procedure and Evidence contain, among other things, rules on the ICTY's primacy. Those rules are contained in the provisions of Article 7*bis*–13.[2] The same rules were upheld by ICTR judges too. These rules do not foresee absolute primacy of international tribunals; on the contrary, competition jurisdiction may also include the precedence of national courts. In addition, the tribunal may abandon the case if it deems it would be better if it were tried by a national court. This is how judges created a mechanism in which a case may be returned to national courts whenever they consider it a better solution (Cassese, 2005: 412). A case may be deferred *proprio motu*[3] or at the request of the ICTY Office of the Prosecutor.

1 Provisions of Articles 2, 3, 4 and 5 of the ICTY *Statute*.

2 See the full text of the Rules at: *https://www.icty.org/x/file/Legal%20Library/Rules_procedure_evidence/ IT32Rev49bcs.pdf;* 21.12.2019.

3 ICTY, *Prosecutor v. Mile Mrksić et al.*, IT-96-23/2-PT, Decision on Referral of Case under Rule 11 *bis*, 17 May

According to this rule, a case may be referred to the state in whose territory the crime was committed, in which the accused was arrested, or having jurisdiction and being willing and adequately prepared to accept such a case. The tribunal may request primacy in the cases under Article 10, paragraph 2 of the Statute.

COMPLEMENTARITY OF THE ICC

Unlike the ICTY and ICTR which have primacy over national courts, the ICC takes into account the principle of complementarity, meaning that its jurisdiction is subsidiary. Hence, priority in conducting procedures is given to national courts, while the ICC assumes responsibility when national courts either do not want or are not capable of conducting the procedure adequately. There are generally two reasons why the states parties to the Rome Statute opted for such an approach: a) they did not want to "overwhelm" the court with cases from all over the world, b) respect for sovereignty of the states to the largest extent (Triffterer, 1999).

The ICC has no right to exercise jurisdiction when a national court claims jurisdiction over a certain crime: (i) when the state has jurisdiction by its internal law; (ii) when authorities in a specific case conduct a proper investigation and criminal procedure or, when they adequately made a decision not to conduct proceedings against a person and (iii) when the case is not of sufficient gravity to justify further action by the Court (Article 17). Furthermore, the ICC (iv) may not conduct proceedings against a person who has already been convicted or acquitted of a specific crime, provided that the trial was fair and in order (Article 17 (c) and Article 20). However, the ICC is competent for a crime if it is already prosecuted before national authorities and may gain precedence over national criminal jurisdiction when the state is unwilling or unable to seriously prosecute or punish, or when the state has decided not to prosecute the person concerned because it is unwilling or unable to actually punish the person and when the case has such gravity to require action by the ICC.

Naturally, in this concept, the issue is raised of interpretation of when the state is unable, or unwilling[4] to prosecute the person charged with an international crime. In the former case, it will be a situation when due to problems in its own judicial system, the state is unable to keep the accused or order the competent authorities to keep them in custody, extradite them, gather evidence, or conduct criminal proceedings. On the other hand, there is "a lack of will" when state bodies launch proceedings in order to protect a person from criminal responsibility or when there is "justified delay"[5] or when the case is not prosecuted independently and impartially.

The question is raised whether the principle of complementarity is valid only for the States Parties to the Rome Statute or also for the states which are not parties to it. The answer to this question lies in Article 8, paragraph 1 of the Statute. In conclusion, if the accused find themselves in the territory of a state that is not party to the Rome Statute for a crime under the ICC's substantive jurisdiction, the state concerned shall have precedence over the ICC if it is willing and able to launch proceedings against such person on the basis of the *forum deprehensionis* principle or on the basis of the principle of universality (Wequi, 2006: 87-110).

2005, paragraph 93.

4 ICC, *Prosecutor v. Katanga and Chui*, ICC01/04-01/07-T-67-ENG, 12 June 2009, 10.

5 ICC, *Prosecutor v. Katanga and Chui*, decision of the Appeals Chamber, the part related to the Bogoro incident.

MODELS OF COOPERATION

Generally speaking, two possible models of cooperation between states and international courts have developed in practice. In the *Blaškić* case, the ICTY Appeals Chamber dubbed these two models "horizontal" and "vertical".[6]

Inter-state cooperation in criminal matters is characterised to be of "horizontal" nature. The horizontal relationship is based on the sovereign equality of states, resulting in the application of the rule *par in parem non habet imperium*.[7] The nature of the relationship is such that a state does not have jurisdiction over another sovereign state and thus cannot order another state to carry out certain actions (Bassiouni, 2008).

Such cooperation is based on international treaties and as such it is a result of international agreement. One of the common requirements in those treaties is the identity of the norm, or the requirement that the relevant criminal offence be provided for as such in both or all states parties. In addition, treaties often foresee certain exceptions (for a certain kind of criminal offences or for a certain type or amount of punishment). Evidence may be gathered only by the authorities of the requested State, while authorities of a foreign state usually may not come into direct contact with individuals who are subject to the sovereignty of the state they seek help from (Swart, 2002). In summary, the entire cooperation is based on the full respect for sovereignty and agreement, or autonomy of the will.

The other model, the so-called "vertical" or "super-state" is newer and according to some authors "more advanced" (Cassese, 2005: 419). This model stipulates that the international court has significant powers not only over an individual being prosecuted, who is subject to the sovereign authority of the state, but also over the state itself. According to this model, an international court has the power to issue a binding order to states and launch mechanisms for coercion in case of the failure to execute. On the other hand, states may not retain evidence due to the national interests they define themselves, nor reject an arrest warrant or some other order from the court. In short, the international court has power over the states, which differentiates it to a large extent from other international organisations (Cassese, 2005: 408-420).

Further judicial practice without exception focuses on the consolidation and broadening of an effective vertical model of cooperation. The duty of the states to cooperate is confirmed in a series of decisions[8]. At the same time, developing the judicial practice, judges have adjusted certain rules in order to maintain the vertical model of cooperation.

TWO MODELS OF PROCEDURE IN INTERNATIONAL CRIMINAL LAW

International criminal procedure law encompasses not only a set of rules related to international criminal procedures, but also the rules that exist in national criminal procedure laws, which refer to certain situations with the element of foreignness. That is why, when we talk about models of procedure in international criminal law, we take into account the accusatorial or inquisitorial model or for the most part the variants emerging when they mix, including various forms of mixed procedure, in an attempt to reconcile the differences or make up for the lacks of each one of them individually. Therefore, the

6 Decision on the Objection of the Republic of Croatia to the Issuance of Subpoenae Duces Tecum, *Blaškić* (IT-95-14-T), TC II, 18 July 1997, *Blaškić* (IT-95-14-AR108bis), AC, 29 October 1997.

7 Latin for "Equals have no sovereignty over each other."

8 E.g. Order in *Blaškić* (IT-95-14-T), TC I, 21 July 1998 and *Delalić et al.* (IT-96-21-T) TC II, 16 October 1997.

models discussed here have to be perceived as a kind of "abstract intellectual construction," similar to the "ideal types" advocated by Max Weber, who used this term for categories such as feudalism, asceticism, mysticism, etc. (Weber, 1970).

According to anthropologists, the adversarial system occurred first as a replacement for blood revenge. In such a procedure, the injured party or any individual who has certain interest in a specific case presses charges against the violator for certain conduct. When the person is accused, an arbiter or judge is selected who will then hear both parties and consider evidence. In further stages of the procedure, the parties separately gathered evidence that corroborated their allegations.

The judge took part in the "competition" between the two parties. The main feature of this procedure in the initial stage of the development of this model was that trials were conducted in public places or in places where people gathered regularly. The injured party had the power to press charges. This system marked the period of Greek city-states and the era of the Roman Republic. What followed after these changes was the fact that a public prosecutor became a new party in the proceedings and a jury was introduced, a feature of the inquisitorial system.

The inquisitorial model was taken over from the Catholic Church during the Roman Empire. It flourished in the medieval times when rulers gradually started embracing the methods the Catholic Church used in its trials for questioning and prosecuting persons accused of heresy. In this system, investigation was secret and consisted of questioning the accused, the victims and the witnesses by an authorised person who drafted official minutes. The authorised officer gathered evidence and decided on the guilt of the accused. Over time, a rule was introduced that investigative judges, who initially only gathered evidence and presented them to the court, gave their opinion about the evidence gathered beforehand.[9]

ELEMENTS OF THE ACCUSATORIAL MODEL OF PROCEDURE IN INTERNATIONAL CRIMINAL PROCEDURE LAW

A case before the ICTY is conducted along the lines of the accusatorial procedure. Hence, it is a legal dispute between two parties (the prosecutor and the accused), where the parties have the power to initiate proceedings, conduct an ongoing case, gather and present evidence. However, it has to be noted that this procedure is not a "pure" accusatorial procedure but rather has elements of the inquisitorial and mixed type procedure as well. In terms of gathering evidence, the prosecutor has the duty to collect evidence incriminating the suspect, and to submit to the defence exonerating evidence, if they find any.

The ICTY Statute in its Article 22 imposes an obligation on the Tribunal to protect victims of crimes and witnesses by special rules of procedure and evidence. The Statute therefore does not precisely define what the protection entails, but does establish that protection measures include conducting the procedure *in camera* and the protection of the victim's identity. In addition, the injured party may address the chamber, if allowed, give a brief presentation, attend hearings and cross examine witnesses. The injured party is not allowed to join an indictment as a private prosecutor, which is a feature of the accusatorial type procedure.

9 This system is characteristic of France, Germany, Spain, Latin America, China, Japan, etc. Today, this system is enriched with some elements taken from the adversarial model.

Also, one of the typical institutions of the Anglo-Saxon legal system, which originates from the *common law* system and is applied by the ICTY too, is *amicus curiae.*[10] This is actually an expert or an organisation that is not party to the dispute, who voluntarily offers the court information about a different legal or other view of the dispute. A report on the topic related to the case is a usual way of cooperation. Apart from natural persons and organisations, the state may also appear as *amicus curiae.* Engaging these actors is optional and depends on an assessment by the court chamber (Damaška: 2012: 3-14). The contribution of the "friend of the court" includes presenting an opinion (verbally or in a motion) about specific issues related to the manner of applying substantive or procedural law.

A procedure before the ICC is also considered mixed as it contains elements of both the accusatorial and inquisitorial procedure. The trial is designed as a "party competition" (Simović, Blagojević & Simović, 2013: 432). The parties have the power to gather and present evidence in all stages of the procedure and have a possibility to dispose of the subject of the dispute. There is no investigating judge who would conduct preliminary proceedings and create the case file. The investigation does not have judicial character and falls under the competence of the prosecutor, even though at this stage there is communication between the prosecutor and the chamber.

ELEMENTS OF THE INQUISITORIAL MODEL OF PROCEDURE IN INTERNATIONAL CRIMINAL PROCEDURE LAW

Even though the procedure before the ICTY is basically closer to the accusatorial model, it contains a series of elements of the inquisitorial or mixed procedure. Among these elements, emphasis is on the division of the procedure into stages. Cumulation of the function of prosecution and investigation is in the hands of the prosecutor - Article 18 of the Statute. It is the right of the prosecutor to question suspects in the investigation (Article 18, paragraph 2 of the Statute) and to examine witnesses in the preliminary hearing (Rule 63). In addition, the trial chamber has an inquisitorial power to take part in the procedure of gathering (Rule 85B) and presenting evidence (Rule 98) upon their own initiative.

Before starting the main hearing before the ICTY and ICTR, the prosecutor gives the chamber a list with the most important information about the case (the so-called pre-trial summary). This is how the court controls the case better, allowing the judges to form a preliminary notion of what will be presented in the hearing, which is not typical of the accusatorial procedure.

The criminal procedure before the ICC is also divided into stages.

During the investigation, the prosecutor has to "establish the truth" so he or she has to investigate "in an equal manner" both the evidence at the expense of, and the evidence in favour *(in favorem)* of the accused, that is, the circumstances "excluding the guilt". The investigation is formally approved by the pre-trial chamber, meaning that it is subject to judicial control, even though it is the prosecutor who is in charge of conducting it. Nevertheless, this kind of control is not a typical inquisitorial element since it is not the "investigating judge" but the limited judicial control that guarantees that prosecution authorities will respect the law and is mainly limited to the control of decisions regarding the encroachment upon human rights (like detention or special investigative actions).

METHODS OF GATHERING EVIDENCE

In the adversarial procedure, the parties autonomously, independently of each other, gather evidence to corroborate their own allegations before the court. The prosecutor has the duty to collect evidence incriminating the suspect or accused, as well as the evidence in favour of the suspect or accused, if he or she finds any. This system has been adopted by the ICTY Statute too, while the ICC Statute obliges the prosecutor to "establish the truth" and therefore gather evidence in favour of the accused.

In principle, every party is obliged to provide evidence to the other side before the main hearing. This means that the prosecutor must submit evidence to the defence before he or she starts presenting the case, while the defence may be obliged to present their evidence to the prosecutor after the presentation of the charges and before the presentation of the defence.

In the typical inquisitorial model, which we do not find in international criminal procedure law though, the prosecutor submits evidence to the investigating judge on the basis of which the latter concludes whether there are grounds to suspect that the suspect has committed the crime, after which he or she gathers evidence for both parties, after assessing there is sufficient evidence, he or she forwards to the court and parties the full record *(dossier de la cause)*.

When it comes to the procedure before the ICTY, the investigation includes different actions of evidence gathering by the prosecutor. In urgent cases, the prosecutor may request any state to apply temporary measures (provisional detention of the suspect; confiscation of material evidence or taking measures to provide evidence and prevent the escape of the suspect, etc. - Rule 40). In line with Article 21 of the Statute, the requested State must execute it immediately, in line with Article 29 of the Statute.

Before the ICC too, the parties have the power to present evidence, where the trial chamber may order that a piece of evidence be obtained because they are authorised to request the submission of all evidence they consider necessary for establishing the truth. In the procedure conducted before the ICC, the prosecutor shall take "appropriate measures" (Article 54, paragraph 3 of the Rome Statute) in order to provide relevant evidence for the criminal procedure.

The prosecutor and the defence have the duty to disclose evidence[11], and the prosecutor also has the duty to submit the material that is exonerating, extenuating or having any impact on the credibility of the prosecution's evidence, before the trial begins, as well as a list of witnesses and copies of witness statements. On the other hand, the defence must submit information if they want to base their defence on an alibi, but that does not prevent them from using such evidence even if they do not submit information beforehand.

Both parties are entitled to examining the material before the confirmation hearing as well as during the main hearing. Exceptions to the rules of disclosure are related to confidential information or information whose disclosure would pose a risk for the witnesses, the injured parties and their families.

RULES OF ACCEPTING AND EVALUATING EVIDENCE

Evidence which may be accepted in a procedure before the ICTY includes the confession of the accused to the prosecutor, testimony in the form of a written statement, questioning a witness, expert witnesses, and various items of material evidence (Neuner, 2002).

If the accused confess to the crime they are charged with during the investigation, it is presumed that such confession is made without duress and voluntarily if the requirements under Rule 63 have been fulfilled. It is a rebuttable presumption so it is possible to prove otherwise.

Testimony in the form of a written statement, without a verbal statement of the witness, is generally not allowed in the Anglo-Saxon law (although there are certain exceptions). Such a statement may be used as evidence before the ICTY, according to Rule 92 *bis*. An obstacle to the application of this rule may be the fact that the accused denies such evidence. If that is not the case and if the witness is not required to be there in person, the court may accept, partially or wholly, the testimony in the form of a written statement or transcript.

The chamber may also accept the evidence which has certain probative value - even though they are not clearly related to the criminal case. Such evidence may be a certain concept of behaviour of a certain person, their affinities, habits, previous behaviour, experience, etc. In terms of generally known facts, the chamber will not request that they be proved, but will formally take cognizance of them.

Similar to the Anglo-Saxon law, a wide range of persons are considered witnesses in a procedure before the ICTY. In addition, the accused themselves may be heard as witnesses in favour of their defence (witness in his/her own case).

The manner of questioning the witness corresponds with the classic model of cross-examination in common law. The rules of procedure and evidence also allow the acceptance of the testimony in the form of a written statement or transcript of the persons who are not available, as well as of the persons that pressure was exerted on.[12]

The ICTY also has special evidentiary rules in cases of sexual assault. The first rule refers to the inability to seek additional corroboration of the victim's testimony.[13] The second rule refers to the exclusion of a certain course of defence of the accused, where they cannot defend themselves by claiming that the victim gave consent to sexual intercourse, if there are certain circumstances formulated in the rule.[14] The third rule allows the accused to invoke the victim's concession, if they persuade the Trial Chamber *in camera* that the evidence they have is relevant and credible.[15] Finally, the fourth rule refers to the prohibition of evidence about the prior sexual conduct of the victim.[16] Here, the victim may neither tacitly nor explicitly renounce the rights from the last rule.[17]

The most important rules of presenting evidence before the ICTY refer to the general regime of evidence (Rule 89), testimony of witnesses (Rule 90), transfer of a detained witness (Rule 90 *bis*), evidentiary value of the accused's confession in the investigation (Rule 92), rule of inadmissibility of using evidence obtained unlawfully (Rule 95), and evidence originating from lawyer-client privilege (Rule 97).

The validity of an independent assessment is sufficiently clearly stated in combination with the principle of fair trial, stipulating that the chamber may admit any relevant evidence which it deems to have probative value [Rule 89 (C)] and exclude the presentation of certain evidence, if the need to ensure a fair trial is significantly higher than the probative value of such evidence. The possibility to change the

12 Rule 92 *quarter* and Rule 92 *quinquies*.
13 Rule 96 (i).
14 Rule 96 (ii).
15 Rule 96 (iii).
16 Rule 96 (iv).
17 ICTY, *Prosecutor v. Delalić et al.*, Decision on the Prosecution's Motion for the Redaction of the Public Record, 5 June 1997.

formal assessment of evidence exists to a certain extent on the basis of the rule under which a chamber may request verification of the authenticity of evidence obtained out of court [Rule 89 (E)]. Apart from that, a chamber may receive the evidence of a witness orally, or where the interests of justice allow, in written form [Rule 89 (F)].

CONCLUSION

The international normative framework of cooperation between states in criminal matters includes a set of mechanisms for a successful fight against crime which often crosses the boundaries of sovereign authority of a state. Formation of international criminal tribunals is a consensus of the international community in convicting the most serious crimes. In order to achieve this goal, it is crucial for the states to cooperate with each other, as well as with such courts.

REFERENCES

1. Bassiouni, C. (ed.) (2008). *International Criminal Law, Volume 1: Sources, Subjects and Contents*, Leiden: Martinus Nijhoff Publishers.
2. Cassese, A. (2002). *The Rome Statute for an International Criminal Court A Commentary.* Oxford University Press.
3. Damaška, M. (2012). Neuvažene prisutnosti u međunarodnim krivičnim predmetima, Zagreb: *Hrvatski ljetopis za krivično pravo i praksu*, vol. 19,(1).
4. Kaseze, A. (2005). *Međunarodno krivično pravo*, preveo O. Račić u saradnji sa V.Hadži-Vidanovićem i M. Milanovićem, Beograd: Beogradski centar za ljudska prava.
5. Neuner, M.T. (2002). *The power of international criminal tribunals to produce evidence. National security and international criminal justice*, (ur.) Roggemann, H& P.Sarsevic, Hague, 2002.
6. Schabas, W.A. (2004). *An Introduction to the International Criminal Court*, *Second Edition*, Cambridge University Press.
7. Simović, M.N., Blagojević, M. & Simović, V.M. (2013). *Međunarodno krivično pravo*, *2.izd.,* Istočno Sarajevo: Pravni fakultet Univerziteta u Istočnom Sarajevu.
8. Swart, B. (2002). *International Cooperation and Judicial Assistance-General Problems*, u Cassese-Gaeta-Jones, ICC Commentary, II.
9. Škulić, M. (2005). *Međunarodni krivični sud - nadležnost i postupak*, Beograd: Centar za publikacije Pravnog fakulteta u Beogradu.
10. Triffterer, O. (ed.) (1999). *Commentary on the Rome Statute of the International Criminal Court*, Baden-Baden: nomos Verlagsgesellschaft.
11. Weber, M. (1970). “Religious Rejections of the World and Their Directions” (1915) in: H.H.Gerth, C.Wright Mills (ed.), From Max Weber-Essays in Sociology (London: Routledge and Kegan Paul).
12. Wequi, U. (2006). On Co-operation by States Non-party to the international Criminal Court, *International Review of the Red Cross*, vol. 88.

TWO DECADES OF CRIMINAL JUSTICE REFORMS IN THE FIELD OF COMBATTING ILLEGAL DRUGS

Dragana Kolarić, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia;
Constitutional Court of the Republic of Serbia

Saša Marković, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Since the beginning of the 21st century more intensive efforts of the Serbian legislator have been observed which are directed at more efficient combatting illegal drugs abuse. The abuse of drugs and psychotropic substances is the problem which exists all around the world. Open borders allow easier movement of people and capital, but they also lead to appearance of new security threats. Legislative activities increase within the new environment, numerous international instruments are adopted, which among other things, imply progressive path of the EU legislation. When adopting and shaping a new legal text the legislators cannot anticipate all the future problems or foresee new manifesting forms of crime. When combatting illegal drug abuse, in principle, we are not talking about new manifesting forms of crime since they have been present since ancient times, but on the other hand the problems have originated in application of these provisions. Therefore, it is clear that we recognize the main reasons for amendments in difficulties in application of these norms in court practice. This, as the authors observe, brings into question normative shaping and drafting by the legislator. Chronologically observing the amendments to criminal legislation, we can see almost two decades of seeking for new adequate solutions in this field. The authors analyse these amendments and additions with special accent on the *Law on amendments and additions to the Criminal Code of 2019* and attempt to find the answer to the question if the present state of the provisions, primarily Articles 246 and 246a, is acceptable, if the problems identified in court practice have been overcome or at least reduced. In the corresponding parts of the paper the authors refer to the current directions of development of the fight against drug abuse in other countries. At the end of the paper, as expected, there are suggestions *de lege ferenda*, as well as the authors' observations related to difficulties and obstacles on the path to drug abuse suppression.

Key words: Criminal Code, suppression, drugs, manufacturing and putting into circulation, unlawful possession, small quantity, personal use, big quantity

1 sasa.markovic@kpu.edu.rs

INTRODUCTORY REMARKS

The subject of the paper is general review of numerous reforms in the field of substantive criminal law which have occurred within our legislation in the last two decades and in particular criminal offences related to drug abuse. It is our goal to determine if there have been reasons which suggest that it is necessary to re-examine drug related criminal offences, as well as in which direction this should go? Were the provisions which had existed prior to 2009 amendments simpler to apply? Namely, there had been a form of summary offence according to Art. 246, which included the possession of drugs even when not intended for sale, which incriminated possession for personal use as well.

That paragraph 3 of Article 246 has not changed by adoption of the new Criminal Code in 2006, i.e. it was kept in the identical form as in the Law on Amendments and Additions to the Criminal Code (LAACC) of 2003 (whoever has in their possession for their own personal use a smaller quantity of a substance or preparation which has been declared a narcotic drug). In the Law on Amendments and Additions to the Criminal Code of 2009, the introduction of the elements "a smaller quantity and for their own personal use" into the subject matter of offence (Article 246a) only created certain dilemmas and resulted in uneven conduct in court practice. Today when we have a new paragraph 2 of Article 246a, which refers to illegal possession of a big quantity of a substance or preparation which has been declared a narcotic drug, has the problem been overcome or, on the contrary, a number of questions has arisen? The suggestions could be heard in court practice that it would be best to return to the period prior to 2003, when the form of summary offence from paragraph 3 of Article 246 had not yet been introduced. For such a step a political willingness should exist as well as the awareness of the members of social community that fight against illegal use and abuse of narcotic drugs cannot be achieved in a way in which the legislator acted with almost the entire Law on Amendments and Additions to the Criminal Code of 2009, considering the citizens as "the enemy that should be neutralized" (Kolarić, 2016: 32).

In this part of the paper the authors point to some negative tendencies which refer to the criminal law science as a whole. In the next part we give the review of numerous amendments and additions which cover the narcotic drugs related offences in the last two decades. Finally, in the concluding remarks the attitude is taken on individual solutions and the concrete suggestions *de lege ferenda* are given.

Some negative tendencies in criminal law science which we recognize in the last period include using criminal law for populist purposes (it is relatively easy to manipulate the public, since it is sensitive to serious crimes and therefore always ready to accept the strictest penalties) and accordingly the strengthening of criminal-law repression. Strengthening of criminal-law repression reflects in both tightening of penal policy as well as in criminal-law expansionism (numerous new incriminations, new criminal offences). All these eventually result in certain derogations from the basic principles of the criminal law.

The amendments in the General Part most often are not the expression of a necessity since in the contemporary criminal legislation we seldom come across justified reasons for its amendments except when it comes to quite a small number of provisions (system of criminal sanctions). Amendments in the Special Part are much more frequent even in the countries that are known for their stable criminal legislation. Except for the amendments in manifesting forms of crime, the additional reason for them is also harmonization with international sources. What is the least desirable are the amendments related to the reasons of socio-political character, when social climate leads to penal populism.

These are the main reasons for amendments, and the main shortcomings of the frequent amendments, which we observe in the majority of criminal legislations, will be presented further in the text.

First of all, this is duplication of incriminations which is the result of uncritical ratification of international treaties which are approached, most often, without any reserves (Kolarić, 2019: 15).

Second, the next shortcoming of frequent amendments is setting of criminal zone too wide using general formulations, such as, for instance, the criminal offence of stalking (Kolarić, 2019: 15).

Third, tightening of penal policy by the legislator is particularly emphasized (the reasons most often are not founded on criminal policy). In Serbia in the last several amendments and additions there is expressed and intensified criminal-law repression. According to one comparative-law analysis, the Criminal Code of Serbia according to the prescribed penalties is classified into criminal codes which exceed the usual degree of repression characteristic for any criminal legislation (Stojanović, 2020: 5).

These are the reasons why it is important who shapes legal norms, i.e. who participates in the commission working on amendments and additions to the Criminal Code, since derogations from the basic principles of criminal law will be minimal if the most eminent representatives of criminal-law theory and practice participate in it.

We shall agree that it is legitimate for all stakeholders to send their proposals for amendments, however there should be a triage, i.e. those proposals which are purposeful and correspond to social reality the commission will take into account with appropriate explanation, of course.

Abuse of narcotic drugs and psychotropic substances is the problem which exists all over the world. On our continent the problem assumes new dimensions with establishing and development of the EU integration processes. Open borders allow easier movement of people and capital, but lead to emergence of new security threats. The globalization process at European soil has had double negative effects. The first are objective in nature and are linked with the fact that one currency and open borders result in increasingly bigger possibilities of abuse, including the area of narcotic drugs abuse. On the other hand, there is often the use of criminal law which ceases to be subsidiary in character and is returned to be *prima ratio* of social policy, a kind of illusory panacea which wants to oppose and with which quite versatile problems are to be solved (Moccia, 2013, cited according to Stojanović, Kolarić 2015: 116).

In the new environment legislative activity is increasing, many international instruments are adopted which, among other things, imply progressive path of the EU law. The most important convention in this field is the *UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances*, adopted in Vienna in 1988 (Law on Ratification of the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Official Gazette of the SFRY – international agreements, 1990). Article 3 of the Convention is particularly significant, that provides for certain activities which should be incriminated. The *Single Convention on Narcotic Drugs* of 1961 is also important for this field, which was ratified in 1964 (Law on Ratification of the Single Convention on Narcotic Drugs, Official Gazette of the SFRY, 1964), as well as the *Convention on Psychotropic Substances* of 1971 (Law on Ratification of the Convention on Psychotropic Substances, Official Gazette of the SFRY, 1973).

It is important here to mention the *Council Framework Decision 2004/757/JHA* of October 25, 2004, the provisions of which influenced the amendments and additions to the Criminal Code of 2019. It is interesting to us since it does not provide for the obligation or recommendation to incriminate possession of narcotic drugs for one's personal use, which has not changed the attitude of our legislator, but influenced the law-maker, as we shall see later on in the part of provisions prescribing new serious forms of crime.

There is no doubt that these sources influenced the national criminal legislation. Let us see at what point in time and in which way.

AMENDMENTS AND ADDITIONS TO CRIMINAL LEGISLATION IN THE FIELD OF SUPPRESSION OF NARCOTIC DRUGS

When adopting and shaping a new legal text, the legislation cannot anticipate all future problems and predict new manifesting forms of crime. When suppressing the abuse of narcotic drugs, in principle, there are no new manifesting forms of crime as they have been known since ancient times, but there are new problems in application of these provisions. Therefore, the main reasons for amendments can be recognized in difficulties related to the application of the norms in court practice. This brings into question normative shaping and nomothetic of the legislator.

In brief, the Criminal Code of the SFRY of 1976 systematized these crimes into two articles: unauthorized production and sale of narcotics (Article 245) and enabling someone to enjoy intoxicating drugs (Article 246). The basic form of the criminal offence of unauthorized production and sale of narcotics is committed by whoever without authority manufactures, processes, sells or offers for sale, or purchases, keeps or transfers for sale, or intercedes in a sale or purchase, or otherwise puts into circulation substances or preparations which are declared intoxicating drugs or psychotropic substances (paragraph 1). More serious form exists if any offence described under paragraph 1 of this article is committed by several persons who joined for the purpose of committing the offence, or if the perpetrator of the act organized a network of middlemen or re-sellers (paragraph 2). The Law on Amendments and Additions to the Criminal Code of the SFRY of 1990, prescribed a new form which was committed by "whoever without authority manufactures, buys, possesses or lends for use the equipment, material or substances for which he is aware that they are intended for manufacturing of narcotics" (Law on Amendments and Additions to the Criminal Code of the SFRY, Official Gazette of the SFRY, 1990).

Since 2003 we have observed more intensified efforts of the legislator through frequent amendments directed at more efficient suppression of abuse of narcotic drugs. But has it been achieved? Namely, the Law on Amendments and Additions to the Criminal Code of the FRY of 2003 (Law on Amendments and Additions to the Criminal Code of the FRY of 2003, Official Gazette of the Republic of Serbia, 2003) for the first time incriminates possession of a narcotic drug even when it is not intended for selling, or putting into circulation in some other way, which incriminates the possession for one's personal use (whoever possesses substances or preparations declared as narcotic drugs – paragraph 3, Article 245).[2] These are the reasons why the title of the crime is changed to unauthorized production, possession and putting into circulation of narcotic drugs. Despite the best intentions of the legislator, this form caused certain dilemmas. Namely, the commitment of this crime included every unauthorized possession of a substance or preparation which is declared as narcotic drug, unless in case the drug is possessed for selling. On the one hand, this form included even the possession of drugs for one's personal use, and thus incriminated drug use, while on the other hand, this form was used even when it referred to serious dealers in narcotic drugs, i.e. when it referred to a part of Article 246, paragraph 1, but due to the problems in proving intent to keep drugs in order to sell them the act was qualified as summary offence. This actually was the main reason to introduce this form at that time (Stojanović, 2018: 816). It included considerably more lenient penalty, i.e. a fine or imprisonment up to three years. Paragraph 1 and 2 remained unchanged in 2003 amendments in the part of enacting clauses

2 For this form possession must have been for personal use, since otherwise it would constitute some other form of criminal offence from paragraph 1 Article 246. Also, the criminal act of unauthorized possession of narcotic drugs is consumed by the criminal act of unlawful circulation of narcotic drugs from Article 246 paragraph 1, since circulation of a drug cannot be done without having it at the same time, so the accused cannot be pronounced guilty for both paragraph 3 and paragraph 1 of Article 246 (*Ruling of the Supreme Court of Serbia KŽ. 843/06 dated May 13, 2006).*

but the part regarding the penalties included much stricter penalties. For paragraph 1, the imprisonment is at least five years, while for paragraph 2 the imprisonment is at least seven years. Former paragraph 3 became paragraph 4 and it included six months to five years imprisonment (whoever without authority manufactures, buys, possesses or lends for use the equipment, material or substances for which he is aware that they are intended for manufacturing of narcotics).

When the Criminal Code of Serbia came into force the crimes related to abuse of narcotic drugs were systematized into the group of crimes against human health. Criminal offence of unlawful production, possession and circulation of narcotic drugs found its place in the new legislation in Article 246, while the facilitating of taking the narcotics is regulated by Article 247. The basic form of the criminal offence of unlawful production, possession and circulation of Narcotics (paragraph 1), as well as more severe (paragraph 2) and summary forms (paragraph 3) were not amended, but in accordance with the then general orientation which was in line with weakening of criminal-law repression (Kolarić, 2019: 23), the legislator provided for more lenient penalties. New paragraphs 4 and 5 were added, i.e. the possibility was provided to remit from punishment the perpetrator from paragraph 3 if he possessed the narcotics for personal use, and also, there was a novelty that the offender specified in paragraphs 1 through 3 of this Article who discloses from whom he obtained narcotics may be remitted from punishment.

The problems that we mentioned related to application of Article 246, and which will be discussed later in more detail, the legislator tried to solve by the Law on Amendments and Additions to the Criminal Code of 2009 (Law on Amendments and Additions to the Criminal Code of 2009, Official Gazette of the RS, 2009) by deleting the summary form of criminal offence contained in paragraph 3 of Article 246 and by introducing the new independent criminal offence of illegal possession of narcotic drugs (Article 246a). This, however, and particularly in the beginning of application, resulted in wandering of court practice and wrong decisions in the sense that there was a complete decriminalization of possession of narcotic drugs. After the intervention of the Supreme Court of Cassation (Decisions Kzz. 133/10 and Kzz. 153/10) the court practice accepted that this was not complete decriminalization but only narrowing of the criminal offence zone. The Law on Amendments and Additions to the Criminal Code of 2009 incriminates illegal possession of narcotic drugs as a criminal offence, but not every illegal possession of narcotic drugs as was the case with criminal offence contained in Article 246 paragraph 3 of the Criminal Code, but only the possession for one's personal use and in a small quantity. Beyond that illegal possession of narcotic drugs for any other reason was not a criminal offence, so in that sense the new criminal code was much more lenient than the previous one (Stojanović, Kolarić, 2020: 156).

And finally, the Law on Amendments and Additions to the Criminal Code of 2019 (Law on Amendments and Additions to the Criminal Code of 2019, Official Gazette of RS, 2019) introduces a new form of criminal offence from Article 246a, which consists of illegal possession of a large quantity of substances or preparations which are declared as narcotic drugs (paragraph 2). In court practice there have occurred many arguable situations and the new form is aimed at unification of this, as stated in the explanation of the proposal of the Code. Also, the result of 2019 amendments is harmonization with the EU *Council Framework Decision 2004/757/JHA* of 25 October 2004, so the new qualified forms are prescribed which exist if anyone sells, offers for selling or without any compensation gives for circulation narcotic drugs to a minor, mentally ill person, temporarily mentally disturbed person, mentally challenged person or a person treated for addiction to narcotic drugs or puts into circulation narcotic drugs mixed with a substance which can result in serious harm to health, or whoever commits act from paragraph 1 of this Article in an educational institution or in its vicinity or institution for the execution of criminal sanctions or in a public bar or at a public event, or if the acts from paragraphs 1 and 2 of this Article are committed by a public official, a doctor, a social worker, a priest or a person who works at an educational institution by using its office or whoever uses a minor to commit this crime.

(UN)JUSTIFIED AMENDMENTS OF CRIMINAL OFFENCES RELATED TO NARCOTIC DRUGS IN THE LAW ON AMENDMENTS AND ADDITIONS TO THE CRIMINAL CODE OF 2019

The majority of amendments in the Law on Amendments and Additions to the Criminal Code which the National Assembly of the Republic of Serbia adopted on May 21, 2019, is bordering on strengthening criminal-law repression (life imprisonment, multiple recidivism, expanding prohibition of penal mitigation, stricter conditions of suspended sentence, preparation of murder, assault on a lawyer, stricter penal policy through prescribed penalties...), which is the result of general social-political climate and the cloud we could call penal populism.

Here we shall discuss the novelties related to narcotic drugs related criminal offences. Some of the novelties are the result of harmonization with the international sources (introduction of new qualified forms), while some amendments, as pointed out in the explanation are aimed at solving the problems of uneven court practice.

For criminal offence of illegal production and circulation of narcotic drugs the act of perpetrating is determined alternatively and can consist of production, processing, selling or offering for selling narcotic drugs, as well as buying, possession or transport with the purpose to sell of narcotic drugs. Possession in selling or buying, as well as any other illegal circulation of narcotic drugs is also incriminated. In any case, the offender must act in an unlawful manner, since production, processing and circulation of narcotic drugs for certain purposes are allowed (for instance, for medical, scientific and other purposes, which is regulated by law and other regulations). The concept of the majority of the said acts of perpetration is not disputable. In court practice the attitudes were taken for some acts which meant their specification.[3]

---

3 Thus, it is generally accepted that the *act of perpetration of selling a narcotic drug* is achieved by very agreement between the buyer and the seller, and therefore for the existence of this offence it is not necessary for the drug to be handed over to the buyer (see verdict of the Court of Appeal in Belgrade Kž.1 3480/11). In the same decision the attitude is taken that for *intermediation* as an act of perpetration it is not significant whether it was successful, i.e. if the selling or buying of a narcotic drug were completed. The court practice in particular dealt with determining *the notion of production and procession* of narcotic drugs. The court practice has had no doubts that planting and growing of Cannabis indica represents such a production if the obtained ripe plant contains active substance which is declared a narcotic drug (Supreme Court of Cassation Kž. 890/04). If during the growing of the plant such a stage was not reached, then the attempt would exist which, considering the penalty, would also be punishable. The production means any activity of a perpetrator by which substance with the characteristics of a narcotic drug can be obtained (Supreme Court of Cassation Kž.. 1517/05). However, it should bear in mind that now growing plants from which narcotic drugs are obtained is prescribed as summary offence, so the act of perpetration of production as in paragraph 1 is understood in a narrow sense and does not include sowing and nurturing of a plant until its biological ripening and completion of vegetation. The court practice accordingly has taken an attitude according to which it is necessary to differentiate between growing a plant from which narcotic drugs are obtained and the production of narcotic drug from the plant, which is the criterion to delimit between the basic form of offence as in paragraph 1 and less serious form as in paragraph 2 (see Decision of the High Court of Cassation Kzz. 130/10). It is a generally accepted attitude in court practice that it is irrelevant whether a narcotic drug is produced or processed for selling, or putting into circulation or for personal use (thus, Supreme Court of Cassation Kž. I 60/09). *Putting otherwise narcotic drugs into circulation* includes all manners used to make a narcotic drug available to another person, which are not explicitly stated in the legal description of the basic form of this criminal offence, and do not represent the act of giving narcotic drug to another person for use as in Article 247. It is predominant in court practice to understand the notion of putting into circulation widely. Thus, the Court of Appeal in Belgrade considers that this act includes not only

Having in mind several recent amendments, we shall stick to the act of possession of a narcotic drug with the intent to sell which is of particular importance in court practice. Possession is equitable title over a thing, in this case a narcotic drug, so it is of no significance whose the narcotic drug is. However, there is a problem here of delimiting with the summary offence from Article 246a, and it is even more serious problem of delimiting with the cases which are not covered by the criminal zone at all. Namely, we are talking about possession of a narcotic drug which is not intended for selling. Although this is a frequent excuse which is pointed out in defending the accused in order to avoid responsibility, it cannot be disputed that there exist such cases as well when a person is in possession of a drug not for selling but for some other reasons. These include possession for one's personal use (but not a smaller quantity, therefore linguistic interpretation does not provide ground for the existence of criminal offence from Article 246a), or, for instance, for giving another person to use it (which represents non-punishable preparatory act for criminal offence in Article 247). It would not be justified to start from the assumption that narcotic drugs which are not in smaller quantity are always kept with the intent to sell although such a trend can be discerned in our court practice. Thus, for instance, the Court of Appeals in Kragujevac states that the quantity over 54 g of marihuana and about 5 g of hashish, which have been found at the accused, were intended for selling and not for personal use. The quantity of narcotic drug can be just one of the circumstances (although an important one) to determine if the drug is intended for selling. In the said case, it is certain that the condition for the existence of the act from Article 246a that it was a smaller quantity of narcotic drugs was not fulfilled, but the stated quantity per se is still not enough to conclude that it was intended for selling.

Therefore, although the intent is not explicitly entered into the legal description, it is still necessary for some forms of act of perpetration. Namely, buying, possession and transport of narcotic drugs must be done with the intent to sell, which means that intent of the offender must exist to do this with the intent to sell. This subjective feature, as a rule, is determined indirectly through objective circumstances of the specific case. For instance, this is suggested by the quantity of drugs, their packaging, and so on. When determining if the drugs are intended for selling or personal use, the courts pay special attention to the circumstances if the accused is a drug addict, and if he has been treated. It is necessary for several such circumstances to indicate that the purpose of possession was selling. The quantity of drugs itself which was possessed would only in rare cases be sufficient for such a conclusion (if we are talking about big quantities of narcotic drugs). The Supreme Court of Serbia points out that regarding the possession of narcotic drugs for selling "the subjective characteristic of this act of perpetration is determined indirectly, through objective circumstances of a specific case, which is usually indicated by the quantity of narcotic drugs, their packing, the circumstance if the offender is also a consumer of narcotic drugs, as well as all other circumstances that can indicate the intent of the offender to engage in selling of narcotic drugs" (Supreme Court of Serbia Kž. I 811/08). The said attitude is acceptable in

---

borrowing and exchange for some other drug or goods, but also giving drug away (Court of Appeal in Belgrade Kž1 3480/11). However, regardless of the fact that a part of court practice advocates the attitude that even a present represents an act of putting into circulation, there are certain dilemmas to that effect, so this issue is controversial. Not only because of the problem of delimitation with the criminal offence as stated in Article 247, but the very notion of "putting into circulation" is related to trade as activity. If this notion is understood as it is usually understood in trade (including positive-legal regulations in this field), it does not include giving away goods free of charge, i.e. its giving as a present. However, there are still reasons here to determine this notion more widely so that it includes giving away the goods free of charge, i.e. giving it as a present. This is possible in exceptional cases, and depending on the circumstances of the concrete case even here the giving away of a narcotic drug could be understood as putting into circulation in the sense of the act of perpetration of this criminal offence. Related to this, *de lege ferenda*, in the description of numerous acts of perpetration the legislator should use the expression which undoubtedly includes the present, i.e. giving away narcotic drugs free of charge.

principle, whereas it is not necessary to determine the intent to "engage in selling", but it is sufficient that there exist intent for the concrete narcotic drug to be sold.

Until the Law on Amendments and Additions to the Criminal Code of 2019, observing some examples from court practice, it was clear that the condition for the existence of the act from Article 246a, that it was a smaller quantity of narcotic drugs for personal use, was not fulfilled. The court, therefore, had the possibility either to interpret[4] the notion of 'smaller quantity' extensively, which would lead to qualification according to Article 246a or to consider that there is no criminal offence (either 246 or 246a) since the stated quantity per se is still not sufficient to conclude that it is intended for selling (Marković, 2015: 224). This is why in 2019 the legislator decided to introduce a new form of criminal offence from Article 246a, which consists of unlawful possession in a large quantity of substances or preparations which are declared as narcotic drugs (Đorđević, Kolarić 2020: 154).

Further, when we are talking about the amendments, the Law on Amendments and Additions to the Criminal Code of Serbia from 2009 introduces a form of summary offence. Its act of perpetration is growing poppy or psychoactive cannabis or other plants from which narcotic drugs are obtained or which contain narcotic drugs themselves. The Law on Amendments and Additions to the Criminal Code of 2019 specifies this form of summary offense emphasizing that it should be the opium poppy.[5]

4 In Belgrade, on October 19, 2012, the accused bought 31 g of heroin and put it in his underwear for transport. During the search of his vehicle by the police 30.93 g of heroin was seized from him. Higher Court in Valjevo in the verdict K. No. 92/12 dated March 28, 2013, *convicted MM for committment of criminal offence according to Article 246a* and meted out conditional sentence. When reaching a sentence the court took the stand that 30,93 g of heroing found at the person in a vehicle represented a smaller quantity intended for personal use (because it was not packed in several PVC bags but only one and the accused according to his own statement consumed up to 2 g of heroin a day, so from his subjective aspect this could be considered a smaller quantity). Higher Public Prosecutor's Office lodged an appeal on the first degree sentence, but the Court of Appeal in Belgrade confirmed the first degree sentence (Kž.1 2821/13 dated May 27, 2013). Similarly, in the next example, the police found 357.55 g of marihuana, manufactured from 17 trees of Canabis indica which was grown in the household and five PVC begs to the total net mass of 253.72 g of marihuana, which according to the statement of the accused he bought from an unknown person. During the main hearing the accused defended that the marihuan found there was for his personal use (611 g) and that he uses 20-30 g making tea from it, which he consumes during the day. By the verdict of the Higher Court in Valjevo K. No. 39/121 dated May 27, 2013, PP was convicted for criminal offence according to Article 246, paragraph 2 of the Criminal Code concurring with criminal offence of illegal possession of a narcotic drug according to Article 246a of the Criminal Code and sentenced him to unified imprisonment of one year and three months. In the explanation of the verdict it is said that the Higher Public Prosecutor's Office did not suggest to the Court or offer any evidence that the accused intended to sell the narcotic drug seized from him. The intent in any criminal offense, even the intent to sell narcotic drugs is legal institute and it must not be assumed, but must be proven undoubtedly during the procedure. The Court presented the opinion that if the intent is to be assumed then the presumtion of innocense would be violated of the person against whom the procedure is led, which would then violate one of the basic principles on which contemporary criminal procedure is founded. The Court supported their opinion also with the data obtained from the procedure that the accused used 20/30 g of marihuna which he boiled for tea, and considering his long-lasting addiction, it is realistic that the quantity of marihuana found with him could be used for personal needs.

5 Growing must be illegal. When and under which conditions it is allowed is prescribed by the Law on Psychoactive Controlled Substances. After the growing stage, as a rule, there is a stage of production or processing, so if it comes to it, this offence does not have a character of a summary offence since it will be the offence in its basic form as stated in paragraph 1. As with production, here it is also irrelevant if growing is for selling of narcotic drugs, or its circulation, or for personal use.

In order to harmonize with the EU Framework Decision there are new qualified forms prescribed (paragraph 4) which exist if someone is selling, offering to sell or without compensation gives narcotic drugs for further circulation to a minor, mentally ill person, temporarily mentally disturbed person, a person who is seriously mentally challenged or a person treated for drug addiction, if narcotic drug is circulated mixed with a substance that can result in severe harm to health, or whoever commits the act from paragraph 1 of this article in the educational institution or in its vicinity or in the institution for the execution of penal sanctions or in a public bar or at a public event, or if the act from paragraphs 1 and 2 of this article is committed by a public official, a doctor, a social worker, a priest or a person employed in educational institution, using their office or whoever uses a minor to commit such an offense.

Another novelty of the Law on Amendments and Additions to the Criminal Code of 2019 deserves attention. Namely, regarding the basic form of this criminal offense (paragraph 1), as well as more severe form from paragraph 3, the Law on Amendments and Additions to the Criminal Code of Serbia from 2009 introduced a prohibition to mitigate penalties (Article 57, paragraph 2). This prohibition did not refer to the most severe form from paragraph 4, i.e. it was possible to mitigate penalty if the offence was committed by an organised criminal group, but not if it was committed by a group. Namely, in 2009 there were amendments by which new provisions were added (Article 57, paragraph 2), according to which the penalty may not be mitigated for certain criminal offences such as: abduction (Articles 134 paragraphs 2 and 3), rape (Article 178), sexual intercourse with a helpless person (Article 179), sexual intercourse with a child (Article 180), extortion (Article 214 paragraph 2 and 3), unlawful production and circulation of narcotics (Article 246 paragraphs 1 and 3), illegal crossing of state border and human trafficking (Article 350 paragraphs 3 and 4) and human trafficking (Article 388). In this way the mitigation of penalty ceased to be a general institute in the Serbian criminal law, because since then it has not been applied for all but only for some (although far larger number of) criminal offences (Delić, 2010: 238). This provision opened a series of dilemmas, because its true purpose cannot be seen. Penalty mitigation is always optional, so this was the case with these criminal offences as well. This has only taken away one possibility to the court and nothing was gained in the field of penalty meting out (Đorđević, 2010: 169). The Law on Amendments and Additions to the Criminal Code of 2019 amended paragraph 3 of Article 56 (mitigation of penalty by the court), in such a way that it expands the circle of criminal offences for which penalty mitigation is prohibited, which removes what was observed as illogical in earlier solution, but on the other hand the reserves towards this prohibition still exist. The expansion occurred since some serious criminal offences, such as aggravated murder, were left out from Article 57, paragraph 2. Also, the same case was with Article 246, paragraph 4 (it is now prohibited to mitigate penalty even if the act from Article 246 was committed by the organized criminal group).

As for the criminal offence of illegal possession of narcotic drugs, the new paragraph 2 was added. Namely, until now the penalty applied on whoever unlawfully possessed a smaller quantity even for the personal use of substances or preparations which are declared as narcotic drugs (paragraph 1). According to the Law on Amendments and Additions to the Criminal Code of 2019 whoever possesses a large quantity of substances or preparations which are declared as narcotic drugs will also be punished (paragraph 2).

Uneven conduct in court practice and the problems in proving intent to sell as provided by Article 246 have obviously resulted in many bad legal solutions in the field of substantive law. Starting from these problems, in 2009 the legislator attempted to solve them by eliminating a form of summary offence from Article 246, paragraph 3, and by introducing a new criminal offence of illegal possession of narcotic drugs (Article 246a). Unlike the previous form of this criminal offence, which read "whoever has in their possession a substance or preparation which has been declared a narcotic drug", now

Article 246a reads "whoever has in their possession for their own personal use a smaller quantity of a substance or preparation which has been declared a narcotic drug". Therefore, for the act stated in paragraph 1 to exist, it is necessary, among other things, that two cumulative conditions are fulfilled: a smaller quantity and for personal use.

The act of perpetration is possession of narcotic drugs. For paragraph 1 it is necessary to have in possession a smaller quantity of a narcotic drug (objective condition) and for personal use (subjective condition). If one of the two conditions is fulfilled, there would be no criminal offence. In that case there could be an offence from Article 246 or no offence at all. This is why the legislator decides to have a separate paragraph which incriminates when a person has in possession a large quantity of a substance or preparation which is declared as a narcotic drug. There was a particularly debatable situation in practice when the characteristics of offence as stated in Article 246, paragraph 1 do not exist, and it is not a smaller quantity of narcotic drug meant for personal use. In such a situation the notion of smaller quantity was either interpreted extensively, which led to the qualification according to Article 246a, or it was considered that there was not a criminal offence (either 246 or 246a). Of course, there were situations in court practice where the opinion was that the very fact that a person had in possession a larger quantity of narcotic drugs suggested that it was possessed for further circulation, which is the significant circumstantial evidence but must not be the only one (Stojanović, 2019: 46). By introducing a new form there appeared a new danger, which was that all cases of possession of narcotic drugs in a larger quantity were qualified according to Article 246a and that in that way determination of important characteristics of the act from Article 246 were neglected (it did not have to establish why a person had a narcotic drug in possession and in addition to this there was not a penalty mitigation). Of course, it was left to court practice to do the fine polishing of this provision as well and to specify the notion of "larger quantity" (Stojanović, 2019: 46). Therefore, when it comes to the act of perpetration in terms of paragraph 2, it should be possession of a large quantity of narcotic drugs.

As for the question what the smaller quantity of narcotic drug is, there are some criteria set in the court practice. One of the criteria is how much certain drug is required by an average drug consumer for several days. As a rule, in specific cases where this criminal offence was applied, these include insignificant quantities, for up to several grams if it is marihuana for instance. It deserves to mention the Obligatory guidelines of the Republican Public Prosecutor A. No. 478-10 dated February 24, 2011, in which it is stated that there is justification to apply the principle of opportunity in order to postpone criminal prosecution in terms of Article 236 of the Law on Criminal Procedure for the criminal offence from Article 246a in cases of possession of narcotic drug marihuana in the quantity up to 5 grams taking into account all other circumstances which are evaluated for any other criminal offence. Still, in some cases the courts considered that this condition was fulfilled even if there were quite small quantities. Thus the Basic Court in Čačak (K. No. 1344/10), as well as the Court of Appeal in Kragujevac (Kž1 No. 5003/10) were of the opinion that "narcotic drug marihuana in the total net quantity of 15.25 grams represents a smaller quantity of a narcotic drug in terms of objective element of criminal offence of illegal possession of narcotic drugs according to Article 246a, paragraph 1 of the Criminal Code". At the end of this part we would point out that paragraph 2 of the criminal offence of facilitating the taking of narcotics was amended in the Law on Amendments and Additions to the Criminal Code of 2019. More severe form from paragraph 2 exists now if the offence specified in paragraph 1 was committed regarding a minor (person below 18 years of age), a mentally ill person, a temporarily mentally disturbed person, a person who is seriously mentally challenged or a person treated for drug addiction or several persons (at least two), or if the offence is committed in the educational institution or in its vicinity or in the institution for the execution of penal sanctions or in a public bar or at a public event, or if this offence is committed by a public official, a doctor, a social worker, a priest or a person employed in the educational institution, by using their position.

CONCLUDING REMARKS

Therefore, in an attempt to combat illegal circulation of narcotic drugs the states, depending on the approach, are more or less successful. As much as it is surprising, more liberal approach to possession of so called "soft drugs" for personal use, primarily cannabis, as well as free selling of them have influence on the reduction of the marihuana user rate, reduction of the HIV infected rate and what is the most important the reduction of illegal drug trafficking (Ćirić, 2014: 543). Such an attitude is not shared by all European states and the various approaches often cause conflicts among the EU member states, since some of them consider their neighbours' policy on combatting narcotic drugs as negative influence (Anderson, 2012: 3).

Various models of legislator's response can be observed.[6] The most avant-garde one is of course the model of Holland, which is known for its tolerance of cannabis trade in well-known coffee shops, but in the meantime it limited "drug tourism" by the quantity of cannabis that can be sold by coffee shops (Anderson, 2012: 3). Namely, according to the Holland's regulations cannabis can be sold to adults, freely, based on special licenses issued by the state institutions according to which the shops are classified as coffee shops. Such behaviour does not contain threat by penalty if the following conditions have been fulfilled: it must not sell more than five grams of cannabis per person in one transaction; it must not sell hard drugs; narcotic drugs must not be advertised; coffee shops must not make noise and inconvenience; the municipality did not order the coffee shop to close and there must not be more than 500 g altogether for selling (Wade, 2009: 156). Uruguay has also taken the path of decriminalization. In this country marihuana is legal, i.e. everyone can buy up to 40 g a month (Ćirić, 2014: 543).

In 2001, Portugal changed its attitude towards combatting narcotic drug abuse, starting from the assumption that the persons who are found in possession of a small quantity of narcotic drugs are sick people who should be offered the corresponding medical treatment. The Portuguese model can be called "partial decriminalization" unlike Holland and Uruguay (Wade, 2009: 156). Namely, in Portugal, the citizens found in possession of 10 daily doses were tried before special administrative tribunal (a kind of magistrate's court) where they were delivered a special measure, for instance, commitment in the institution for treatment of addiction together with the measures of voluntary work in the public interest (Ćirić, 2014: 548).

Some countries made classifications of narcotic drugs and prescribed penalties according to their respective kind.[7] Also, in the last ten years amendments in the area of penalties have been observed particularly regarding the possession of small quantity of narcotic drugs for personal use. Thus Belgium has considerably reduced the penalties (in Belgium possession of a small quantity of cannabis for personal use was originally punished by imprisonment of at least five years, now it is punished by a fine).[8]

---

6 Countries in Europe, as well as other developed countries worldwide must deal with the problem of drug abuse. Pointing out how much the narcotic drug abuse can endanger public health and lead to rise in criminal offences related to illegal production and circulation of narcotic drugs, the EU member states have helped establish the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). The Centre keeps detailed information on drug use and legal means of response in European countries.

7 For instance, in Romania the law of 2004 differentiates between highly risky and risky substances. The penalty for the former is imprisonment from two to five years, and for the latter from six months to two years. See: *Annual report on the State of the drugs problem in Europe, European Monitoring Centre for Drugs and Drug Addiction*, 2011. See: http://www.emcdda.europa.eu/online/annual-report/2011/policies-law/5 Retrieved on December 1, 2014

8 *Ibidem.*

As far as our country is concerned, it is difficult to expect the change in orientation of the legislator in the near future and the special treatment of persons who are drug users. They are criminal offenders and can possibly count on the application of the measure of mandatory treatment of drug addicts. Through the insight in some cases we have determined that there is a huge recidivism of these offences. This is mostly special recidivism. These are the persons who in addition to criminal offences as stated in Articles 246 and 246a often commit property crimes, which is connected with their addiction to use narcotic drugs. These are, therefore, sick people. This is surely the main reason for different approaches of certain countries in suppression of these offences.

Frequent amendments of these provisions in the Criminal Code of Serbia, which consist of prescribing new forms of criminal offences, expansion of criminal zone or tightening of penalties, can yield positive results only if the state is ready to deal with this problem, but it also requires a multidisciplinary approach which implies including all competent government authorities and institutions. Also, it is not sufficient just to amend the provisions of the Criminal Code, the efficient application is also necessary. Good coordination is necessary between the prosecutor's office and the police, especially in gathering evidence, as well as to prevent prequalification of the offence stated in Article 246 paragraph 1 into the offence as stated in Article 246a. It is possible that the most recent amendments have opened the path even more to application of Article 246a, as we have already pointed out, since now all cases of possession of narcotic drugs in larger quantity can be qualified according to Article 246a and in that manner it is possible to neglect determining important features of the offence according to Article 246 (meaning that it is not necessary to determine why a person is in possession of a narcotic drug, and in addition to this there is no prohibition of penalty mitigation).

REFERENCES

1. Anderson, S. (2012). European Drug Policy: The Cases of Portugal, Germany and the Netherlands. EIU Political Science Review, 1, 1-16.
2. *COUNCIL FRAMEWORK DECISION 2004/757/JHA* of 25 October 2004 laying down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking.
3. Ćirić, J. (2014). Mogućnosti i granice krivičnog prava u suzbijanju ilegalnog prometa opojnim drogama. Pedesetpeta redovna godišnja konferencija Srpskog udruženja za krivičnopravnu teoriju i praksu - Optuženje i drugi krivičnopravni instrumenti državne reakcije na kriminalitet (str. 545), Zlatibor: Srpsko udruženje za krivičnopravnu teoriju i praksu.
4. Delić, N. (2010). Zabrana (isključenja) ublažavanja kazne u određenim slučajevima. *Crimen*, 2, 228-246.
5. Đorđević, Đ. Kolarić, D. (2020). *Krivično pravo-posebni deo*, Beograd:Kriminalističko-policijski univerzitet.
6. Đorđević, Đ. (2010). Nova rešenja o ublažavanju kazne u KZ Srbije. Revija za kriminologiju i krivično pravo, 3, 161-173.
7. Kolarić, D. (2019). Krivični zakonik i (ne)adekvatnost državne reakcije na kriminalitet (sadašnje stanje i nova rešenja). Šezdeseta redovna godišnja konferencija Srpskog udruženja za krivičnopravnu teoriju i praksu - Izmene u krivičnom zakonodavstvu i status nosilaca pravosudnih funkcija i adekvatnost državne reakcije na kriminalitet (međunarodni pravni standardi i stanje u Srbiji) (str. 23), Zlatibor: Srpsko udruženje za krivičnopravnu teoriju i praksu.

8. Kolarić, D. (2016). Evropske integracije i krivično materijalno zakonodavstvo Republike Srbije. Pedesetsedma redovna godišnja konferencija Srpskog udruženja za krivičnopravnu teoriju i praksu - Evropske integracije i kazneno zakonodavstvo, poglavlje 23-norma,praksa i mere harmonizacije (str. 31), Zlatibor: Srpsko udruženje za krivičnopravnu teoriju i praksu.
9. Kolarić, D. (2019). Orjentacija zakonodavca u poslednjem zakonu o izmenama i dopunama Krivičnog zakonika - (ne)opravdano jačanje krivično-pravne represije. Arhiv za pravne i društvene nauke, 3-4, 13-45.
10. Marković, S. (2015). Zloupotreba opojnih droga i institut zabrane ublažavanja kazne u praksi Višeg suda u Valjevu. Pedesetšesta redovna godišnja konferencija Srpskog udruženja za krivičnopravnu teoriju i praksu - Suđenje u razumnom roku i drugi krivičnopravni instrumenti adekvatnosti državne reakcije na kriminalitet (str. 224), Zlatibor: Srpsko udruženje za krivičnopravnu teoriju i praksu.
11. Moccia, S. (2013). Volto attuale del sistema penale. *Rivista italiana di diritto e procedura penale*, 3, 1093-1094.
12. Stojanović, Z. (2020). Kazneni rasponi i represivnost krivičnog zakonodavstva – uporednopravna analiza. Crimen, 1, 3-34.
13. Stojanović, Z. Kolarić, D. (2020). Krivičnopravno suzbijanje organizovanog kriminaliteta, terorizma i korupcije. Beograd: Pravni fakultet Univerzitet u Beogradu.
14. Stojanović, Z. Kolarić, D. (2015). Savremene tendencije u nauci krivičnog prava i krivično zakonodavstvo Srbije. Srpska politička misao, 3, 111-136.
15. Stojanović, Z. (2018). Komentar Krivičnog zakonika. Beograd:Službeni glasnik.
16. Stojanović, Z. (2019). Krivični zakonik, predgovor i registar - Z. Stojanović. Beograd:Službeni glasnik.
17. Wade, M. (2009). Prosecutors and Drugs Policy: A Tale of Six European Systems. Utah Law Review, 1, 153-174.
18. Law on Ratification of the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Official Gazette of the SFRY – international agreements, 14/1990
19. Law on Ratification of the Single Convention on Narcotic Drugs, Official Gazette of the SFRY, 2/1964
20. Law on Amendments and Additions to the Criminal Code of the SFRY, Official Gazette of the SFRY, 3/1990, 38/1990, 45/1990, 54/1990
21. Law on Amendments and Additions to the Criminal Code of the SRY, Official Gazette of the RS, 39/2003
22. Law on Amendments and Additions to the Criminal Code, Official Gazette of the RS, 72/2009
23. Law on Amendments and Additions to the Criminal Code, Official Gazette of the RS, 35/2019.

ENGAGING THE PROBATION SERVICE IN CRIMINAL PROCEEDINGS IN THE REPUBLIC OF SERBIA BEFORE THE IMPOSITION OF ALTERNATIVE SANCTION

Dijana Janković, PhD[1]
Appellate Court in Niš, Serbia

Abstract: The topic of the paper is reviewing the relationship between the probation service and the judiciary in the Netherlands and UK, and the possibility of engaging the Probation Service in criminal proceedings in the Republic of Serbia before the imposition of a criminal sanction (in the form of giving reports and recommendations to judges or public prosecutors on the pronouncement of an alternative sanction). In this regard, the paper discusses the legal possibilities in Serbia, i.e. whether the court or public prosecutor under the Serbian Criminal Procedure Code has the authority to request a report on the personality of the defendant from the Probation Officer in the pre-trial criminal proceedings or in the phase of main trial (before the decision on the criminal sanction). The paper also discusses a possible proposal to amend the Law on the Execution of Non-Custodial Sanctions and Measures and Serbian Criminal Procedure Code in these areas.

Key words: alternative sanctions, pre-trial reports, Probation Service, personality of the defendant, sentence.

INTRODUCTION

The assessment of sentences is very important for both the offender on whom the sentence is imposed, and for the public. The sentence itself represents the final result of a complete criminal proceeding. When determining a sentence, the court primarily takes into account the criminal act and the guilt, as well as but the personality of an offender. Accordingly, the offender as an individual is a factor that significantly affects the process of sentencing. In that sense, in the process of sentence assessment, personal factors that are in connection with the offender, but are not related to the offence itself, could

1 dijankovic@gmail.com

be applicable and could be of great importance for the individualization of punishment in terms of special prevention (Roxin, 1997: 99). Taking the personality of an offender as a determinant in the process of sentencing, we come to the point of the individualization of a sentence.

Probation service in the most countries acts and cooperates with the Court and Prosecution in all phases of criminal procedure (Clobusa: 2018). The reports on the personality of the defendant are received from the prosecution service and the law allows the prosecutor or judge to use the data thus obtained before deciding on the type and amount of the criminal sanction. The report also lists the risks and safeguards that the Probation Officer observes from the interviews with the convicted person and persons from his immediate environment, as well as the issues of accommodation, education, social relations, employment, etc. Relevant information are: risk factors, relation problems, mental disorders, financial situation, work, alcohol / drug abuse, as well as the attitude of the accused, motivation to change, risk of reoffending. Pre-sentence reports provide courts with objective information about the offender, and about the suitability of various sentencing options and contributes to the fairness of the decision by the court as perceived. (Global Prison Trends, 2018).

In this regard, the paper discusses the legal possibilities in Serbia that the court or public prosecutor under the Serbian Criminal Procedure Code (Official Gazette RS, 72/11, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014, 35/19 - hereafter CPC), and the Law on the Execution of Non-Custodial Sanctions and Measures (Official Gazette RS, 55/2014, 87/2018) request in a report on the personality of the defendant from the Probation Officer in the pre-trial criminal proceedings or in the phase of main trial (before the decision on the criminal sanction). The paper also discusses a possible proposal to amend the laws, such as the suggestions to introduce legal possibilities in Serbia for the implementation of the report of the Probation Officer in the criminal procedure before the decision on criminal sanction or pre - trial detention in the pre-trial and pre-sentence work. In that regard, the paper suggests that the Article 6 of the Law on the Execution of Non-Custodial Sanctions and Measures should be amended by prescribing the possibility that the Probation Officer could report on the personality of the defendant upon a request of the court or public prosecutor.

THE DUTCH PROBATION IN EUROPEAN PERSPECTIVE

The United Nations (Standard Minimum Rules for Non-Custodial Measures- The Tokyo Rules, 1990) and Council of Europe (The European Probation Rules, 2010)[2] state that:

”In order to provide greater flexibility consistent with the nature and gravity of the offence, with the personality and background of the offender, and with the protection of society, and to avoid unnecessary use of imprisonment, the Criminal Justice System should provide a wide range of non-custodial measures, from pre-trial to post-sentencing dispositions.”

“The social enquiry report should contain social information on the offender that is relevant to the person’s pattern of offending and current offences. It should also contain information and recommendations that are relevant to the sentencing procedure. The report shall be factual, objective and unbiased with any expression of opinion clearly identified.”

According to Basic Principles Probation Rules: 4 and 14:

2 Recommendation CM/Rec (2010)1 of the Committee of Ministers to the Member States on the Council of Europe Probation Rules (Adopted by the Committee of Ministers on 20 January 2010 at the 1075th meeting of the Ministers Deputies).

"Probation agencies shall take full account of the individual characteristics, circumstances and needs of offenders in order to ensure that each case is dealt with justly and fairly…Probation agencies shall work in partnership with other public or private organizations and local communities to promote the social inclusion of offenders. Co-ordinated and complementary inter-agency and inter-disciplinary work is necessary to meet the often complex needs of offenders and to enhance community safety."[3] It can be said that one of the essential goals of alternative sanctions is the suppression of recidivism, because in its basic idea it contains measures and actions of a society that are oriented towards the personality of the perpetrator, the perpetrator himself, his family and social environment and the fact that the phenomenon of recidivism is prevented by the influence of these measures (Bewley - Taylor, et al, 2018: 67).

The probation service in the Dutch system, as an independent service, in cooperation with the prosecution represents permanent link in the judiciary system (Jacobs et al., 2006: 80). The significance of the reports provided by the probation officers in terms of determination of a sentence are particularly emphasized (Tigges, 2018).

Probation service in the Netherlands (as well as in most countries of the Council of Europe and European Union, for example in North-Western Europe: Austria, Belgium, Denmark, Finland, France, Ireland, the Netherlands, Norway, Sweden, Switzerland, England and Wales, Northern Ireland, and in other regions) acts and cooperates with the Court and Prosecution in all phases of criminal procedure (Stevens, 2009: 165) particularly in:

1. *pre-trial and pre-sentence work*: information to support courts in their decisions regarding avoiding custodial remands where possible, and the pre-sentence reports to assist the courts in decision making regarding sentence;

2. *community supervision*: the management of Community Service, Electronic Monitoring or the "suspended" prison sentences;

3. *the penitentiary stage*: the provision of reports to assist decisions regarding early release and rehabilitation;

4. *post-penitentiary work*: managing prisoners after release on parole.

It has been pointed out that in the Netherlands (Kalmthout van & Tigges, 2008: 677):

1) *Probation is the only organization that deals with offenders throughout their whole journey in the criminal justice system* (Prakken & Spronken, 2017: 155):

- offers a major opportunity to influence them positively
- the overarching knowledge makes probation an influential partner in the justice chain.

2) *Pre-trial reports impact not only the sentencing process, but also the implementation of the sentence* (Prakken, & Spronken , 2007: 155):

- supervision in the community builds upon the assessed risks and needs of the offender, the probation plan addresses these risks and needs
- the kind of projects where the offender is to be placed in case of a community sentence is influenced by the profile of the offender

3 Recommendation No. R (92)16 of the Committee of Ministers to the Member States on the European rules on community sanctions and measures (Adopted by the Committee of Ministers on 19 October 1992 at 482nd meeting of the Ministers Deputies).

- in case of a prison sentence, the rehabilitation efforts and the gradual lessening of security towards more freedom can be based on the assessment in the pre-trial phase and the re-assessment during the execution of the prison sentence considering whether the rehabilitation has been successful.

3) *Early Release in the community needs to be based on the (re-)assessed risks and needs and provisions to address these.*

4) *Post-penitentiary Work*: managing prisoners after release on parole, based on knowledge and experience with this person during the previous phases.

The struggle of probation: external and internal communication

- the top boss of the probation is often interviewed by the press, not only on incidents, but on how the society can be made safer;
- he has frequent informal contacts with parliament members;
- he has very regular contacts with the probation workers, he knows what is going on in the field;
- he defends the profession or probation but everybody knows that he is eager to improve the work of probation.

In the Netherlands, the reports on the personality of the defendant are received from the prosecution service and the law allows the prosecutor or judge to use the data thus obtained before deciding on the type and amount of the criminal sanction. The Probation Service provides data in a specific format, which allows them to easily review the report and notice the most important information. The report also lists the risks and safeguards that the Probation Officer observed from the interviews with the convicted person and persons from his immediate environment, as well as the issues of accommodation, education, social relations, employment, etc. Dutch judges consider probation reports useful information.

Probation officers obtain relevant information about the personality of the accused. Relevant information considers: risk factors, relation problems, mental disorders, financial situation, work, alcohol / drug abuse as well as the attitude of the accused, motivation to change, risk of reoffending (Tak, 2008: 12).

Functions of a pre-sentence reports:

- They provide courts with objective information about the offender, and about the suitability of various sentencing options.
- They contribute to the fairness of the decision by the court as perceived by the offender. This enhances the acceptance of a sentence and contributes to a lower reconviction rate.
- They help the justice system to make optimal use of the array of sentencing options.
- They contribute to economic savings if the right offender is matched with the least costly and most effective sentence.

Minimum content:

- offence analysis and pattern of offending;
- relevant offender circumstances as either a contributing factor or a protective factor of offending behavior;
- risk of harm and likelihood of reoffending analysis, based on data and clinical judgment;

- outcome of pre-sentence checks with other agencies or providers of probation services;
- address of any indications of possible sentence provided by the court;
- an integral conclusion which and why factors are crime-related and what needs to be done;
- sentence proposals commensurate with the seriousness of the offence and which address the offenders assessed risk and needs; what kind of sentence will work.

For the Dutch and UK judges and public prosecutors, it is unimaginable to go through the work process without pre-sentence reports from the Probation Service. Pre-sentence reports present a pathway for judges to use cheaper, more effective, proportionate alternative sanctions.

RELATIONSHIP BETWEEN THE PROBATION SERVICES AND THE JUDICIARY IN THE UK

Throughout the UK, legislation and guidance regulate the circumstances in which reports and other information are provided by probation to the courts. The effectiveness of these elements of probation work is regularly subject to internal performance monitoring and external inspection; courts generally give strong support for the work of probation.

In the UK, the Probation Service (*NPS*) performs all the court-facing roles of probation. Whether sufficiently high standards are maintained usually depend on the quality of information they are able to provide on a timely basis to the court. In part this depends on caseloads and staffing and other resources. A further key factor is the quality and timeliness of information they receive from the Community Rehabilitation Companies (CRCs) about offenders and the availability of programmes and support in the local area.[4]

The issue that has been discussed in the UK is whether the expertise and experience of probation agencies are used in developing crime reduction strategies.

If the court orders participation in a programme or imposes some other requirement that should reflect a thorough assessment of the offender's individual needs and history by the court, aided by probation. Individualized requirements with a therapeutic and/or treatment content often in combination with supervision can be imposed, but are less frequently used in E&W than unpaid work and electronic monitoring (Fox et al, 2014).

In practice the degree of individualization will depend on whether the court is provided with the information needed to make a proper assessment. The key tool is the pre-sentencing report prepared by probation together with any information on available programmes or treatment places. Advice to the court on sentencing has traditionally been a key part of the probation officer's role. (Review of efficiency in criminal proceedings, 2015).

4 The Community Rehabilitation Companies in UK work directly with service users aged 18 and over who either has been sentenced by the courts to a Community Order or Suspended Sentence Order or released on licence from prison to serve the rest of their sentence in the community. Under the Offender Rehabilitation Act 2014 in UK, the Community Rehabilitation Companies also continue to supervise ex-service users for a 12 months' period after release from prison. And from 1 February 2015, they introduced 'Through the Gate' services including housing, employment, finance and debt advice for those sentenced to less than 12 months in prison and who are at greatest risk of re-offending.

In England and Wales, Crime Reduction Boards, Local Criminal Justice Boards, and Community Safety Partnerships are statutory bodies that have to some extent enabled probation to provide expertise for crime reduction. In London since 2010 a Crime Reduction Board has met quarterly to share information and work on crime reduction with probation staff, local council officers, health workers, the police, and other bodies. These bodies share information with each other in order to assess local crime priorities. They work with probation and other public bodies to develop approaches in tackling crime and reoffending. The Probation Chiefs Association issued a position statement confirming the importance of probation supporting these crime reduction partnerships to help stop reoffending (Fox et al, 2013).

In England and Wales the relationship between the probation service and the prison service until the 1960s did not exist - aftercare was provided by a prisoners' aid charity. Subsequently there was greater interaction between probation and prisons around license and aftercare, but they remained entirely separate. This changed in 2000 when the service was reorganized into 42 Probation Boards covering the same areas as local police forces. In 2003 a review recommended linking prisons and probation.

The National Offender Management Service (NOMS) was created as a result in 2004 with the aim of creating a seamless transition of offenders from prison to the community. The NOMS is an executive agency sponsored by the Ministry of Justice (The NOMS Offender Management Model, 2006: 13). It is responsible for prisons (managing public sector prisons and also accountable for those in private ownership by managing the contracts for these). It also oversees probation delivery and rehabilitation for prisoners and those being released.

A supervision requirement does allow for greater individualization according to the offender's needs and circumstances. Once the probation order has been made, the offender manager will use the Offender Assessment System (OASys), which offers a degree of individualization to meet the needs of the offender resulting in a detailed sentence plan including how the need will be addressed (Policy Briefing by Criminal Justice Alliance, 2013). Categories of need listed in the OASys correspond to factors thought to increase the risk of offending or reoffending. They include accommodation, alcohol or drug issues, and lifestyle, behavior and relationship problems. Plans or interventions to address these needs are also entered into the OASys, for example, treatment programmes, training or counseling *(Sentence Planning, 2014).*

An important example is the Maturity Assessment Tool for young adults. Whether these tools and other available resources are used effectively to produce a responsive supervision plan will depend largely on the skill of the probation officer in building a relationship with the offender (The Community Order and the Suspended Sentence Order three years on, 2009).

APPLYING THE REPORT OF THE PROBATION SERVICE IN THE REPUBLIC OF SERBIA

Legislation in Serbia prescribes significant number of alternative sanctions in different phases of a criminal procedure.[5] Alternatives to imprisonment in Serbia can be shared into the following groups:

5 According to the latest data from the Department for treatment and alternative sanctions at the Administration for execution of alternative sanctions of the Ministry of Justice of the Republic of Serbia, in the period from 2006 to 2017 in Serbia, about 18 692 alternative sentences were pronounced. The data indicate the rise in number of pronounced alternative sanctions in Serbia. Since the time of introduction into the legislative system until 2017, "House prison" has shown a constant increase (in 2011 - 394 verdicts, in 2012 - 882 verdicts, in

The Serbian Criminal Procedure Code provides following alternative sanctions at the pre-trial stage: 1. Deferring criminal prosecution; 2. Prohibition of approaching, meeting or communicating with a certain person; 3. Prohibition of leaving a temporary residence; 4. Bail; 5. Prohibition of leaving a dwelling (house arrest).

The Criminal Code in Serbia (Official Gazette RS, 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016, 35/19) provides following alternative sanctions at the trial and sentencing stage: 1. Community service; 2. Home detention; 3. Settlement of the offender and victim; 4. Revocation of driver's license; 5. Cautionary measure (Suspended sentence - suspended sentence under the protective supervision) and Judicial admonition, 6. Fin.

Furthermore, the Serbian Criminal Code at the post- sentencing stage provides: Conditional release (Criminal Code).

In order to analyze the legal framework of the probation system in the Republic of Serbia, we could refer to the following laws and acts - the Criminal Procedure Code, the Criminal Code, the Execution of Criminal Sanctions, the Law on Execution of non-custodial sanctions and measures (Official Gazette RS 55/2014, 87/2018) and the Action Plan for Implementation of the Strategy of Developing the System of Execution of Criminal Sanctions in the Republic of Serbia until 2020 (Official Gazette RS, 85/2014)[6].

From the above stated types of prescribed alternative sanctions in Serbia and the stated phases of criminal procedure in which the alternative sanctions can be pronounced, it can be concluded that according to the legislation, alternative sanctions can be pronounced in all phases of the criminal procedure starting with the pre-trial procedure and concluded with the execution of criminal sanctions.

On the other hand, from the existing Criminal Code, Criminal Procedure Code, as well as from law regulating competence and activity of the Probation Service (Law on Execution of non-custodial sanctions and measures), it can be concluded that Probation service starts its activities in the phase of execution of criminal sanctions. The Probation service actually supervises the execution of the pronounced alternative (non-custodial) sanctions in the phase of execution. Likewise, it performs certain supervision activities in pre-trial phase during the execution of some measures imposed to secure the presence of the defendant and are the substitution to custodial measures (for example, prohibition of leaving a dwelling -house arrest).

Probation Officers make reports only in relation to the supervision of the execution of alternative sanctions. The Probation Officers write reports to the Trial Chamber on the behavior of prisoners serving the sentence of house arrest.

The Probation Service notifies the court of the commencement of the execution of a measure, penalty or protective supervision, as well as of its completion. If problems arise during execution, the trust service informs the court through extraordinary reports on a newly created situation for which it is not possible to execute punishment, measure or protective control.

According to the current legislation and practice in Serbia, the Probation Service does not submit reports to the court nor to the prosecutor's office on the personality of the defendant before the imposition of criminal sanctions, i.e. in the phase of the *pre-trial and pre-sentence work* when the court

2013 - 1101 verdicts, in 2014 - 1934 verdicts, in 2015 - 2498 verdicts, in 2016 - 3136 verdicts and in 2017 - 3362 verdicts).

6 The Government of the RS adopted, on December 23rd, 2013, the Strategy of Developing the System of Execution of Criminal Sanctions in the Republic of Serbia until 2020.

decides on the type and the level of punishment to which the accused will be sentenced. Besides, such reports of probation officers are not submitted even in the pre-trial proceedings when the public prosecutor or the court decides whether a pre-trial detention will be imposed on the suspect or some other milder measure as alternatives to pre-trial detention.

Namely, the court (specifically the judge acting in the proceeding and deciding on the case) and the public prosecutor during the hearing of the defendant, under Article 85 of the Code of Criminal Procedure, take personal information from him (name, surname, personal identification number or identification number of a personal document, nickname, the first and last name of the parent, the mother's family name, place of birth, place of residence, the day, month and year of birth, citizenship, occupation, family circumstances, whether he is literate, what kind of school the defendant has completed, the property owned by the defendant and his family members, whether, when and why he was convicted, whether and when the criminal sanction was pronounced and whether proceedings for any other criminal offense are being prosecuted). They also obtain an excerpt from the criminal record (on possible earlier convictions) of the defendant from the competent Police Administration and on the basis of these data, judges practically make a decision on the criminal sanction.

On the other hand, under the Article 54 of the Criminal Code "the court shall determine a punishment for a criminal offender within the limits set forth by law for such criminal offence, with regard to the purpose of punishment and taking into account all circumstances that could have bearing on severity of the punishment (extenuating and aggravating circumstances), and particularly the following: degree of culpability, the motives for committing the offence, the degree of endangering or damaging protected goods, the circumstances under which the offence was committed, the past life of the offender, his personal situation, his behavior after the commission of the criminal offence and particularly his attitude towards the victim of the criminal offence, and other circumstances relating to the personality of the offender." The stated provision of the Criminal Code prescribes the circumstances regarding personality of the defendant that court takes into account when deciding on the criminal sanction.

The reports of the Probation Officer on the personality and personal circumstances of the defendant could greatly improve and facilitate the decision on a criminal sanction or on the measure of detention. Hence, not only would be the report particularly important for the work of the court and the public prosecutor, but also the proposal which non-custodial sanction or measure would have the best effect on the convict. Of course, this proposal would not be binding for judges.

In this regard, we can ask the following questions:

- Does the court or public prosecutor under the Criminal Procedure Code have the authority to request a report on the personality of the defendant from the Probation Officer in the pre-trial criminal proceedings or in the phase of main trial (before the decision on the criminal sanction)?

- Does the Probation Service have the authority and permission to compile and submit such a report to the court or the prosecutor's office?

- What should the contents of the report be?

- Pursuant to the provisions of the Criminal Procedure Code of the RS, the report of the Probation Officer could have the significance of the record in the sense of the provision of Article 138 of the Criminal Procedure Code.

According to the Art.138 paragraph 2 of the Criminal Procedure Code: "A record issued in a prescribed form by a state institution within the boundaries of its competences, as well as a record issued

in that form by a person in the performance of a public authorization vested in him by law, proves the veracity of what is contained in it."

In other words, the document issued in the prescribed form by the state body within the limits of its competence, as well as the document issued in such form by a person exercising the public authority entrusted to him/her by law, proves the credibility of the content therein.

Furthermore, the court or public prosecutor would be authorized to request such a report (as a document) from the probation service pursuant to the provision of Article 139. The Code of Criminal Procedure stipulates that: "A record is obtained ex officio or on a motion of the parties by the authority conducting proceedings, or is submitted by the parties, as a rule in its original form."

On the basis of the aforementioned legal provisions of the Code of Criminal Procedure of the RS, the court and the public prosecutor would have the legal possibility to instruct the probation officer to submit the said report. They could also use the report of the probation officer in criminal proceedings (in the pre-trial proceeding or in the phase of the main trial before the decision on the criminal sanction), provided that it was duly compiled and certified by the competent department of the Department of Treatment and Alternative Sanctions.

However, from the perspective of the Probation Officer and the Probation Service, observing the Law on the Execution of Non-Custodial Sanctions and Measures, the provision of Article 1 stipulates that: "This Law regulates the procedure for execution of measures pronounced in criminal, misdemeanor or any other procedure executed within community (hereinafter: enforcement) of which the purpose, content, manner of execution, the position of the person in the proceedings, as well as the supervision of execution are prescribed."

Therefore, the provisions of the Law on the Execution of Non-Custodial Sanctions regulate the procedure for the execution of non-custodial sanctions and measures only at the execution stage. In other words, acting of the probation service is regulated only after the imposition of alternative sanctions at one of the procedure stages, and is limited on exercising supervision over them.

The provision of Article 6 of the Law on the Execution of Non-Custodial Sanctions regulates the competence of the Probation Service. Article 6 paragraph 2 of the Law on Execution of Non-Custodial Sanctions and Measures stipulates that: "The Probation Officer is authorized to collect data on the persons under execution, to establish contact with their families, to inspect the official documentation of the competent authorities and legal entities and to ask them to provide him with the necessary information."

Accordingly, Art. 6 of the Law on Execution of Non-Custodial Sanctions and Measures does not contain a direct provision authorizing the Probation Officer to make reports on the personality of the defendants and submit them to the court and the public prosecutor at the pre-trial phase of criminal proceedings and the phase of the main trial. In other words, the Probation Officer is not obliged to submit reports on the personality of the defendant in the earlier phases of the criminal proceeding before the execution.

In this regard, the suggestion is that the Law on Execution of Non-Custodial Sanctions and Measures should be extended - amended in Art. 6 of the Law on the Execution of Extradite Sanctions and Measures by adding the possibility that the Probation Officer, upon a request of the court or public prosecutor, is authorized to submit a report on the personality of the defendant before the imposition of the sentence.

CONCLUSION

Reports of the probation services delivered to judges and prosecutors at their request, in the phase of imposing a sentence or deciding on an alternative sanction or pre - trial detention, would be of great use. Reports would make it easier to decide on the criminal offense or the merits of detention. The reports would give a much more complete picture of the personality and personal circumstances of the defendant. All this is of significant importance for the decision of the court or the public prosecutor on the application of the alternative sanction or the sentence of imprisonment or detention.

Reports of probation officers would have two important new features: 1. Probation officers could submit reports on request of a court or public prosecutor in pre-trial proceedings, investigations, prosecution and main trial proceedings, i.e. at the stage of the proceedings before the court decides on the sentence or detention (determination or extension of detention) 2. The reports could contain information about the personality of the defendant (personal, family, social circumstances of the defendant) that are of relevance to the court for the decision on the type of criminal sanction or measures, and a piece of advice of the probation officer whether the accused would benefit from an alternative sanction in the perspective of his rehabilitation (either positively or negatively).

The judicial practice of Serbia does not apply the submission of reports by the probation officers at the stage of the imposition of the criminal sanctions - the pre-trial and pre-sentence work. The legal provisions of the Law on the Execution of Non-Custodial Sanctions and Measures do not prescribe the acting of the probation officer and the submission of a report to the court or public prosecutor at any of the earlier stages of the criminal proceedings (pre-trial procedure, main trial) before the execution of sanctions and measures.

However, the Law on Enforcement of Non-Custodial Sanctions and Measures of the RS does not fully exclude the activities of the probation officer in the part when the court decides on the manner of execution of the non-custodial sanction. Article 20 of the Law on the Execution of Non-Custodial Sanctions and Measures stipulates that: "Enforcement of the Punishment of the Home Prison is prescribed before the decision on execution of the sentence of the house-arrest with the application of electronic supervision is taken, the court will determine whether there are technical and other possibilities for the execution of this sentence." Furthermore, Article 20 paragraph 2 provides that: "If the court is not able to determine the conditions referred to in paragraph 1 of this Article, it will ask the probation officer to report on the existence of technical and other options of importance for the execution of this sentence." In practice, the judges requested such reports in order to check technical and other options of importance for the execution of the sentence of the house arrest, which the Probation Service fulfilled and informed the court through the report.

These provisions, as well as the practice leave some space for the probation officer's activity at the stage of assessment of the criminal sanction and for the submission of the reports and personal circumstances of the defendant to the court or the public prosecutor.

It is proposed to introduce legal possibilities in Serbia for the implementation of the report of the probation officer in the criminal procedure before the decision on criminal sanction or pre - trial detention in the pre-trial and pre-sentence work. In that regard, the provision of the Article 6 of the Law on the Execution of Non-Custodial Sanctions and Measures should be amended by prescribing the possibility that the probation officer, upon a request of the court or public prosecutor, will submit a report on the personality of the defendant before the decision on the sentence.

REFERENCES

1. Andrews, D.A., Bonta, J. and Wormith, J.S (2011). The Risk-Need-Responsivity (RNR) Model: Does Adding the Good Lives Model Contribute to Effective Crime Prevention?. *Criminal Justice and Behavior,* Vol. 38(7). 735-755.
2. Boone, M. and M. Moerings (2007). *Growing Prison Rates in: M. Boone and M. Moerings (eds.) Dutch Prisons*, 51-76. The Hague: BJu Legal publishers.
3. Cabinet Office (2011) Modernising Commissioning: Increasing the role of charities, social enterprises, mutuals and cooperatives in public service delivery, London: Cabinet Office.
4. Corstens, G.J.M. (2009) Het Nederlandse Strafprocesrecht. Deventer: Kluwer.
5. Clobusa,F. (2018). *An introduction on the Dutch probation practice*. Matra Rule of Law Training Pregramme,Veenhuizen, Netherlands.
6. CPT (2008) Report to the authorities of the Kingdom of the Netherlands on the visits carried out to the Kingdom in Europe, Aruba, and the Netherlands Antilles by the European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT) in June 2007. Strasbourg: Council of Europe.
7. Available online at: https://www.refworld.org/docid/47a86f912.html (last accessed 19 July 2020).
8. Fox, A. (2012). *Personalisation: Lessons from Social Care*, London: RSA.
9. Fox, A., Fox, C. and Marsh, C. (2013). Could personalisation reduce re-offending? Reflections on potential lessons from British social care reform for the British criminal justice system. *Journal of Social Policy Vol. 42(4*). 721 – 741.
10. Fox. C, Fox. A., Marsh, C. (2014). Personalisation in the criminal justice system: what is the potential?. *Criminal Justice Alliance*. March 2014.
11. Heard, C., Ford, M. (2015). Alternatives to prison in Europe. United Kingdom, *European Prison Observatory,* Alternatives to detention, Rome.
12. Jacobs, M., M. von Bergh and A.M. van Kalmthout (2006). Toepassing van Bijzondere Voorwaarden bij Voorwaardelijke Vrijheidsstraf en Schorsing van de Voorlopige Hechtenis bij Volwassenen. *The Hague: WODC.*
13. Jescheck, H.H. (1996). *Lehrbuch des Strafrechts, Allgemeiner Teil,* 5. Auflage, Berlin.
14. Kalmthout van, A.M. and L. Tigges (2008). The Netherlands in: A.M. van Kalmthout and I. Durnescu (eds.) *Probation in Europe*, pp. 677-725. Nijmegen: Wolf Legal Publishers.
15. Lappi-Seppälä, T., (2012). Explaining national differences in the use of imprisonment, in: S. Snacken, E. Dumortier, (Eds.), *Resisting punitiveness in Europe? Welfare, human rights and democracy*, Oxon: Routledge.
16. Prison Population Projections 2014 – 2020 England and Wales. (2014). MOJ Statistics Bulletin.
17. Prakken, T. and T. Spronken (2007). The Investigative Stage of the Criminal Process in the Netherlands in: *E. Cape et al. Suspects in Europe*, pp. 155-179. Antwerp-Oxford: Intersentia.
18. Policy Briefing by Criminal Justice Alliance, Personalisation in the criminal justice system (2013). Available online at:

19. http://criminaljusticealliance.org/wp-content/uploads/2015/02/Personalisation_in_the_CJS.pdf (last accessed 19 July 2020).

20. Roxin, C. (1997) *Strafrecht, AllgemeinerTeil*, Band I.*Grundlagen. Der Aufbau der Verbrechenslehre*, Verlag C.H.Beck, München.

21. Review of efficiency in criminal proceedings, Rt Hon Sir Brian Leveson (January 2015), Available online at: https://www.judiciary.uk/wp-content/uploads/2015/01/review-of-efficiency-in-criminal-proceedings-20151.pdf (last accessed 19 July 2020).

22. Stevens, L. (2013). The Meaning of the Presumption of Innocence for Pre-trial Detention. An Empirical Approach ", *Netherlands Journal of Legal Philosophy.*

23. Stevens, L. (2009). Pre-trial detention: The presumption of innocence and Article 5 of the European convention on human rights cannot and does not limit its increasing use. 165-180. *European Journal of Crime, Criminal Law and Criminal Justice*.

24. United Nations Standard Minimum Rules for Non-custodial Measures - The Tokyo Rules (1990), A/RES/45/110.

25. Tak, P.J.P. (2008).The Dutch Criminal Justice System. Nijmegen: *Wolf Legal Publishers*.

26. Tigges L. (2018). *The Dutch Probation in European Perspective.* Matra Rule of Law Training Programme - Detention and Alternative Sanctions, The Hague, October 8th, 2018.

ROLE OF THE POLICE AND THE JUDICIARY IN INCREASING EXPENSES OF CRIME

Danijela Petrović, PhD[1]
Faculty of Law, University of Priština, Kosovska Mitrovica, Serbia

Abstract*:* The economic approach to crime is based on the assumption of rational choice. The decision of an individual to engage in crime is determined by the ratio of the costs and benefits of engaging in crime, but also the number of benefits they derive from engaging in legal activities. Individuals decide to commit a crime if the benefits they derive from it are greater than the costs of the criminal act, while the aforementioned benefits can be of a financial, psychological, or other nature. The achieved benefit is in the function of the probability of punishment, that is, the bearing of the consequences of a criminal act. Effective crime prevention can be achieved through the reduction of the benefits for the perpetrator of the crime, or by increasing the costs of engaging in crime. The subject of analysis in this paper is the role of the police and the judiciary in increasing the probability of punishment. The analysis also reveals the influence of the threatened punishment on the expected benefit from engaging in crime.

Keywords: *crime, economic analysis, benefit, probability of punishment, police, judiciary*.

INTRODUCTION

Observed as a deviation which manifests itself, as a rule, as a criminal violation of written laws and the legal order, a criminal act is a social phenomenon which is characteristic for all states in the modern age. Various forms of criminal activity and behavior of both individuals and criminal groups endanger individuals who are affected by a specific crime, but also the functioning of numerous institutions and society as a whole. Although crime is distinctive in human society in all development epochs, modern living and working conditions, respectively during its development, have created conditions for the phenomenon of new forms of criminal activities and new areas in which crime develops. At the same time, crime is seen as a challenge to the theory and the legislator who, through intensive activity, is required to regulate and limit the number and scope of criminal acts.

1 danijela.petrovic@pr.ac.rs

The presence of crime in everyday life, the fact that there is a possibility of avoiding punishment and bearing the consequences of criminal activity, as indicated by a significant number of unsolved cases, as well as the possibility of gaining significant benefits, influenced the comprehension of crime as one of the most profitable occupations. While one part of society sees crime as a big problem, another, smaller part, which consists of individuals and groups that are engaged in crime, is developing a successful career in that area.

It is clear that crime cannot be completely prevented, with regard that the costs of crime prevention would be greater than the damage caused by criminal activities. Consequently, confrontation with all criminal perpetrators, in order to reduce or prevent crime, does not seem logical or economically justified (Thomsen, 2016: 10). Investments directed towards preventing crime are necessary, but what is even more necessary is the coordination of work between the judiciary and the police.

But, by creating an environment in which it is not worthwhile to engage in crime, respectively by increasing the costs of engaging in crime and decreasing the benefits of engaging in crime, the level of crime and the amount of resources that this area absorbs can be affected.

The analysis of this paperwork points out the factors that determine the choice of individuals to engage in crime, respectively to earn income in engaging in legal activities, as well as the possibilities to reduce crime from repression into prevention by an adequate allocation of resources to a socially acceptable and economically justified level.

The subject of analysis of the first part of this paper are factors that are of influence on the determination of an individual to commit a crime as well as the cost-benefit ratio that crime conditions. The topic of the second part of this paper is the influence of the police and the judiciary on the increase in costs of crime and the importance of coordination in their work. The third part of this paper analyzes the influence of the threatened punishment on crime level and profitability of engaging in crime in comparison to legal activities.

DETERMINING FACTORS OF INFLUENCE FOR COMMITTING A CRIMINAL OFFENSE

The level of crime that one society is confronting with is not given by itself. The occurrence of crime and the level of its manifestation are influenced by a large number of factors that are determined by the moral limitations of individuals, as well as the conditions and factors determined by the state or society. The fact that a significant number of individuals do not engage in criminal activities, even though they have the opportunity to do so, indicates the morality they possess, meaning of the moral limitations that they are not ready to violate, even though there is a stimulus for that. On the other hand, for a number of individuals, numerous restrictions in terms of laws, penalties, etc. are not a sufficient obstacle in deciding to engage in criminal activities. In addition, the inclination of the individual towards crime, the occurrence, and scope of crime are determined by the role of the state and its readiness to reduce crime to an economically justified level. The role of the state is reflected in the creation of an economic environment in which individuals are encouraged to engage in legal activities, that is, in creating conditions in which individuals can be accomplished professionally, which implies the existence of decently paid jobs in legal flows. Next to the creation of an economic environment, what is of significance is the readiness of the state to adequately sanction individuals or groups who have decided to commit a crime for any reason. In underdeveloped countries facing crises, individuals decide to engage in crime as a way to provide the necessary means of their existence. However, crime

is also present in developed countries where individuals do not face existential problems. The question which arises from that fact is what is the cause and reason for criminal activity, respectively what are the factors which influence the decision of individuals to engage in crime. The economy as a science in its effort to answer this question has established assumptions and defined models with which it requires to determine the reasons for individuals to commit a crime, as well as the impact that the probability and severity of punishment have on the level of crime.

The starting assumption of economic models, as well as economic analysis in general, is the rationality of individuals. Rationality is measured by the ratio of resources and the aim achieved through the usage of those resources. Until the 20th century, there were relatively few theories about decision-making with regard to the rational choice. Due to the consequences that the choice between alternatives causes, numerous models of rational behavior were developed during the 20th century. Rationality is limited by subjectivity, so there is potentially as much rationality as there are people on the planet (Shveri, 2010: 35-51). Rational behavior is a characteristic of individuals, regardless of whether there are market or non-market areas of their activity. Cooter and Ulen, however, make a difference between a rational individual in economics, and an individual in law who behaves in accordance with the standard of a reasonable man. According to their opinion, a rational individual in economics has stable and hierarchical preferences, and strives to maximize it, while a reasonable individual in law behaves in accordance with legal norms. Standards that are accepted and which serve as a basis for determining the rationality of individual behavior refer to the standard of rationality based on the relationship of means and goals (Cooter, Ulen, 2000: 299).

Rationality as the starting assumption of Becker's model of criminal behavior (Becker, 1968) has been very often the target of criticism. The basic question that arises is what is rational in the behavior of perpetrators of criminal acts. This question particularly comes to the fore in the case of serious crimes in which there is no direct financial benefit. In the case of criminal acts where the benefit can be measured quantitatively in terms of the amount of money or other values, it is clear that rational behavior is any behavior that provides greater value than invested resources. However, when it comes to criminal acts of murder (which basically have no material benefit), rape, and other serious crimes, the behavior of perpetrators from the point of view of society as a whole cannot be considered rational, and the society condemns and punishes perpetrators. Seeing from the perspective of the perpetrators of serious crimes, those crimes are rational because they allow them to increase the gain, which is reflected in the psychological satisfaction which psychopaths can feel. Such a form of interest is a typical example of an interpersonal interest function, in which the increase in the interest of the perpetrator is associated with a decrease in the interest of the victim (Begović, 2015: 68). Murders due to psychological pleasure should be distinguished from murders that occur in the case of committing other crimes (robberies or other forms of forced transfers), where murders are only means of executing the basic goal, meaning acquiring material benefits. The behavior of the perpetrator of a criminal act can be considered rational if the chosen way of behavior maximizes self-benefit (Petrović, Damjanović, 2019: 233). The assumption of rationality should be accepted with limitations. Insufficient or inadequate information, but also limited information processing, limit human rationality (Jovanović, 2008:46). The fact that people have insufficient and inadequate information, that is, gathering sufficient and adequate information causes costs, what influences their behavior and decisions which they make.

The decision to engage in criminal activities, in addition to aspiration in achieving maximum benefits in comparison to the invested resources, is also influenced by the tendency of individuals to take risks. Under risk, we imply the variability of the outcome of an uncertain event. People's attitudes to risk are different, and they may be neutral, be prone to risk, or to have an aversion towards the risk. The attitude they have towards risk significantly influences the decisions which they make (Begović,

Labus, Jovanović, 2008: 359). Individuals prone to risk, along with other unchanged circumstances, more easily decide to commit a crime than in the case with individuals who have an aversion towards the risk, respectively they are not prone to risky behavior.

The decision to commit a crime is determined by the cost-benefit ratio of engaging in criminal activities. The size and type of utility that is given from engaging in crime are determined by the form of criminal activity and the specific criminal offense. The costs caused by crime are conditioned by material costs in terms of equipment which is necessary for committing a crime, mental anxiety, fear, etc., and also by the expected costs of penalty and opportunity costs (Eide, 2000: 351). A penalty can be seen as formal (includes all forms of imprisonment, fines, and other penalties), but also as informal, which refers to inconveniences that arise as a reaction of family, friends, employers, etc. The costs of engaging in crime represent the difference between the gross benefits of engaging in crime and the costs which it causes (Eide, 2000: 352).

The decision of committing a crime is also influenced by the amount of income earned by engaging in legal activities. If the income which is earned can afford a decent life, the choice of individuals will not be a crime, especially if there is an aversion to risk. The low level of income from legal activities represents the low opportunity costs of engaging in crime. Low incomes often influence the decision of younger people who are paid very low to engage in crime. In addition, the fact that the income from criminal activities is achieved by the very act of committing a crime and that the penalty or consequences come later, with the possibility of not being punished for the crime, is a sufficient stimulus to commit a crime (Eide, 2000: 352).

The expected utility of crime is in a function of the probability of punishment, which is determined by the state's readiness to punish the perpetrators. Punishment is a sanction for the perpetrator of criminal acts through which he bears the consequences of his behavior. Punishments can be imposed differently, such as imprisonment, probation, fines, etc.

The aim of the judicial system is that the perpetrators of criminal acts, respectively all those who in any way endanger or violate the rights of others, bear the consequences of their behavior and are adequately sentenced. In order to achieve the above-mentioned aim, it is necessary to coordinate between all forms of authority. The legislative power strives to anticipate and regulate criminal acts and to sanction them. The efficiency in punishing the perpetrators of criminal acts is determined by the activity of the police and the judiciary.

INFLUENCE OF THE POLICE AND THE JUDICIARY ON THE PROBABILITY OF PUNISHMENT

Analysis of a significant number of authors that for research subjects have a causal relationship between the efficiency of the police work and the crime rate indicates that such a relationship exists (Begović, 2015: 124). Given that the efficiency of the police work is reflected in the probability of discovering and punishing perpetrators of crimes, the logical conclusion would be that the increase in police officers and resources related to police protection leads to the crime rate decrease. The fact that a number of police officers and their presence in society affect individuals and their decision to engage in crime indicates the significance of the preventive police protection and the influence that prevention has on the crime rate (Begović: 2015: 123). Next to the influence of the police work on the crime rate, the fact of the reverse causal relationship has risen, that is, the crime rate influence the need for increased police protection. Increased police protection implies an increase in the amount of resourc-

es in this area, and the optimal protection level implies a cost-effective ratio of costs and benefits that this kind of engagement poses.

The role and the significance of the police have been changed in accordance with changes and requests that have been put in front of it. Change in the classical police work concept, as well as the application of the police concept in the community, contributed to the development of the crime prevention strategy. With increased equipment and increased efficiency in the police work, which is reflected in the number of cases where the perpetrators of crimes are discovered and brought to justice, a clear message is sent to other perpetrators and all others that can potentially decide to commit a crime, that they will be sanctioned, thus affecting their choices to act in accordance with the law in a stimulative manner, as well as the general sense of security in society.

Next to police protection, the judiciary has a significant influence on the crime rate and its task is that the perpetrator of a crime gets punishment in accordance with the crime that they have committed. The role of a judge in a justice system is of great significance. Judicial judgment and decision-making represent an important process, especially if judges are not limited to mere enforcement of the law and its application, but they can affect the development of the law, that is, its creation. Judges must be aware of their role in both, the cases they are directly involved in, and the influence that their work and decisions have on potential participants in judicial proceedings, but also of the effects that they could have on the creation of the case-law.

It is a fact that judges like other people are not perfect, nor is the system they are a part of. As a consequence of the complex rules and procedures, and the possibility that lawyers and their clients can abuse eventual gaps in the law or law interpretation, problems in the essential enforcement of the law emerge, so court activity is of extreme importance. Enforcement of the law is additionally aggravated because courts and judges do not have perfect information on their disposal[2] as well as the fact that excessive activity in the sense of complete precision in law enforcement conditions expenses. That indicates the necessity of determining the level of precision in interpretation and enforcement of the law that is socially acceptable and aligned with economic reasons.

Determining guilt and responsibility of a crime perpetrator in the judicial proceedings conditions resource engagement in this area and causes expenses that can be considered as administrative costs and costs of judges' errors. Characteristic of administrative costs that include costs of undertaking action in criminal proceedings is that they are measurable and that they can be expressed in money. Unlike them, the costs of judges' errors can hardly be measurable and reliably determined. Error size and their frequency are influenced by the level of information that judges have on their disposal, and the very fact that they do not have them, indicates the possibility of errors in determining punishment by which the perpetrator of a crime is punished (Cooter, Ulen, 2016: 397). In the cases of determining responsibility and guilt of perpetrators of a crime, judges' errors are possible and they can be manifested as type I judicial errors that are false-positive findings that have the punishment of an innocent person as a consequence, and type II judicial errors that are false-negative findings that have the release of the perpetrator of a crime as a consequence (Begović, 2015: 134). Making a fair decision and determining punishment level represents the hardest part of the judges' job and it represents the result of complex interactions and judges' efforts that the punishment is in accordance with the crime committed, the facts of the specific case, and the rules that regulate that specific felony.

2 Perfect informing implies making rational decisions with complete knowledge about significant facts related to those decisions which implies complete certainty in terms of consequences that occur when those decisions are put into power (Begović, Labus, Jovanović, 2008: 353 and beyond).

It is important to point out that judges, as well as law-makers, do not bear the consequences of their actions and mistakes (Jovanović, 2008: 65). Along the same lines, it is of significance to mention that although they do not bear the consequences of their mistakes, those mistakes cause further expenses. In the case where an innocent person is punished, expenses include punishment costs and the cost of the fact that the perpetrator of a crime is not punished, which leads to a decrease in general prevention.

The decision that the accused is guilty is made by judges when:

$$(1 - p)\, v(c1) \geq p \qquad (1.1)$$

Where p is a judge's subjective probability that the accused is guilty, and $v(c1)$ and $v(c2)$ are functions of utility loss of court decision-makers (judges and jurors). The above indicates that along with the costs $c1$, $c2$, and the critical probability p^* the accused will be found guilty if the subjective probability is above the level of critical probability p^* (Andreoni, 1991: 385-395), where the critical probability is gained from an equation:

$$p^* = v(c1) / v(c1) + v(c2) \qquad (1.2)$$

The analysis of the utility of a perpetrator of a crime where utility function $u(b)$ fulfills the condition that $u(b1) > 0 > u(b2)$, determines utility level in the case when a perpetrator of a crime avoids punishment for the committed crime $b1$ and utility level that a perpetrator of a crime is punished for the committed crime $b2$. The probability that they will be punished and bear the consequences of their behavior is determined by the expression $q = a(1-p^*)$. Listed assumptions enable determining of what is necessary, that is, a necessary condition for a potential perpetrator to commit the crime. Expression:

$$EU = (1 - q)\, u(b1) + q\, u(b2) > 0 \quad (1.3)$$

shows that the condition for a crime to be committed represents crime's utility that should be bigger than zero.

EXPECTED UTILITY FROM ENGAGING IN CRIME

The use of the term "expected utility" indicates that because of the uncertainty that accompanies crime engagement, it cannot be claimed with certainty that a crime perpetrator will gain that utility or the outcome will condition losses. Engaging in crime often does not have utility gain as a consequence, but it can cause losses that can be bigger than resources engaged in the preparation of a criminal act. Those losses can often be more significant than material gain because freedom and even life could be lost. The expected utility of a choice, that is an event, represents a sum of utility levels of many different outcomes multiplied by the possibility of their occurring (Begović, Labus, Jovanović, 2008: 38 and 359).

The utility that is realized by committing a crime is in the function of the gain that is attained through a criminal act and the probability of bearing the consequences of a crime. The probability that a crime perpetrator will bear the consequences of their actions is determined by the probability that a perpetrator will be caught and the amount of the threatened penalty. The probability that a perpetrator will be caught is in the function of resources engaged in police work, that is, the number of police officers and the achieved productivity in police work and adequate resource allocation within this area as well. When we are talking about the amount of the threatened penalty, thoughts and opinions of the authors who have the influence of the threatened penalty on crime as their subject of analysis

are divided. There are opinions that increased and more strict punishments can influence the crime level, that is, with more rigorous punishments it can be acted preventively on perpetrators of crimes and all others who can potentially find themselves in that position to stop committing criminal acts, that is, not to engage in criminal activities (Bar- Gill, Harel, 2001: 485-591). On the other hand, there are opinions according to which stricter punishments can lead to an increase in the crime level. The fact that they are going to be punished for a severe crime may tempt perpetrators to decide to commit several crimes (if a perpetrator of a crime knows that they will receive a life sentence because of the rape or murder, they will be ready to commit several severe crimes because the punishment is not increased thereby). Sharper penal policy leading to higher expected sentences may result both in the decrease and increase of crime (Nussim, Tabbach, 2009: 314-323).

The question of whether and to what extent the amount of the threatened punishment has a preventive effect on perpetrators and potential perpetrators of criminal acts with regard to the level of crime is one of the key dilemmas within the economic analysis of crime and crime analysis in general. The essence of the question is to determine whether the punishment deters the crime, i.e. whether the potential perpetrators of criminal acts are intimidated by the punishment, but also whether the amount of crime is elastic and depends on the punishment.

The influence of the effect of punishment and intimidation by punishment is the subject of many pieces of research. Charles Murray and Louis Cox, Jr. monitored the effect of a prison sentence on the conduct of offenders in their research which included 317 males. The research deals with a criminal group whose members are minors and whose average age is 16 years. After serving the prison sentence for 14 murders, 23 rapes, more than 300 attacks, 300 car thefts and other serious crimes, their behavior was monitored for a period of 18 months. The conclusions reached on that occasion indicated that the prison sentence served as a means of intimidation because the number of arrests of group members dropped by two thirds (Murray, Cox, 1979).

The amount of the threatened penalty may affect the strengthening of general prevention. Determining the amount of punishment that can stimulate the decision of individuals not to commit a crime is not easy. There is a threshold of the amount of the threatened penalty after which the character of the change in the expected utility of the penalty changes depending on the change of that amount (Begović, 2015:142).

The analysis of the factors influencing the decision of an individual to commit a crime and pointing out the utility that can be achieved by dealing with crime seeks an answer to the question of whether it is profitable to deal with crime, or which are the areas of crime where a higher level of utility than possible accomplish by performing legal affairs. In the study conducted in the United States at the end of the 20th century, James Wilson and Alan Abrahamse compared the annual profits made in the field of crime and legal work. The analysis included prisoners in three countries which were divided into two groups for the purposes of the analysis: mid-rate offenders and serious offenders. The research came to a conclusion that both criminal groups generated income from committing criminal acts, as well as from engaging in legal businesses in accordance with their possibilities. The obtained analysis results are presented in the table (Wilson, Abrahamse: 1992: 359-367).

TABLE 1.1 *Criminal and Legitimate Earnings per Year (Dollars)*

Crime type	**High-Rate**		**Mid-Rate**	
	crime	work	crime	work
Burglary/theft	5.711	5.540	2.368	7.931
Robbery	6.541	3.766	2.814	5.816
Swindling	14.801	6.245	6.816	8.113
Auto theft	26.043	2.308	15.008	5.457
Mixed	6.915	5.086	5.626	6.956

Source: Wilson & Abrahamse, *Does Crime Pay?*, 9 JUSTICE Q. 359, 377 (1992).

The results of the mentioned research indicated that for the perpetrators of less serious crimes dealing with crime is not profitable in all areas, except in the case of car theft.

The conclusion they came to when it comes to a group of serious criminals is that crime is profitable for them for all types of crime except burglary. These results were obtained by an analysis that did not include the costs related to the time the perpetrators had spent in prison. By including these costs in the analysis, it was concluded that crime was unprofitable for both groups of criminals. This conclusion shows that dealing with crime is unprofitable, while according to the researchers, the reasons for the decision of individuals to engage in crime lie in other problems that individuals face. Some of these reasons are related to alcohol and drugs, which prevented them from engaging in legal work, but also to the temperament and tendency of individuals toward risk. Economic analysis indicates that the reasons are that the perpetrators of the crime do not value the punishment and losses that it causes.

The analysis referring to the benefits of committing crimes shows that the income generated by crime depends on the economic situation of the country in which it has been committed. Thus, unlike in developed countries, the income generated by drug trafficking in less developed and poor countries is greater than income generated by legal businesses (Rodgers, 2017). Beside higher income generated by legal businesses in developed countries, lesser income generated by crime is the result of increased possibility of punishment, i.e. higher expenses of engaging in criminal activities.

Determining the amount of the threatened punishment that will lead to the strengthening of general prevention, determining the number of police officers, and the amount of resources engaged in this area and other important issues are aimed at achieving the protection that would maximize the level of social prosperity and minimize crime. The goal of criminal law is to minimize the social costs of crimes, which includes the damage that occurs and the costs of crime prevention (Cooter, Ulen, 2016: 474). It should be added that the level of social prosperity can be significantly influenced by increasing efficiency in the implementation of court proceedings, i.e. in the procedures of proving and determining the guilt of the perpetrator of a criminal offense.

The criterion in defining and determining the optimal size, i.e. efficiency in the work of the police and the judiciary is the level of social prosperity that is achieved. The fact that the engagement of scarce resources in the field of police and judiciary requires their efficient application in order to achieve maximum results. Proponents of the Kaldor-Hicks criterion (Stringham, 2011: 41-50) believe that it is useful to have quantitative measures by which the efficiency could be measured in assessing the effectiveness of resource usage in different areas of society, that is, to determine the criteria by which conditions can be compared when defining those conditions. From the aspect of society, the criterion

of efficiency is the maximization of social prosperity. From the aspect of crime, the criterion of efficiency is the number of criminal offenses, i.e. crime rates. The choice and adoption of maximization of wealth, i.e. well-being, mitigates the initial allocation of rights and leads to its more efficient definition. Wealth is a value that can be expressed in money or cash equivalents, and its measurement does not create difficulties, which is not the case with the measurement of utility. The level of utility that an individual enjoys in spending everything that gives him a sense of satisfaction or from the activities he undertakes is different and determined by subjective personality factors. The criterion of maximizing social prosperity is accepted as an important concept of efficiency but is still criticized, which refers to the fact that as a normative theory does not offer a satisfactory explanation of the initial distribution of rights, and that the rule of maximizing wealth may conflict with ethical norms, etc.

CONCLUSION

The level of crime is determined by a large number of factors relating to the characteristics of individuals, their moral limitations, risk appetite, etc., but also factors relating to economic conditions, i.e. economic development of a country and the state's willingness to sanction perpetrators. Sanctioning criminals implies the engagement of resources in the field of police and justice and requires coordination in their work. The increase in the probability that criminals will bear the consequences of their behavior reduces the expected utility of engaging in crime, which reduces the incentive for individuals to engage in criminal activities. The analysis pointed out the necessity of increasing the costs of dealing with crime and creating conditions for generating income in legal flows. The increase in the costs of dealing with crime is realized by the increased probability of punishment, adequate penal policy, and allocation of resources within prevention.

This paper emphasizes the significant role of the police and the judiciary and increasing efficiency in their work. By increased preventing investment within these areas, crime level can be affected which would lead to a decrease in costs of individuals who are the victims of criminal acts, and overall social costs caused by crime as well. With the decrease of crime level, there would be a decrease in the amount of resources that this area absorbs, and resources engaged in court proceedings initiated with the goal of punishing crime perpetrators. Next to material costs, a decreased number of committed criminal acts would cause a decrease in the number of injuries that have physical and mental pain that victims of criminal acts suffer as a consequence, and less of irrecoverable loss as well.

The effect that crime has on society as a whole, as well as the costs that it causes, makes the intensive activity of legislators to adequately regulate this justifiable and necessary.

REFERENCES

1. Andreoni J., (1991), Reasonable doubt and the optimal magnitude of fines: Should the penalty fit the crime, RAND *Journal of Economics*, Vol. 22, pp. 385-395;
2. Bar- Gill, O., i Harel, A. (2001), Crime Rates and Expected Sanctions: The Economics of Deterrence Revisited, *Journal of Legal Studies*, Vol. 30, ss. 485-591;
3. Backer G., (1968), Crime and punishment, An economic approach, *Journal of Political Economy*, Vol. 76, pp. 169-217;

4. Begović B., (2015), *Ekonomska analiza generalne prevencije*, Pravni fakultet Univerziteta u Beogradu;
5. Беговић Б., Лабус М., Јовановић А., (2008), *Економија за правнике*, Правни факултет Универзитета у Београду, Београд;
6. Cooter R., Ulen T., (2000), Law and Economics, 6th edition, Addison Wesley Pearson, pp. 299;
7. Cooter R., Ulen T., (2016), Law and Economics, 6th edition, Addison Wesley Pearson, pp. 357;
8. Јовановић А., (2008), *Теоријске основе економске анализе права*, Београд, Правни факултет Универзитета у Београду, pp. 65;
9. Erling E., (2000), Economics of criminal behavior, *Encyclopedia of Law and Economics,* Vol. V, *The Economics of Crime and Litigation*, Chetlenham, Edwarda Elgar, 722 p. ISBN 1 85898988 4;
10. Murray C. A, & Cox, L.A. JR, (1979), Beyond Probation: Juvenile Corrections and the Chronic Delinquent;
11. Nussim, J., i Tabbach, A. D., (2009), Deterrence and avoidance, *International Review of Law and Economics,* Vol. 29, ss. 314-323;
12. Petrović D., Damjanović G., (2019), "Economic Analysis of the Criminal Offence", International Scientific Conference "Archibald Reiss Days", University of Criminal Investigation and Police Studies, Belgrade, Vol. 2, pp. 231-241;
13. Rodger D., (2017), Why do drug dealers still live with their moms?: Contrasting views from Chicago and Managua, https://www.researchgate.net/publication/317818294_Why_do_drug_dealers
14. Stringham E. (2011), Kaldor–Hicks Efficiency and the problem of Central Planning, *The Quarterly Journal* of *Austrian Economics*, Vol. 4, n. 2, pp. 41-50;
15. Швери, Р., (2010), Теория рационального выбора: универсально средство или экономический империализм? *Вопросы теории* 7, pp. 35-51;
16. Thomsen L. S., (2016), On the Economic Analysis of Costs and Benefits of Crime Prevention, Contributions from the 9th Annual International Forum 2015 within the German Congress on Crime Prevention, pp. 10;
17. Wilson J., & Abrahamse A.,(1992), *Does Crime Pay?*, 9 JUSTICE Q., pp. 359-367.

UNIVERSAL WARRANTIES OF THE SUSPECT OR ACCUSED IN CRIMINAL PROCEEDINGS IN BOSNIA AND HERZEGOVINA

Marina M. Simović, PhD[1]
Secretary of the Ombudsman for Children of the Republika Srpska, B&H;
Faculty of Law, University *Apeiron*, Banja Luka, Republic of Srpska, B&H

Sadmir Karović, PhD[2]
Faculty of Law, University of Travnik, B&H;
State Agency for Investigations and Protection, Sarajevo, B&H

Abstract: The paper analyses the universal guarantees that are applicable to the criminal procedure laws applied in Bosnia and Herzegovina in relation to a suspect or a defendant. These guarantees oblige the court, the prosecution and other authorities that act directly in criminal proceedings and determine the criminal process aspect of treatment, as is the position of the suspect or the defendant in the criminal procedure. The aim of this paper is to identify, systematize, define, describe and explain universal guarantees of the suspect or accused in criminal proceedings, and to clarify certain dylemmas referring to direct practical application. Based on the conclusions of the Paper several questions are opened, answers to which should be sought in some future research in Bosnia and Herzegovina.

Keywords: universal guarantees, suspect, accused, criminal proceedings, Bosnia and Herzegovina.

INTRODUCTORY REMARKS

The Constitution, as the highest political and legal act in the country, but also all other accepted and ratified international legal documents, especially the European Convention for the Protection of Human Rights and Fundamental Freedoms, with its Protocols (Mowbray, 2005: 57 and 58), provide for

1 vlado_s@blic.net
2 karovic.s@hotmail.com

the consistent application and realization of the catalog of rights of the suspect or accused in criminal proceedings. From the constitutional point of view, the only obligation of the legislator is to take into account the requirements set before him by the Constitution of Bosnia and Herzegovina, especially those arising from the principle of the rule of law, when regulating certain institutes of these proceedings. More precisely, their regulation must always be such as to ensure the achievement of legitimate objectives of criminal proceedings, distinctness, accessibility, predictability and legal certainty of norms, as well as procedural equality of the parties.[3]

In addition to the substantial requirement necessary to undertake certain evidentiary and special investigative actions in the course of investigation, in terms of collecting the necessary evidence in relation to a specific criminal offense and perpetrator, it is necessary to meet the formal requirements in each individual case, and that is an order obtained from the judge, more precisely from pre-trial judges. Namely, any restriction of fundamental human rights and freedoms of any citizen in the field of criminal prosecution requires the approval of the court, so that in each case the court autonomously assesses whether the legal requirements for the application or performance of certain evidentiary or special investigative actions are met. Special sensitivity is shown when it comes to the application of special investigative actions with regard to the sensitivity and nature of the aforementioned actions. This means that all repressive activities that restrict certain human rights and freedoms of the suspect or accused (right to privacy, right to property, etc.) by law enforcement entities are limited by the law, and thus prevent or unable arbitrariness in law enforcement or other forms of possible abuse by individuals (Marochini, 2014: 63-84).

The initial existence of grounds for suspicion that a certain criminal offense was committed, in itself, is not sufficient to restrict fundamental human rights and freedoms, given that the legislator has prescribed another cumulative requirement, which is a formal requirement - a court order. In this regard, the control function and the role of the court are directly focused on the control of legality in each individual case in terms of meeting the legally prescribed requirements. In addition, the legal axiom of criminal procedure, which directly affirms and determines modern criminal procedural law, is that a court decision cannot be based on illegally obtained evidence. The indictment, efficient conduct of criminal proceedings, position of the prosecutor in the evidentiary proceedings, resolution and clarification of the criminal matter and ultimately decision-making in relation to the specific criminal matter and the accused depend on the legally collected evidence in the investigation,

It follows from the above stated that the entire conduct of law enforcement entities (prosecutors, police and other law enforcement agencies) relating to any encroachment in or restriction of human rights and freedoms, and the application or conduct of various criminal procedure actions depends on the nature and specifics of a particular criminal offense and is limited exclusively by the law. Criminal procedure laws applied in Bosnia and Herzegovina at all levels of government[4], respecting the complex constitutional structure and organization of the state, contain essentially identical provisions with cer-

3 See: Constitutional Court of Bosnia and Herzegovia, case No. U-5/16, Partial Decision on Admissibility and Mertis of 1 June, 2017, paragraph 37.

4 Criminal Procedure Code of Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina, Nos. 3/03, 32/03, 36/03, 26/04, 63/04, 13/05, 48/5, 46/06, 76/06,29/07, 32/07, 53/07,76/07, 15/08, 58/08, 12/09, 16/09, 93/09, 72/13 and 65/18); Criminal Procedure Code of the Federation of Bosnia and Herzegovina Official Gazette of the Federation of Bosnia and Herzegovina, Nos. 35/03, 37/03, 56/03, 78/04, 28/05, 55/06, 27/07, 53/07, 09/09, 12/10, 08/13 and 59/14); Criminal Procedure Code of the Republika Srpska (Official Gazette of the Republika Srpska, Nos. 53/12, 91/17 and 66//18), and Criminal Procedure Code of Brčko District of Bosnia and Herzegovina (Official Gazette of Brčko District of Bosnia and Herzegovina Nos. 10/03, 48/04, 06/05, 12/07, 14/07, 21/07, 27/14 and 3/19).

tain (minor) differences and represent the basic criminal procedure framework for actions of all law enforcement entities or agencies in the field of effective and vigorous fight against crime. These laws prescribe certain criminal procedural actions of criminal procedural entities and other participants in various stages of criminal proceedings aimed at solving criminal procedure tasks, which means the clarification and resolution of certain criminal matters.

CONCEPTUAL DETERMINATION AND DEFINITION OF THE STATUS OF A SUSPECT OR AN ACCUSED IN CRIMINAL PROCEEDINGS

In order to properly understand the criminal procedure status of a suspect or an accused, it is necessary to conceptually determine and define the two mentioned criminal procedure statuses. In the scientific and professional public, the difference between the criminal procedure status of a suspect and an accused person is quite clear, but there are also certain dilemmas on the part of the public, sometimes including the media. In Article 20 of the Criminal Procedure Code of BiH, the legislator defined the meaning of the mentioned terms in the catalog of basic terms. A suspect is a person for whom there are grounds for suspicion that he has committed a criminal offense [Article 20, item a)]. An accused is a person against whom one or more counts in the indictment have been confirmed [Article 20, item b)]. In the system of criminal procedural law in Bosnia and Herzegovina, natural persons, as well as legal entities, can appear as suspects or the accused (Halilović, 2019: 101).

When it comes to the criminal procedure status of a suspect, it is necessary to satisfy the standard of proof that there are grounds for suspicion that a certain criminal offense has been committed. Also, the grounds for suspicion as the lower/est degree of probability or suspicion that a certain person has committed a particular criminal offense must be satisfied for the initiation and conduct of an investigation by the prosecutor, as the only legally authorized authority (issues an order to conduct an investigation). The acting prosecutor, on the basis of autonomous and independent assessment in each criminal case, evaluates and decides on initiating and conducting an investigation, depending on whether the substantive requirement is met - the grounds for suspicion.

However, if we look at the practical aspect of initiating and conducting an investigation, it can be stated that - in the investigation phase - a certain person, for whom there are grounds for suspicion that he committed a certain criminal offense, does not know that an investigation has been initiated against him at all. It is evident that there is no prescribed legal obligation to inform the suspect about initiation and conduct of investigation. The suspect practically learns that he has the capacity of a suspect only during the application of repressive activities and particular evidentiary actions by entities or law enforcement agencies (police, prosecutor's office) restricting certain rights and freedoms (deprivation of liberty, interrogation of the suspect). On the other hand, the situation is identical when it comes to the court, given that the acting prosecutor autonomously and independently, on the basis of his own or personal assessment, decides to initiate and conduct an investigation without any obligation to previously notify, obtain the consent or approval by the court. This means that the pre-trial judge was not informed that the acting prosecutor had initiated an investigation against a particular person, and that the investigation has been conducted for a certain period of time. The pre-trial judge learns about the investigation, i.e. that there are grounds for suspicion that a particular person has committed a certain criminal offense only after receiving a reasoned request for the application of certain evidentiary or special investigative actions by the acting prosecutor.

On the other hand, when it comes to the criminal procedure status of the accused, the legal definition of this term and its meaning implies that it is necessary to satisfy a higher degree of suspicion, i.e. the probability that a certain crime was committed - reasonable doubt. Namely, for the existence of a reasonable doubt standard, it is necessary to obtain, i.e. collect during the investigation the necessary evidence relating to the existence of objective - subjective characteristics of a particular or specific criminal offense. The entire investigative and evidentiary actions taken in the investigation by the acting prosecutor and the police, and possibly of other law enforcement agencies (tax administration, inspection services, customs service, etc.) are aimed at reviewing the validity of initial information related to the existing grounds for suspicion that a certain person has committed a particular criminal offense and collection of necessary evidence. The fact that an investigation has been initiated against a certain person due to the existence of grounds for suspicion that he has committed a particular criminal offense does not necessarily mean that this person will automatically have the criminal procedure status of an accused after the investigation is completed. His further criminal procedure status and treatment directly depend on the evidence collected during the investigation, based on which the acting prosecutor autonomously and independently assesses and decides on a possible raising of an indictment, if collected evidence shows that the evidentiary standard - reasonable doubt, is met.

There is often a wrong and ill-founded opinion in the general public that the investigation is led by the police, given that the criminal procedure laws at all levels entrust the prosecutor with the managerial role in the investigation. Authorized officials have an extremely proactive role in the investigation in terms of collecting necessary evidence under the managerial role of the acting prosecutor, so that the police or authorized officials should be viewed and understood as an executive or operational service of the prosecutor's office, although they are two different and independent law enforcement entities in an organizational sense. The police, i.e. authorized officials directly implement all the requests and orders of the prosecutor, but also of the court, in terms of collecting the necessary evidence and information in relation to the particular criminal offense and the perpetrator, but this does not mean that the police or authorized officials lead the investigation. However, following the nature of their work and tasks, authorized officials are able to make proposals to the acting prosecutor or to initiate the application of certain criminal procedural actions (evidentiary actions, special investigative actions, etc.).

GUARANTEES TO THE SUSPECT OR THE ACCUSED IN THE CRIMINAL PROCEEDINGS

A key issue relating to the protection of human rights and freedoms of the suspect, i.e. the accused are their guarantees, as well as a catalog of legally prescribed rights in criminal proceedings which restrict the use of repressive means and prevent arbitrariness in actions, i.e. various forms of abuse by persons being entrusted with public powers in the field of law enforcement. On the other hand, the state of Bosnia and Herzegovina, by signing and ratifying numerous international legal documents (conventions, etc.), has undertaken the obligation to coordinate and harmonize criminal legislation regarding the adoption of appropriate internationally recognized standards that guarantee or protect human rights and freedoms to each individual (Materljan, 2019: 503-528). The analysis of the provisions of the Criminal Procedure Code of Bosnia and Herzegovina, at all the levels of government (state level, Entity level, Brčko District), recognizes clearly prescribed guarantees of universal character to the suspect / the accused in criminal proceedings (Ivičević Karas, 2015: 355-382).

FAIRNESS OF THE PROCEEDINGS

The European Court of Human Rights often spoke about "prominent place held in a democratic society by the right to a fair trial"[5]. This guarantee is directly prescribed in the provision of Article 2 of the Criminal Procedure Code of Bosnia and Herzegovina. The rules established under this law should ensure that no innocent person is convicted and that a criminal sanction is imposed on the perpetrator under the conditions stipulated in the Criminal Code of Bosnia and Herzegovina and other laws of Bosnia and Herzegovina prescribing criminal offenses and by a procedure prescribed by the law (Article 2 of the Criminal Procedure Code of BiH). Criminal proceedings must be organized in such a way as to ensure (as characteristics of a criminal proceedings) a fair trial. The right to a fair trial is an important determinant of the quality of the concept of the rule of law and, therefore, it is of special importance that this right is protected in practice as much as possible. The proceedings must be fair, i.e. must be conducted within a "reasonable time" and have to meet certain requirements regarding the consideration of the dispute and the pronouncement of the judgment.

JURISDICTION OF THE COURT

A fair trial has to be conducted before "independent and impartial tribunal established by the law". As the European Court of Human Rights explained, "it is essential in a democratic society that the courts instil confidence in the public and, above all, in criminal proceedings, in the accused"[6]. Consequently, to that end, Article 6 of the European Convention for the Protection of Human Rights and Fundamental Freedoms requires that the court falling within its jurisdiction be impartial[7].

With this guarantee, citizens have a universal right to a trial before a court. For criminal offenses within the jurisdiction of the court, only that court may impose a criminal sanction in the proceedings initiated and conducted under this law, unless otherwise prescribed by this law (Article 2 paragraph 3 of the Criminal Procedure Code of BiH).

Jurisdiction is the right and duty of a single court to shed light upon and resolve a particular criminal matter in accordance with the law. This is the scope of the court's conduct, prescribed in advance by legal regulations. It follows from such character of court jurisdiction that it cannot be changed by the agreement of the parties or by a court decision, that the jurisdiction of the courts can be established and changed only by the law, and that all acting bodies are obliged, *ex officio*, to take care of their jurisdiction, even when the matter has been previously considered by some other body deciding on that matter.

RESTRICTIONS ON THE USE OF REPRESSIVE MEANS AND LEGALITY OF RESTRICTING THE RIGHTS AND FREEDOMS

Given that fundamental human rights and freedoms are guaranteed to each individual regardless of his or her national, ethnic, religious or racial affiliation or any other personal characteristic, the re-

5 *Andrejeva v. Latvia* [GC], no. 55707/00, § 98, ECHR 2009 and *Prince Hans-Adam II of Liechtenstein v. Germany* [GC], no. 42527/98, § 45, ECHR 2001-VIII.

6 *Kyprianou v. Cyprus* [GC], no. 73797/01, § 118, ECHR 2005-XIII and *Padovani v. Italy, 26* February 1993, § 27, Series A no. 257-B

7 *Kyprianou v. Cyprus* [GC], no. 73797/01, § 118, ECHR 2005-XIII.

striction of rights and freedoms is possible only if the conditions prescribed by the law are met. Prior to the issuance of a final verdict, the suspect or the accused may be restricted in his freedom and other rights only under the conditions prescribed by the law (Article 2 paragraph 2 of the Criminal Procedure Code of BiH).

PRESUMPTION OF INNOCENCE

Everyone is presumed innocent of a criminal offense until his guilt is established by a final judgment (Article 3 paragraph 1 of the Criminal Procedure Code of BiH). An identical provision is prescribed under Article 6 paragraph 2 of the European Convention for the Protection of Human Rights and Fundamental Freedoms. It is the so-called temporary presumption (*praesumptio iuris tantum*), which is valid until proven otherwise.

It follows that: (1) the suspect or the accused is not obliged to defend himself, provided that he is obliged to respond to the summons of the body conducting the criminal proceedings; (2) the suspect or the accused is not obliged to prove his innocence and the burden of proof lies on the opposite party, i.e. the prosecutor; (3) the court must render an acquittal, not only when it is convinced of the innocence of the accused but also in a situation where it is not convinced of his guilt.

Any form of prejudice of guilt before a final judgment constitutes a violation or threat to legally prescribed rights. At the moment of the final termination of the criminal matter, this presumption can be refuted (Bejatović, 2019: 211).

IN DUBIO PRO REO

Doubt regarding the existence of facts that constitute the characteristics of a criminal offense or on which the application of provisions of criminal law depends, the court resolves by a verdict in a way that is more favorable for the accused (Article 3 paragraph 2 of the Criminal Procedure Code of BiH). In this way, the rights of the accused person are directly secured from any arbitrariness or improvisation in the application of the law, as well as possible issuance of an illegal court decision. In order to reach a verdict finding the accused guilty certainty is required regarding the existence of decisive facts, so that the court must resolve any doubt in a positive ("fact stands") or negative sense ("fact does not stand") equally for all the facts, both those being in favor and those that are to the detriment of the accused (Vasiljević & Grubač, 2002: 623).

NE BIS IN IDEM (NOT TWICE ON THE SAME MATTER)

No one may be tried again for an offense for which he has already been tried and for which a final court decision has been rendered (Article 4 paragraph 2 of the Criminal Procedure Code of BiH). The law prohibits a retrial for the same offense for which the person was tried and for which a final court decision was rendered. In connection with the above, the case law of the European Court of Human Rights is very interesting with regard to establishing a violation of the *ne bis in idem* principle, and establishing a violation in the sense of determining criteria. One of the problems of a practical nature is timely recognition and differentiation of criminal behavior into misdemeanors and criminal offenses.

Persons who commit a certain criminal offense practically have the opportunity to avoid individual criminal responsibility due to punishment for misdemeanor.

It follows from the above stated that, when defining punishable behaviors, the legislator must pay special attention to the similarity between the misdemeanor and the criminal offense according to their important characteristics and decide whether a certain punishable behavior, i.e. a certain action is a misdemeanor or a criminal offense, thus removing dilemmas and doubts regarding clear differentiation and consistent application of the universal guarantee *ne bis in idem*. In practice, it is necessary to be very cautious whenever a certain behavior (doing or not doing, i.e. punishable behavior) can be both a misdemeanor and a criminal offense, and should assess at the beginning or at least during the proceedings (either misdemeanor or criminal, and, logically, when it is rather a misdemeanor procedure) which has not been legally terminated, whether it is one or the other delict or even whether a misdemeanor or criminal offense may arise from the same life event, which can also sometimes be the case (Stojanović, Škulić & Delibašić, 2018: 66).

LEGALITY OF EVIDENCE

One of the central issues of adequacy and proper application of the law incorporates the legality of evidence, which the correct court decision directly depends on. In this sense, the legislator has prescribed very restrictive legal requirements to be applied in each specific criminal case, so that all evidence is obtained in the legally prescribed manner. It is prohibited to extort a confession or any other statement from a suspect, accused or any other person participating in the proceedings (Article 10 paragraph 1 of the Criminal Procedure Code of BiH). The Court cannot base its decision on evidence obtained in violation of human rights and freedoms prescribed by the Constitution and international treaties ratified by Bosnia and Herzegovina, nor on evidence obtained in substantive violations of this Law (Article 10 paragraph 2 of the Criminal Procedure Code of BiH). In this regard, it should be emphasized that the European Convention for the Protection of Human Rights and Fundamental Freedoms with its Protocols has supremacy over domestic (national) law, the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, and the Universal Declaration on Human Rights which strictly prohibit any form of torture or cruel, inhuman or degrading treatment or punishment.

The rules of international human rights law stipulate that no one may be subjected to torture or cruel, inhuman or degrading treatment or punishment. Illegal evidence - due to the violation of the procedural form, which at the same time represents a violation of fundamental human rights - must not be used for passing a verdict in criminal proceedings (Grubač, 2004: 279). According to the legal regulation of illegal evidence, we can classify it into three basic types: a) evidence obtained in violation of human rights and freedoms prescribed by the constitution and international treaties ratified by Bosnia and Herzegovina, b) evidence obtained in significant violations of criminal procedure provisions, and c) evidence that has been established from illegal evidence (the so-called “doctrine of the fruit of poisonous tree”).

INSTRUCTION ON RIGHTS

The court, prosecutor and other bodies participating in the proceedings shall instruct the suspect / the accused or another person participating in the procedure, who could, out of ignorance, fail to carry

out an action in the proceeding or fail to exercise their rights, on the rights granted to them under this Code and the consequences of failing to act (Article 12 of the Criminal Procedure Code of BiH). Therefore, the legislator has prescribed to the court, prosecutor's office or other bodies participating in the proceedings the obligation to give instruction on rights, so that the suspect, accused or other persons would not omit an action or fail to use the rights prescribed by the law, out of ignorance, including the consequences of possible failure to act, i.e. omission of a certain action.

TRIAL WITHOUT DELAY

Conducting the proceedings within reasonable time is of a crucial importance for the entire legal system, because any unnecessary stalling often leads to *de facto* deprivation of an individual's rights, loss of efficiency and trust into that system (Moules, 2004: 265-268). The suspect or accused has the right to be brought before a court within the shortest reasonable time and to be tried without delay (Article 13 paragraph 2 of the Criminal Code of BiH). The court is obliged to conduct the procedure without delay and to prevent any abuse of the rights of persons participating in the proceedings (Article 13 paragraph 2 of the Criminal Code of BiH). Considering that certain rights are limited to the suspect / the accused, in the criminal proceedings, there is a prescribed obligation to take all legal actions within the shortest reasonable time in order to reach a lawful court decision. Any delay or unjustified and unnecessary delay in undertaking certain procedural actions and activities directly results in the unfavorable criminal procedure position and the status of the suspect / the accused.

The right to a trial within a reasonable time is also enshrined in the European Convention for the Protection of Human Rights and Fundamental Freedoms, which stipulates in Article 6 paragraph 1 that everyone has the right to a fair and public hearing when deciding on his civil rights and obligations or criminal charges against him - within a reasonable time before an independent and impartial tribunal constituted by the law. Pursuant to the above provision, the right to a trial within a reasonable time is one of the fundamental rights of citizens that enjoy protection before the European Court of Human Rights, so the case law of this court is the most valuable source of rights in this field (Carić, 2018: 14).

EQUALITY OF TREATMENT

One of the legal axioms in law is the equality of parties in proceedings. The court is obliged to treat the parties and the defense counsel equally and to provide each party with equal possibilities in terms of access to evidence and its presentation at the main trial (Article 14 paragraph 1 of the Criminal Code of BiH). The court, the prosecutor and other bodies participating in the proceedings are obliged to examine and establish with equal care both the facts that incriminate the suspect or the accused and those that are in their favor (Article 14 paragraph 2 of the Criminal Code of BiH).

CONCLUSION

Throughout history, the Criminal Procedure Code of Bosnia and Herzegovina has gone through various stages of development with very intensive and dynamic reform processes and a clear intention to find the most adequate solutions and answers to crucial criminal procedure questions. The adequacy

of the state reaction to crime, in terms of efficient and energetic fight, can be observed through the prism of the adequacy of the criminal procedure norm and consistent application of universal guarantees to the suspect or accused, in order to clarify and resolve certain criminal matters and make a final court decision.

The criminal procedure position of the suspect or accused, by its nature, significance and importance, occupies a first-class and central place in all reform processes, given the tendency to affirm the protection of fundamental human rights and freedoms, which directly affected the position, status and treatment of the suspect or accused. The humanization of modern criminal procedural law has directly reflected on the criminal justice position and status of the suspect / the accused, and the exercise of the right to defense in the broadest sense. The universal guarantees that are the subject matter of this paper relate to the criminal procedural aspects of the specific position of the suspect or accused, and they prevent arbitrariness and various forms of abuse by persons entrusted with public authority, and directly express and affirm the legal security of each individual in terms of consistent application of the law.

REFERENCES

1. Batistić Kos, V. (2012). *Pozitivne obveze prema Europskoj konvenciji za zaštitu ljudskih prava i temeljnih sloboda*, Narodne novine, Zagreb.
2. Bejatović, S. (2019). *Krivično procesno pravo, Drugo izmijenjeno izdanje*, Beograd: Službeni glasnik.
3. Carić, S. (2018). *Pravo na suđenje u razumnom roku, treće izmijenjeno i dopunjeno izdanje*, Beograd: Službeni glasnik.
4. Grubač, M. (2004). *Krivično procesno pravo, Uvod i procesni subjekti*, Beograd: Službeni glasnik.
5. Halilović, H. (2019). *Krivično procesno pravo, Knjiga prva: Uvod i temeljni pojmovi*, Sarajevo: Fakultet za kriminalistiku, kriminologiju i sigurnosne studije Univerziteta u Sarajevu.
6. Harris, David et al. (2014). Law of the European Convention on Human Rights, Oxford.
7. Ivičević Karas, E. (2015). *Pomicanje granica prava na branitelja pod utjecajem europskog kaznenog prava*, HLJKPP, Zagreb, 2.
8. Krapac, D. (2015). *Kazneno procesno pravo, Prva knjiga: Institucije*, Narodne novine, Zagreb.
9. Marochini, M. (2014). The interpretation of the European Convention on Human Rights, Zbornik radova Pravnog fakulteta u Splitu, god. 51, broj 1.
10. Materljan, G., Materljan, I. (2019). *Predmet Taricco ii i pitanja na vagi: ustavno načelo zakonitosti u kaznenom pravu i djelotvornost prava Europske unije*, Hrvatski ljetopis za kaznene znanosti i praksu, Zagreb, vol. 26, broj 2.
11. Mowbray, A. (2005). *The Creativity of the European Court of Human Rights*, Human Rights Law Review, 5, 1.
12. Moules, R. (2004). *The Right to Trial within a Reasonable Time*, *The Cambridge Law Journal* Vol. 63, No. 2.
13. Rainey, B. *et al.* (2017). *The European Convention on Human Rights*, Oxford University Press, Oxford.
14. Schabas, W.A. (2015). *The European Convention on Human Rights: A Commentary*. Oxford Commentaries on International Law.

15. Simović, M., Simović, V. (2018). *Krivično procesno pravo Uvod i opšti dio*, Istočno Sarajevo: Pravni fakultet Univerziteta u Istočnom Sarajevu.
16. Simović, M. (2019). *Krivično procesno pravo Uvod i opšti dio*, Bihać: Pravni fakultet Univerziteta u Bihaću.
17. Stojanović, Z., Škulić, M., Delibašić, V. (2018). *Osnovi krivičnog prava, Krivično procesno pravo, Krivični postupak kroz praktičnu primjenu*, *Knjiga II*, Beograd: Službeni glasnik.
18. Škulić, M. (2015). *Krivično procesno pravo, sedmo izdanje*, Pravni fakultet Univerziteta u Beogradu.
19. Trechsel, S. (2005). *Human Rights in Criminal Proceedings*, Oxford University Press.
20. Vasiljević, T., Grubač, M. (2002). *Komentar Zakonika o krivičnom postupku*, Beograd; Službeni glasnik.

THE SALE OF CONTERFEIT GOODS VIA THE INTERNET AS A CONTEMPORARY SECURITY CHALLENGE – LEGAL ASPECTS

Jelena Ćeranić Perišić, PhD[1]
Institute of Comparative Law, Belgrade, Serbia

Abstract: The sale of counterfeit goods via the Internet is considered to be a contemporary security challenge. Using e-commerce platforms (such as eBay) allows consumers to globally search, locate and buy goods from anywhere in the world. This new mode of trade has increased opportunities for infringements of Intellectual Property Rights, especially Trademark Rights. Counterfeit products pose threats to the health and safety of consumers and to security. Since Internet users have access to websites created and edited abroad, the limits of national regulations have been breached. Therefore, it is an additional challenge for all legislators to agree on international legal framework for fight against the online sale of counterfeit goods. Existing binding sources of international law, treaties and state-to-state agreements (so-called hard international law), have nothing much to say regarding this issue. However, non-binding instruments (so-called soft international law) offer some effective solutions, such as Memorandum of Understanding on the Sale of Counterfeit Goods via the Internet.

Key words: counterfeit goods, trade, Internet, international legal framework, security.

INTRODUCTION

The expansion of the Internet and technologies based on it has enabled the development of the digital economy and the emergence of new and innovative business models. The Internet has transformed how goods and services have been produced, delivered and consumed. Using Internet platforms (such as eBay, Alibaba and Google Search) allows consumers to globally search, locate and buy goods from anywhere in the world (Maltzer, 2015). Simultaneously with the rapid development of technology, there was a need for regulatory intervention in various area of law, including the Intellectual Property

1 ceranicj@gmail.com

Law. Increasingly diverse ways of using Intellectual Property works on the Internet have contributed to the frequency and extent of their abuse. The sale of counterfeit goods via the Internet is a mode of abuse of Intellectual Property Rights (IPR). Moreover, it is estimated that the trade of counterfeit goods via the Internet is the fastest growing area of illegal trade. Thus the sale of counterfeit goods via the Internet is considered to be a contemporary security challenge.

A strong economic future, including sustained job growth, will only be achieved when coupled with aggressive protection of Intellectual Property (IP) globally. Likewise, this is not solely an economic or business issue. Counterfeit products, such as fake pharmaceuticals, electrical devices and critical technology components, pose serious threats to the health and safety of consumers and to national security.

The proliferation of counterfeit and pirated goods, as well as of services that distribute infringing material, undermines legitimate trade and sustainable development of the world economy, causes significant financial loses for right holders and for legitimate businesses, and, in some cases, provides a source of revenue for organized crime and otherwise poses risks to the public (Rimmer, 2011).

The Internet, a global computer network that provides communication among users around the world, is defined by technical and technological capabilities that are more or less balanced globally. In such an environment, different and even more imprecise regulations, which allow for uneven interpretations, contribute to legal uncertainty. The primary common interest of all participants in interactive communication is to establish normative frameworks for the harmonization of regulations at the global level.

As Internet users have the access to websites created and edited in other countries, the limits of national regulations have been breached. Therefore, it is an additional challenge for legislative subjects of the most developed countries to regulate the sale of counterfeit goods via the Internet on international level. The aim of the paper is to examine the international legal framework for fight against the sale of counterfeit goods via the Internet. Existing binding sources of international law, such as international treaties and state-to-state agreements (so-called hard international law), do not regulate this issue. However, non-binding international legal instruments (so-called soft international law) offer very interesting and effective solutions, such as Memorandum of Understanding on the Sale of Counterfeit Goods via the Internet.

BINDING SOURCES OF INTERNATIONAL LAW − HARD INTERNATIONAL LAW

The problem of the sale of counterfeit goods via the Internet became topical only with the phenomenon of the advent of the Internet and the beginning of its massive use. Accordingly, neither the Paris Convention of 1883 nor the 1994 Agreement on Trade Related Aspects of Intellectual Property – TRIPS regulate this issue.

Nonetheless, Intellectual Property Rights holders have advocated the establishment of higher standards of Intellectual Property protection through international treaties (hard international law). There were two attempts in that direction, both of which ended in failure. Those are: the Anti-Counterfeiting Trade Agreement (ACTA) and the Trans-Pacific Partnership Agreement (TPP).

ANTI-COUNTERFEITING TRADE AGREEMENT

The initiators of the negotiations for the adoption of the Anti-Counterfeiting Trade Agreement were two economically very strong countries: the United States and Japan. The official negotiations began in 2006. In addition to these two states, representatives of several other countries, including the European Commission, took part in negotiations. The Anti-Counterfeiting Trade Agreement was finally concluded in 2011 between seven countries: the United States, Canada, Australia, South Korea, Morocco, Singapore and New Zealand. In January 2012, the European Union joined the seven. The Agreement was expected to enter into force upon the ratification of at least six signatories.

The adoption of the ACTA took place in the light of two specific circumstances. First, from the very beginning, the negotiators did not have ambition to make an agreement that would be widely accepted. Its territorial scope was limited to a "club" composed of a small number of states. In this sense, the ACTA does not belong to any of the existing institutional frameworks for regulation of IP protection at international level. However, the ACTA establishes its own body (ACTA Committee) to supervise the implementation of the Agreement. The Agreement is open for accession only to the Member States of the World Trade Organization (WTO), under conditions on which all of them must agree (Marković, 2012). Second, the negotiations were mostly conducted in secret. Indeed, the negotiators did not consider it necessary for the public of their countries to be informed about what their diplomatic representatives were working on. The closed nature of the negotiations has raised concerns at different levels.

„There has been much concern about the closed, secretive, and selective nature of the negotiations over ACTA. There have been fears that the agenda has been driven by lobbyists from Intellectual Property industries; and that e-commerce, consumer, and competition interests have had little say in the development of the proposed agreement." (Rimmer, 2011). However, by virtue of information leakage in the period from 2008 to 2010, several working drafts appeared, and the world campaign against the adoption of the ACTA began. The campaign was led by the numerous non-governmental organizations and intellectuals (Ćeranić Perišić, 2020).

The Anti-Counterfeiting Trade Agreement contains 46 articles divided into six chapters: 1) Initial Provisions and General Definitions, 2) Legal Framework for Enforcement of Intellectual Property Rights, 3) Enforcement Practices, 4) International Cooperation, 5) Institutional Arrangements and 6) Final Provisions. The core of ACTA is certainly the second chapter, more precisely articles 6–27, which refer to enforcement of IPR. This chapter prescribes minimum standards of civil, criminal and administrative law protection (so-called border measures), as well as special measures for the protection of IP in the digital technological environment.

Regarding the content of the ACTA, it is based on the provision of Article 1 (1) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which stipulates that member states may, but shall not be obliged to, implement in their law more extensive protection than is required by this Agreement, provided that such protection does not contravene the provisions of this Agreement. Members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice. In this sense, ACTA is considered a "TRIPS plus" Agreement in the field of standards of judicial and administrative protection of Intellectual Property. Therefore, the ACTA can only be considered, understood and evaluated in conjunction with TRIPS (Marković, 2012).

From the point of view of developed countries, Chapter 3, Enforcement Practices, was a weak point of TRIPS. Therefore, ACTA's mission was to address these weaknesses and create a stronger legal framework for the international fight against IPR infringements.

Three types of provisions of ACTA's draft attracted special attention and thus became the subject of the sharpest criticism. First, the provisions proposing the criminalization of all intentionally taken actions of infringement of IPR on commercial basis, with the obligation of criminal prosecution ex officio; then, the provision proposing an obligation ex officio to implement border measures in the case of import, export and transit of goods, including goods in hand luggage; and, finally, provisions proposing to encourage Internet service providers to establish some form of monitoring of Internet traffic in order to detect IPR infringements, as well as those proposing an obligation for providers to provide right holders with information about service users infringing IPR and to stop providing them further services.

Public opinion was mobilized against the adoption of ACTA. One of the arguments against ACTA was that its application could endanger the privacy of Internet users, lead to the misuse of their personal data and endanger the freedom of communication. It is assumed that the strength of the negative reactions contributed to the omission of all maximalist provisions from the final document, reducing it to a measure that envisages protection above the level prescribed by TRIPS, but still without exceeding the already achieved level of protection in the EU and the U.S. Comparing the final version of ACTA with the previous working versions, some legal scholars called it "ACTA lite" (Ermert, 2010).

Initial drafts of the ACTA had a whole section devoted to online infringement. However, the final version of the ACTA contained only Article 27 (4) which might be considered as "almost a benign remnant of what was once negotiated" (Marković, 2012). According to the Article 27 (4) a party may provide, in accordance with its law and regulations, its competent authorities with the authority to order an online service provider to disclose expeditiously to a right holder information sufficient to identify a subscriber whose account was allegedly used for infringement, where that right holder has filed a legally sufficient claim of trademark or copyright or related rights infringement, and where such information is being sought for the purpose of protecting or enforcing those rights. These procedures shall be implemented in a manner that avoids the creation of barriers to legitimate activity, including electronic commerce, and, consistent with that party's law, preserves fundamental principles such as freedom of expression, fair process, and privacy. Nevertheless, there have been concerns that the obligations could have an adverse impact upon consumers' privacy, free speech, innovation, competition and the digital economy (Rimmer, 2012).

However, in its Opinion on the negotiations on the ACTA, the European Data Protection Supervisor refers to the provision of Article 27 (4) only in one paragraph. At the same time, the essence of the provision, i.e. possible obligation of Internet service provider to, upon the order of the competent state body, provide the holder of IPR with information on the identity of subscriber due to the suspicion that the subscriber is infringing his right, is not disputed. It was only stated that specification of guarantees for the protection of privacy was missing (Marković, 2012).

Article 27 (4) provides that any measure under the ACTA must be "implemented in a manner that (…), consistent with the Party's law, preserves fundamental principles such as freedom of expression, fair process, and privacy". Therefore, with regard to the guarantees, ACTA refers to national legislation, which means that national provisions are guarantees. In this regard, the fear that ACTA could derogate the high standards of protection of privacy of personal data and communication, which already exist in the EU, was not founded. The problem could arise with its application in countries which have a lower level of protection of human rights standards. In countries where there are no legal mechanisms guaranteeing the protection of the privacy of personal data and communication, the ACTA could be a basis for the violation of these rights.

Despite the fact that the final version of ACTA contained almost nothing that the Internet community was afraid of, the EU sought the opinion of the European Court of Justice on the compliance of the

provisions of the Agreement with the EU fundamental rights, primarily with the freedom of speech, expression, data protection and IPR. It is unprecedented in the history of European integrations that an agreement attracted so much attention. The parliamentary debate was followed by the lobbing of thousands of EU citizens, including mass street demonstrations (Radovanović, 2015). Finally, in July 2012 the European Parliament refused to ratify the ACTA and thus ended a multi-year debate over its compatibility with the *acquis communautaire*.

TRANS-PACIFIC PARTNERSHIP AGREEMENT

The Trans-Pacific Partnership (TPP), also called the Trans-Pacific Partnership Agreement, is a trade agreement signed on 4 February 2016 between Australia, Brunei, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam, and the United States.

The Trans-Pacific Partnership Agreement began as an expansion of the Trans-Pacific Strategic Economic Partnership Agreement, signed in 2005 by four countries: Brunei, Chile, New Zealand and Singapore. In 2008, additional countries joined the discussion for a broader agreement: Australia, Canada, Japan, Mexico, Peru, the United States, and Vietnam. Thus the number of negotiators increased to twelve.

The original version of TPP contained measures to lower both non-tariff and tariff barriers to trade and establish an investor-state dispute settlement mechanism. Opinions of legal scholars and professional public regarding this Agreement were divided. One part, including, the U.S. International Trade Commission and the World Bank, found that the final agreement would, if ratified, lead to net positive economic outcomes for all signatories. The other part, using an alternative methodology, found that the Agreement would adversely affect the signatories. Many observers have argued the TPP would have served a geopolitical purpose, namely to reduce the signatories' dependence on Chinese trade and bring the signatories closer to the United States (McBride, Chatzky, 2019).

The well-known American Electronic Frontier Foundation was very critical of the draft chapter on IP covering copyrights, trademarks and patents. The Foundation stressed that the TPP Agreement would limit the ability of the United States Congress to engage in domestic law reform in order to meet the evolving needs of the U.S. citizens to protect IP and advance the innovative technology sector. The provisions of the Agreement regarding the introduction of greater liability of Internet intermediaries were particularly controversial.[2]

In January 2017, the United States withdrew its signature from TPP. Thus the Agreement could not be ratified and did not enter into force.

A few months later, in May 2017, the remaining eleven countries agreed to revive the Agreement. The new free trade agreement, called the Comprehensive and Progressive Agreement for Trans-Pacific Partnership contains most of the provisions of the TPP Agreement. In March 2018, eleven countries singed a revised version of the Agreement. After being ratified by six countries (Australia, Canada, Japan, Mexico, New Zealand and Singapore), the Agreement entered into force on December 30, 2018 (McBride, Chatzky, 2019).

2 Trans-Pacific Partnership Agreement. Accessed on July 17, 2020. https://www.eff.org/issues/tpp.

NON-BINDING SOURCES OF INTERNATIONAL LAW – SOFT INTERNATIONAL LAW

Although the European Commission participated in the drafting of the ACTA, the European Parliament refused to ratify it in July 2012. Accordingly, the question arises: what had happened in the meantime that influenced the EU to give up the idea of regulating this issue at the international level?

At least two reasons can be distinguished. The first reason has already been mentioned, and it is the opposition of public opinion, including mass demonstration against ACTA. Another reason is that for the last few years, the European Commission has superintended a dialogue among over thirty stakeholders consisting of brand owners and Internet platforms regarding their respective roles in tackling counterfeiting online. And, in 2011, this led to the adoption of a Memorandum of Understanding on the Sale of Counterfeit Goods via the Internet (MoU), which may now be the vehicle by which the EU seeks to universalize its approach to this question (Dinwoodie, 2014).

This Memorandum is considered an instrument of so-called soft international law

The European Commission has previously noted that such agreements can be more easily extended beyond the EU borders. Indeed, the U.S. administration had shown interest in the MoU in bilateral contacts with the EU.

Memorandum of Understanding on the Sale of Counterfeit Goods via the Internet

One of the most significant aspects of the MoU is the fact that it arguably commits parties (which include Internet stalwarts such as eBay and Amazon, as well as brand owners) beyond obligations that might presently flow from the hard law secondary liability standards. The Memorandum makes explicit that it does not replace or interpret the existing legal framework, and it cannot be used in evidence in legal proceedings. However, it clearly has an eye to litigation. The exchange of information contemplated by the MoU is not to constitute actual or constructive notice. And the parties to the MoU agreed to a one-year moratorium on lawsuits against each other regarding matters within the scope of the agreement (Dinwoodie, 2014). This “moratorium” on litigation is an important provision that emphasizes the mutual obligation of the signatories of the MoU to work together in good faith (Ćeranić, 2016).

The Memorandum was concluded on May 4, 2011 for a probationary period of one year. After the expiration of that period, every two years, a report on the results will be prepared. Based on that report, the extension of its application for the next two years will be decided. In 2016, the MoU was revised and signed again to include key performance indicators to track its impact and measure its success.

In respect of the scope of the MoU, it is limited both geographically and substantively. As a matter of geography, the MoU is limited to the provision of services in the European Economic Area. And as a matter of substance, it addresses only counterfeit goods, rather than disputes about parallel imports or selective distribution systems. Moreover, the MoU does not apply to all intermediaries, but only to providers whose service is used by third parties to initiate the trading of physical goods.

The Memorandum focuses on disrupting and deterring the supply side of counterfeit market, in other words, it seeks to eliminate online offers of counterfeit goods. It promotes a strategy based on three lines of defense. The Memorandum seeks to ensure that: 1) illicit offers do not appear on the Internet; 2) if

they do appear, they are taken down as quickly as possible; and 3) in any event, rapidly enough to prevent further transactions from taking place. The measures all operate simultaneously and in real-time.[3]

First of all, it is very important that customers, sellers and buyers, understand the counterfeiting phenomenon, its inherent risks to consumers and detrimental effects on IPR owners. Consumers can be active parties in the fight against counterfeiting. To this end, Internet platforms committed to making appropriate information available to potential sellers and buyers, in an easily accessible way and, where appropriate, in cooperation with rights owners. Internet platforms should explain that offering counterfeit goods is illegal and suggest precautions that buyers should take to avoid buying them (Ćeranić Perišić, 2020).

The second line of defense involves 'Pro-Active and Preventive Measures' (PPMs) as timely and adequate response to attempts to seek counterfeits, either before offer being made available to the public or shortly after. By taking such measures IPR owners and Internet platforms try to reduce online offers of counterfeit goods. Such measures may be technical and/or procedural. They often require human intervention. Those measures are often specific to the respective business models and the organizations of the IPR owners or Internet platforms. Effective PPMs are often sophisticated, requiring substantial resources and effective cooperation between rights owners and Internet platforms. PPMs seek to ensure that offers of counterfeit goods do not appear online.

The third line of defense considers Notice and Takedown System. Despite customer information and PPMs, offers of counterfeit goods may still become available to the public on an Internet platform. In that case, IP right owners and consumers can notify the Internet platform concerned of the existence of such offers. This notification allows the platform to take appropriate action, including taking down the offer from the site. The purpose of Notice and Takedown System is to offer a simple, fair and expeditious procedure to remove online offers of counterfeit goods (Ćeranić Perišić, 2019).

Hence, the central part of the MoU is reserved for Notice and Takedown Procedures. This fact is not surprising at all: all platforms already use them (Mostert, Schwimmer, 2011). The parties commit to continue operating such systems, but also agree to details that differ from the type of system that arguably now flows from hard law secondary liability rules. In particular, in addition to item-based Notice and Takedown, the MoU allows trademarks owners to notify the platforms of sellers who are generally engaged in the sale of counterfeits. The platforms will "take this information into consideration as part of their proactive and preventive measures". This is clearly an effort to move away from the specificity of notice that some case law may require to confer knowledge sufficient to establish secondary liability (Dinwoodie, 2017). The provision allowing trademarks owners to notify the platforms of sellers who are generally engaged in the sale of counterfeits is considered a revolutionary novelty of the MoU.

Abuse of the Notice and Takedown System is also regulated by the MoU. If a trademark owner makes notifications to an intermediary without exercising appropriate care, the owner may be denied future access to the system and must pay the platform any fees lost due to such notifications. And sellers should be informed where an offer has been taken down, including the underlying reason, and be provided with the means to respond including the notifying party's contact details.[4] The aim of these provisions is to provide some balance within the system.

3 Report from the Commission to the European Parliament and the Council on the Functioning of the Memorandum of Understanding on the Sale of Counterfeit Goods via the Internet (2013, April 18). Accessed on July 18, 2020. https://eur-lex.europa.eu/legal-content/HR/TXT/?uri=CELEX:52013DC0209.

4 Memorandum of Understanding on the Sale of Counterfeit Good via the Internet (2011, May 4). Accessed on July 18, 2020. https://ec.europa.eu/growth/industry/policy/intellectual-property/enforcement/memorandum-understanding-sale-counterfeit-goods-internet_en.

The Memorandum complements these measures by providing better consumer protection, including the possibility of receiving a replacement product or a refund under certain conditions. The MoU also includes dissuasive actions against repeat infringers. The signatories of the MoU have committed themselves to cooperate in the detection of repeat infringers. The Internet platforms undertake to implement and enforce deterrents according to their internal guidelines. Repeat infringer policies have to be objective and proportionate and take full account of the circumstances. Information-sharing on repeat infringers under the MoU fully respects data protection laws (Ćeranić Perišić, 2020).

The Memorandum also includes a minimum set of consumer protection provisions. Compensation for economic or other harm depends on the policies of the individual signatories concerned.

CONCLUSION

Counterfeiting phenomenon and the sale of counterfeit goods via the Internet present contemporary security challenges. Since the Internet is defined by technical and technological capabilities that are more or less balanced globally, the problem of the sale of counterfeit goods via the Internet should be resolved at the international level. However, hard international law does not regulate this issue, while soft international law offers some solutions.

Negotiation, adoption and implementation of the instruments of soft international law carries certain risks, but also has a number of advantages in relation to hard international law. On the one hand, since the MoU has mostly been operated by multinational companies, there is a risk that legal norms applicable to all actors grow up around the capacity and sophistication of large economic players – though this can also happen if litigation is the vehicle for development of principles. Again, public scrutiny is essential (Dinwoodie, 2014). On the other hand, the MoU reduces costs by limiting litigation expenses. Furthermore, experience shows that instruments of soft international law, such as the MoU, are much more suitable for the development of international legally binding norms than the negotiations of multilateral instruments of international public law character (Ćeranić Perišić, 2020). Finally, on the international horizon, the MoU is expected to contribute both to a gradual harmonization of the signatories' legislations and a progressive unification of their case law.

REFERENCES

1. Ćeranić J. (2016). Povreda žiga na sajtovima za aukcijsku prodaju robe. In: D. Popović (Ed.), *Intelektualna svojina i Internet* (47–73), Belgrade: Faculty of Law of the University of Belgrade.

2. Ćeranić Perišić J. (2019). Prodaja krivotvorene robe na internetu. *Aktuelna pitanja savremenog zakonodavstva*. Budva. 453–461.

3. Ćeranić Perišić, J. (2020), *Odgovornost internet posrednika za povredu žiga*, Belgrade: Institute of Comparative Law.

4. Dinwoodie G. (2014). Secondary Liability for Online Trademark Infringement: the International Landscape. *Columbia Journal of Law & Arts,* 37, 468–469.

5. Dinwoodie G. (2017). A Comparative Analysis of the Secondary Liability of Online Service Providers. In: G. Dinwoodie (Ed.) *Secondary Liability of Internet Service Providers* (1–72), Springer.

6. Ermert, M. (2010, September 8). Treaty Negotiators Turn To 'ACTA Lite' in Hopes of Closure. *Intellectual Property Watch*. Accessed on July 16, 2020, http://www.ip-watch.org/2020/09/08.

7. Maltzer J. (2015). Maximizing the Opportunities of the Internet for the International Trade. E15 Expert Group on the Digital Economy, Policy Options Paper, E15Initiative. Geneva. Accessed on July 17, 2020, *http://www3.weforum.org/docs/E15/WEF_Digital_Trade_report_2015_ 1401.pdf.*

8. Marković S. (2012). Trgovinski sporazum protiv krivotvorenja robe (ACTA) – sadržina, ciljevi, značaj. *Pravo i privreda*, 7–9, 198–217.

9. McBride, J, Chatzky, A. (2019, January 4). What is Trans-Pacific Parnership (TPP)?. Accessed on July 17, 2020. https://www.cfr.org/backgrounder/what-trans-pacific-partnership-tpp.

10. Memorandum of Understanding on the Sale of Counterfeit Good via the Internet (2011, May 4). Accessed on July 18, 2020. https://ec.europa.eu/growth/industry/policy/intellectual-property/enforcement/memorandum-understanding-sale-counterfeit-goods-internet_en.

11. Mostert W., Schwimmer M. (2011). Notice and Takedown for Trademarks. *Trademark Reporter*, 249, 264.

12. Radovanović S. (2015). Građanskopravna odgovornost internet posrednika za povredu autorskog prava – uporednopravni aspekt. In: D. Popović (Ed.), *Intelektualna svojina i Internet* (83–112), Belgrade: Faculty of Law of the University of Belgrade.

13. Report from the Commission to the European Parliament and the Council on the Functioning of the Memorandum of Understanding on the Sale of Counterfeit Goods via the Internet (2013, April 18). Accessed on July 18, 2020. https://eur-lex.europa.eu/legal-content/HR/TXT/?uri=CELEX:52013DC0209.

14. Rimmer M. (2011). 'Breakfast at Tiffany's': eBay Inc, Trade Mark Law and Counterfeiting. *Journal of Law, Information & Science*, 1–39.

15. Trans-Pacific Partnership Agreement. Accessed on July 17, 2020. https://www.eff.org/issues/tpp.

THE RELATIONSHIP BETWEEN LOAN SHARK AND EXTORTION – CONCEPT OF CRIMINAL OFFENSES, SIMILARITIES, DIFFERENCES, SOLVING AND PROVING

Gordana Nikolić, PhD[1]
Ministry of the Interior of the Republic of Serbia

Abstract: The criminal offenses of loan shark and extortion are incriminated in the same chapter of the Criminal Code in the group of offenses against property, in special articles with precisely defined action, conceptual and more serious forms. However, in addition to the different legal incrimination of these acts and their different practical manifestations, these crimes show certain similarities, and are sometimes difficult to determine in practice, especially if the connection of these acts has led to a number of their closeness to the object of protection, a special subjective element on the part of the perpetrator. The manner of obtaining material gain, the specificity of the manner of execution, different punishments and different ways of initiating criminal proceedings indicate evident, clear, but sometimes difficult to detect differences between these acts.

The author gives definitions of the crime of loan shark and extortion incriminated by the Criminal Code of the Republic of Serbia, their more difficult forms, and notices the similarities and differences between these acts that indicate easier, more efficient and clearer elucidation of their commission, possible prevention, solving and proving.

Keywords: loan shark, extortion, Criminal Code, solving, proving.

INTRODUCTION

Although the acts of committing criminal acts of loan shark and extortion are differently defined in the law, in rich practice they are conditioned, connected, and often intertwined with each other. The similarities and differences that are grounded between these acts, sometimes helped, and sometimes did not help in determining the acts in practical manifestation, and thus in their solving and proving.

1 chupka84@gmail.com

Although both acts are placed in the group of crimes against property in different articles, their analyses, as well as the features that connect and separate them, are the basis for efficient, fast and thorough solving and proving in criminal practice.

The criminal offenses against property are general, archaic, conventional, classic crimes that know all criminal laws from ancient times to modern times. In the Republic of Serbia, they are systematized in a special part of the Criminal Code, in Chapter Twenty-one.

The title: “The criminal acts against property” indicates the nature, type and character of the group object of protection of these crimes - and that is property or the right to property (as one of the basic human rights guaranteed by a number of international documents of universal or regional character). The object of protection in these crimes is, as their name suggests, property.

The crime of extortion are included in hybrid crimes (Jovašević, 2010) - acts that have a dual legal nature. Thus, these acts are simultaneously: a) a form of property crime - with regard to the object of protection, i.e. the object of attack, and b) a form of violent crime or crime of violence - with regard to the manner and means of undertaking the act of execution.

Although loan shark is legally defined as a form of property crime, in practice this criminal act is often accompanied by violence, bearing in mind that victims are afraid of violence that may be inflicted on them by perpetrators of loan shark.

The paper reviews the incrimination of criminal offenses of loan shark and extortions in the Criminal Code of the Republic of Serbia, emphasizing similarities and differences of this property offense, pointing out more efficient, better and simpler solving with valid material and personal proving that would be used in further criminal proceedings and would be the subject of proving.

CRIMINAL LAW DETERMINATION OF EXTRORTION

Extortion in the criminal law of the Republic of Serbia is regulated by the provisions of the Criminal Code (“Official Gazette of the RS”, No. 85/05, 88/2005, 107/2005, 72/2009, 111/2009, 121/12, 104/13, 108/14, 94/16 and 35/19) and prescribed in the group of criminal offenses against property, in Article 214. The offense has one basic and four difficult (qualified) forms (Jovašević, 2011). The basic form of the crime consists in the following: “Whoever, in order to obtain illegal property gain for himself or another, by force or threat forces another to do or not do something to the detriment of his or someone else’s property, shall be punished by imprisonment for one to eight years”(paragraph 1).

The action of committing this criminal act is coercion a passive subject to do or not do something to the detriment of his or someone else’s property (Jovašević, 2017). Coercion (the act coercion) is performed in two ways: by force or threat, which are marked alternatively in the incrimination of the act with the possibility that the perpetrator uses both force and threat cumulatively (Stojanović, 2014).

According to its characteristics, extortion is a specific criminal offense because coercion appears here only as a means to achieve the basic goal of extortion, which is to obtain illegal property gain (Lazarević, 2011). Considering that the goal of extortion is to obtain illegal property gain and that is the reason why this criminal offense is classified as criminal offenses against property.

The perpetrator can be any person, and in terms of guilt, direct intent is required, which qualifies direct intent (obtaining illegal property gain for oneself or another). If force or threat is used without such intention, it will not be extortion but some other criminal act, primarily coercion.

The first and second more severe forms of extortion are qualified by the amount of material gain obtained. If the extortion obtained an illegal property benefit in the amount exceeding four hundred and fifty thousand dinars, the perpetrator shall be punished by imprisonment for a term between two and ten years (paragraph 2), and if by committing the basic form of the crime an illegal property benefit in the amount exceeds one million and five hundred thousand dinars, the perpetrator shall be punished by imprisonment for a term between three and twelve years (paragraph 3).

In addition to these more serious forms, which are qualified by the amount of property gain obtained, there are two other more serious forms of the crime of extortion. The third serious form of crime (paragraph 4) exists in one of two alternatively prescribed cases: 1) if the perpetrator is dealing in committing basic or more serious, previously mentioned, forms of extortion (which implies continuous commission of this crime, i.e. in the form of craft) or 2) if the act was committed by a group, qualifying circumstances of this form of crime consist in "dealing" in the commission of the crime, so for this notion it is not enough that extortion is committed only once, even in those situations when the intention to repeat the crime can be repeated (Stojanović, 2019) or committing acts by a group (not a single perpetrator). For this qualified form of crime, a prison sentence of five to fifteen years is prescribed.

Fourth, the most serious form of crime, which was introduced into the legal text by the most extensive amendment to the Criminal Code in 2009, and as such is the only form of organized crime, exists if extortion (basic or more serious forms qualified by the amount of material gain obtained) is committed by organized crime groups (paragraph 5). This form of extortion is one of the typical activities of organized crime, which is slang for "racket" or "racketeering" (Škulić, 2015). For this most severe form of extortion, a prison sentence of at least five years is prescribed, which means that a special minimum sentence is set, while the legislator did not prescribe a special maximum sentence, but the maximum sentence is equal to the general maximum prison sentence of twenty years.

CRIMINAL LAW DETERMINATION OF LOAN SHARK

The criminal offense of loan shark is also prescribed in the group of criminal offenses against property, in the provision of Article 217 of the Criminal Code. An act is a person who, for lending money or other consumables to another person, receives or contracts for himself or another disproportionate material benefit, taking advantage of difficult financial situation, difficult circumstances, necessity, recklessness or insufficient ability to reason passive subject.

In this criminal offense the object protection (Đorđević, 2011) is the property (movable or immovable) of a person who is in a difficult situation or necessity. The essence of the act of loan shark is in fact lending money to another person with "interest" which is disproportionately high in relation to the money given and which the perpetrator of the criminal act determines himself, and very often during the time until the debt is repaid, often increases its amount and thus achieves a disproportionate property benefit. It is important to emphasize that the perpetrator performs this action using the difficult financial situation of another person, his difficult opportunity, necessity, recklessness or insufficient ability to reason.

From the legal definition of the crime we may conclude that the category of victims of the criminal offense of loan shark includes persons who are in a difficult financial situation, as well as persons with the characteristics prescribed by the incrimination of this offense. In most cases, these are people who do not earn a permanent income, because in that case they would take the money "on loan" from the bank, with the legally prescribed interest rate harmonized with the state regulations, and not "on the street "from unauthorized persons. However, in the rich criminal practice, not only these persons do not have to be found in the capacity of victims, but they can also be persons who cannot realize the funds they need at that moment. In this way, the passive subject, due to their difficult financial situation borrows more and more money bearing in mind that the perpetrators often increase the interest on the debt and reduce the deadlines for repaying the debt, so the damaged parties often decide to sell the remaining property they own and thus make their difficult financial situation even more difficult.

The act of execution is alternatively set: receiving or contracting a disproportionate property benefit for lending money or other consumables. Considering such an alternatively set act of execution (receipts or contracts), this is at the same time a tort of violation, the execution of which leads to reduced property of the passive subject and a tort of endangerment, if the contract is not realized (Stojanović, 2019). For the existence of the act, it is important that this action refers to the disproportionate property benefit, which in this way is obtained by the perpetrator of the act.

For the existence of a criminal offense, it is necessary that two more elements are met. These are: a) the action of execution is undertaken in connection with the giving of money (domestic or foreign) or other consumables (of value) on loan (provided that they are returned in a certain time and under certain conditions) and b) the action of execution is undertaken by the perpetrator who knows about the difficult condition of the passive subject, which is precisely the exploitation for the commission of the act. These are: difficult financial situation, difficult circumstances, necessity, recklessness or insufficient ability to reason.

For this offense the sentence is a cumulative prison of up to three years and a money punishment are prescribed for this crime, whereby the legislator explicitly determined that criminal prosecution for this crime be undertaken at the proposal of the injured party.

The act has two more difficult forms of manifestation. The first serious form of crime exists in two cases: a) if the undertaken act of execution caused severe consequences for the passive subject and b) if the perpetrator thus obtained material gain in the amount exceeding 450.000 dinars. This amount of use is determined according to market conditions at the time of the commission of the act. This offense is punishable by imprisonment from six months to five years with a cumulative money punishment.

Another serious form of crime also exists in two cases: a) if the perpetrator obtained material gain in the amount of over 1.500.000 dinars by the undertaken act of execution and b) if the act was committed by a group. A cumulative prison sentence of one to eight years and a fine are prescribed for this crime.

SIMILARITIES BETWEEN THE CRIMINAL OFFENSES OF EXTORTION AND LOAN SHARK

The similarities between the criminal acts of extortion and loan shark seem to be very large, but essentially very small, so with a careful analysis of the legal incriminations of their actions, these acts can be

more easily distinguished in practice. However, it is important to point out some of the similarities of these crimes in order to help criminal solution of these crimes, find and provide proving.

First of all, both crimes belong to the group of crimes against property. What brings these property crimes closer is the fact that the consequences of the undertaken actions in these cases do not occur immediately, they are not simultaneous with the undertaken action, but there is a time lag between the undertaken act of execution and the consequences of the act. These acts differ from some other property acts (theft, aggravated theft, robbery and robbery theft) where the consequences occur immediately after the action taken to commit the act.

The similarities of loan shark and extortion is also reflected in the identical object of protection - property in the form of movable or immovable property; consequences - causing property damage to the passive subject and a special subjective element on the part of the perpetrator - the intention to obtain illegal property gain by undertaking an act of execution for oneself or another.

The crime of loan shark and extortion and some of the same qualifying circumstances that indicate the gravity of these acts are the amount of obtained property gain, so in both parts the amount exceeding 450.000 dinars is considered, as well as the amount of 1.500.000 dinars, while the second identical qualifying circumstance of both parts is considered execution by the group. Punishment is of course different for these forms of execution having in mind the different gravity of these acts.

DIFFERENCES IN LEGAL DEFINITION AND PRACTICAL MANIFESTATION OF CRIMINAL OFFENSES OF EXTORTION AND LOAN SHARK

Although the legislator has clearly and precisely defined the criminal acts of extortion and loan shark in his legal text, in practical manifestation there are often difficulties in their qualification, so in order to more easily differentiate these acts, it is important to point out some of their differences. This is important not only because of the determination of the work, but also because of their easier clarification and more efficient collection of proving.

First of all, loan shark differs from extortion in the way of obtaining material gain, bearing in mind that in extortion it is coercion, which is why there is no connection between these two acts (extortion and coercion), while in loan shark it is done arbitrarily money on loan, on which the perpetrators very often use coercion to negotiate a disproportionate debt, and loan shark can occur in conjunction with coercion. The acquisition of criminal acts of loan shark and coercion is also reflected in the fact that perpetrators of loan shark often use forms of coercion (force and threat) in order to receive a disproportionately agreed property benefit due to the delay in repaying the debt by the person to whom they lent money with interest.

The difference between extortion and loan shark is also reflected in the type of obtained illegal property gain. While extortion is related most often for movable and immovable property, such as an apartment, cottage, shop, house, car and money, loan shark is exclusively about money or other consumables, which the legislator prescribed when incriminating loan shark.

In the case of extortion, the perpetrator practically finds the injured party, while in the case of loan shark, the injured parties find the perpetrator themselves in order to borrow money from them. The victims of the criminal act of extortion are most often persons who have material means, while the

victims of the part of loan shark are mostly persons who do not work anywhere or do not earn a permanent income.

In criminal practice, perpetrators of the crime of loan shark often become perpetrators of extortion. Namely, these are situations when loan shark (usury) in some way initiates and inspires the execution of extortion which achieves the settlement of a "given loan". This indicates that in the specific case, it is a matter of a real acquisition of these criminal acts, where loan shark precedes extortion.

It often happens in criminal practice that extortion precedes loan shark, and that persons over whom the act of extortion has begun, and who do not have a permanent income and cannot regularly provide money, borrow money from loan shark in order to give the same money to the perpetrator of extortion and thus, in addition to the status of the aggravated criminal acts of extortion, they become the aggrieved persons of the criminal act of loan shark.

Regarding the organized form (Ignjatović & Škulić, 2012) of these acts, the legislator prescribed the commission of an act by an organized criminal group only in the criminal act of extortion as its most serious form, and in this regard in the circle of organized crime extortion is included the most difficult form. The legislator did not include loan shark in the form of organized crime, so there is no such act by an organized group in this act, but as one of the alternatively most difficult forms of this act there is a case of committing an act by a group.

The legislator prescribed the cumulative punishment of imprisonment and a fine for the commission of the criminal act of loan shark. Such a case is not foreseen in the criminal offense of extortion, although it is logical for the court in this case to impose a fine on the perpetrator of this criminal offense in addition to the prescribed prison sentence, bearing in mind that it is a property criminal offense.

And finally, no less important, the difference between loan shark and criminal acts of extortion is reflected in the manner of initiating criminal proceedings. While this procedure for the criminal offense of extortion is initiated ex officio, in the case of loan shark, criminal prosecution is initiated upon the proposal of the injured party.

SOLVING AND PROVING CRIMINAL OFFENSES OF EXTORTION AND LOAN SHARK

The correct qualification of the criminal offenses of extortion and loan shark to which the previously analyzed legal definitions of the offense contribute, as well as their similarities and differences, are the initial steps in undertaking criminal tactical, methodical and technical actions in order to solve and prove their acts. For solving and proving the criminal acts of extortion and loan shark it is important to organize a criminal investigation in a proper manner (Bošković, 2015) with respect to the principles of criminology (especially the principles of efficiency and speed and the principle of legality), as well as golden issues of criminology (Krivokapić, 2010).

In criminal practice, three modes of manifestation of the criminal act of extortion appear most often (Marinković & Lajić, 2016). These are: 1) the case when an individual and a group of persons extort money from a person who owns a certain property or property value, which can also be called classic extortion; 2) a case in which extortion occurs as a result of unsettled property relations between individual persons - the perpetrator and the victim, and 3) a case of forced offering of "protection" by an organized criminal group with appropriate compensation - the so-called "Racket" (Radović & Vu-

ković, 2012). Unlike extortion, loan shark is done with the self-willed consent of the injured party and finding a "loan shark" who lends money or other consumables, in which case he contracts a disproportionate property benefit (in the form of loan repayment, debt) taking advantage of difficult financial situation, opportunities, necessity, recklessness or insufficient ability to reason with the injured party.

During the execution of extortion, the perpetrators threaten the injured party in various ways, such as threats: murder, kidnapping (kidnapping of children and women), infliction of bodily injuries, destruction or burning of a house, apartment, and shop. For forced protection - "racket" they are looking for money, valuables, cars, and even real estate. Force and threat as forms of coercion appear as ways of committing an act, so in this case there is no confluence between extortion and coercion, while perpetrators of loan shark use coercion (force or threat), so in this case coercion and loan shark appear in the acquisition.

A number of criminal acts of extortion and loan shark are not known, having in mind the fear that the victims have due to the force or threat, as well as the fact that the victims themselves are often "on the border" of the law, and the victims of loan shark in a difficult and unenviable position . In this regard, the dark number is very emphasized. The most common information about the commission of these acts is obtained by reporting the injured (Škulić, 2017). In practice, often, the first knowledge is obtained on the basis of the report of close relatives of the injured person, but also other persons who have such knowledge. In addition to this knowledge, the operational activity of the internal affairs bodies is a very common source of knowledge. In the case of the criminal offense of loan shark, the legislator prescribed that for the basic form of the offense, prosecution be undertaken at the proposal of the injured party (while in the case of more serious forms of crime, ex officio).

In criminal practice (Bošković, 2005), two situations are distinguished with regard to the report: a) when the report is filed after the use of force or threat by the perpetrator, i.e. borrowing money by contracting disproportionate property gain, more money than borrowed and b) when the crime is reported after it has been committed. Accordingly, criminal tactical actions are taken (Žarković, 2010).

It is necessary to clarify all the facts relating to the place, manner and time of the crime, knowledge of the perpetrator, description of the perpetrator, manner of the crime, possible telephone conversations and correspondence between the perpetrator and the injured party, witnesses, etc., how much money (or other property benefits) the injured party was asked to hand over, i.e. return, as well as where, when, to whom and in what way he should hand over money or other property benefits (personal handover to the perpetrator or some other person, leaving at a pre-agreed place).

It is difficult to catch extortionists and loan shark in action. Therefore, the prosecuting authorities base their activities on the permanent use of indicative methods, with the setting of criminal versions about the perpetrators of the act of extortion, while some information about the perpetrator is known in loan shark. The motives for committing these acts are clear, having in mind that these are property crimes, and the motives also refer to obtaining illegal property gain, i.e. disproportionate property gain. The aim of the investigation (Krivokapić & Krstić, 1999) is for the internal affairs bodies, together with the injured party, to provide personal and material evidence of the committed crime and to deprive the perpetrators of their liberty, as a rule during or immediately after handing over money or other valuables, disproportionate property benefits. On that occasion, the injured parties are given certain instructions regarding handing over money, meetings, etc.

Very often experienced extortionists agree on a place to leave the money or a person to whom it should be handed over, while in the case of loan shark, the money is very often returned to the perpetrator "in a simpler way", mostly at the agreed place and time. Successful criminal investigation is supported by

the exceptional conspiracy of conducting the investigation, professionalism, skills and ability of police officers to deprive the perpetrators of these acts of freedom, respecting criminal principles and legal provisions (Bošković & Banović, 2001).

The money intended for the perpetrators of extortion and loan shark before the surrender is listed (serial numbers of banknotes), with the possibility of sprinkling silver nitrate or other powdered substance on it, which has the property of coloring the skin in contact with the fingers, when taking banknotes, which is prove of the contact of money and hands (chemical trap).

The person who carries the money is immediately followed by police officers upon departure to the agreed place, controlling the surrender. After taking over the money, i.e. disproportionate money given on loan by the perpetrator, he is deprived of liberty, as well as persons who are brought into contact with the perpetrator. The items are temporarily confiscated from the person who took over the money. Visible changes in the hands of the person who took over the money can be ascertained by taking photographs and through the minutes (Feješ & Lajić, 2014).

In case of direct physical contact between the perpetrator and the victim at the scene (Delibašić, 2017), it is possible to find clues that can provide prove such as e.g. traces of blood, broken objects on the spot, as well as the presence of a specific person: by determining papillary lines, biological traces, DNA analysis, etc.

The apartment of a person deprived of liberty must be searched in order to find the items that had been previously handed over, usually money and other traces, lists of debtors, requested amounts, agreed deadlines, payment slips, contracts, bank statements and various documents indicating the handover or misappropriation of money, or other valuable items of the perpetrator, that is giving money to the injured party with an agreed disproportionately higher compensation when repaying the loan.

In case of extortion, it is also important, both from the injured party and from the competent state body that performed the certification, to obtain documents signed by the injured party under pressure of the perpetrator of extortion, in order to change ownership of valuable movables or immovable property, after which documents are excluded for the purpose of further expertise.

Important criminal, but also procedural action (Škulić, 2011) in order to detect and prove the criminal acts of extortion and loan shark, especially in the case when the injured party and the perpetrator do not know each other, but had direct contact during the commenced act (in the unfinished act) or finished act is the method of recognizing faces.

Further criminal proceedings (Bošković, 2012) against the perpetrators of the criminal offense of extortion are identical to other criminal offenses, which in addition to the pre-investigation procedure conducted by the public prosecutor, consists of two phases: a) investigative procedure and b) main trial, respecting the provisions of criminal procedure rights (Bošković & Kesić, 2015), with the emphasis that in the case of loan shark, the prosecution for the basic form of the crime is taken over according to the proposal.

CONCLUSION

The incrimination of the criminal offenses of extortion and loan shark, as well as the qualifying circumstances that make up their more severe forms analyzed in the paper, is the first and important step in their solving and proving. Bearing in mind that these are criminal offenses that are in the same group of criminal offenses, a group of offenses against property, as well as their frequent practical interconnection during execution, the indicated similarities and differences between these offenses are important for a more precise course of criminal proceedings.

The analyzed legal definitions of these acts, as well as their similarities and differences, contribute to the successful conduct of criminal investigations and adequate undertaking of criminal tactical actions, which are analyzed in the paper, all in order to solve and prove the crimes of extortion and loan shark, as well as for further efficient criminal proceeding.

REFERENCES

1. Bošković, A. (2012). Pojam krivičnog postupka prema novom ZKP Republike Srbije. *Kultura polisa*, broj 2. Novi Sad.
2. Bošković, A., (2015). *Radnje policije u prethodnom krivičnom postupku i njihova dokazna vrednost*. Beograd.
3. Bošković, A., & Kesić, T. (2015). *Krivično procesno pravo*. Beograd.
4. Bošković, M., & Banović, B. (2001). *Kriminalistika metodika*. Beograd.
5. Bošković, M. (2005). Kriminalistika metodika. Beograd.
6. Delibašić, V. (2017). Značaj uviđaja u krivičnom postupku. Tematski zbornik radova: *Policija i pravosudni organi kao garanti slobode i bezbednosti u pravnoj državi,* Tara, Tom 1. Beograd.
7. Đorđević, Đ. (2011). *Krivično pravo, Posebni deo*. Beograd.
8. Žarković, M. (2010). *Kriminalistika taktika*. Beograd.
9. Ignjatović, Đ., & Škulić, M. (2012).*Organizovani kriminalitet*. Beograd.
10. Jovašević, D. (2010). *Krivično pravo, opšti deo*. Beograd.
11. Jovašević, D. (2011). *Leksikon krivičnog prava*. Beograd.
12. Jovašević, D. (2014). *Krivično pravo, posebni deo*. Beograd.
13. Jovašević, D. (2017). *Krivično pravo, posebni deo*. Beograd.
14. Krivični zakonik, *"Službeni glasnik RS"*, broj 85/05, 88/2005, 107/2005, 72/2009, 111/2009, 121/12, 104/13, 108/14, 94/16 i 35/19.
15. Krivokapić, V., & Krstić, O. (1999). *Kriminalistika taktika 2*. Beograd.
16. Krivokapić, V. (2003). *Kriminalistika taktika*. Beograd.
17. Lazarević, LJ. (2011). *Komentar krivičnog zakonika*, Beograd.
18. Marinković, D., & Lajić, O. (2016). *Kriminalistička metodika*. Beograd.
19. Radović, N., & Vuković, S. (2012). *Prevencija organizovanog kriminala*. Beograd.

20. Stojanović, Z. (2014). *Krivično pravo, opšti deo*. Beograd.
21. Stojanović, Z. (2019). *Komentar Krivičnog zakonika: prema stanju Krivičnog zakonika od 1. decembra 2019. godine i prema stanju zakonodavstva od 21.maja 2019. godine*. Beograd.
22. Feješ, I., & Lajić, O. (2014). Kriminalistička metodika, Novi Sad.
23. Škulić, M. (2011). *Krivično procesno pravo.* Beograd.
24. Škulić, M. (2015). *Organizovani kriminalitet: pojam, pojavni oblici, krivična dela i krivični postupak*, Beograd.
25. Škulić, M. (2017). Uloga policije u zaštiti prava oštećenog krivičnim delom, Tematski zbornik radova: *Policija i pravosudni organi kao garanti slobode i bezbednosti u pravnoj državi*. Tara, Tom 1. Beograd.

THE FIGHT AGAINST ILLEGAL TRAFFICKING OF CULTURAL PROPERTY IN THE REPUBLIC OF SERBIA – THE ROLE OF POLICE AUTHORITIES[1]

Vanja Pavićević, LLM[2]
Institute of International Politics and Economics, Belgrade, Serbia
Mihajlo Vučić, PhD[3]
Institute of International Politics and Economics, Belgrade, Serbia

Abstract: This paper sheds light on a very controversial topic - the legal and security aspects of the illegal trafficking of cultural property. In the first part, the paper will depict the international legal framework dedicated to the illegal trafficking of cultural property. In the second part, the emphasis will be on the state of affairs in the Republic of Serbia and the role of the Bureau for the fight against organized crime when it comes to the aforementioned challenges. Thirdly, certain security and procedural challenges will be presented, thus highlighting the importance of strong cooperation between official authorities with the competence to fight against cultural property trafficking. Finally, possible solutions for a more effective national response in suppressing the illegal trafficking of cultural property will be put forth. The protection of cultural property gains growing importance in an attempt to develop and strengthen Serbia's cultural policy and cultural identity. It is also a topic of the national interest, especially having in mind the goals set in the new Strategy for Cultural Development of the Republic of Serbia for the period 2020-2029, which is still in the process of the adoption in the National Parliament.

Keywords: cultural heritage, illicit trafficking, cultural goods, police and customs authorities, cooperation.

---

1 This paper presents findings of a study developed as a part of the research project "Serbia and challenges in international relations in 2020", financed by the Ministry of Education, Science, and Technological Development of the Republic of Serbia, and conducted by Institute of International Politics and Economics, Belgrade.
2 vanja_pavicevic@yahoo.com
3 mihajlovucic@gmail.com

THE FIGHT AGAINST CULTURAL PROPERTY TRAFFICKING - INTERNATIONAL LEGAL FRAMEWORK

Comprehensive protection of cultural property, as the backbone of cultural policy and cultural diplomacy of the state, deserves special attention, not only during armed conflicts but also during peacetime (Pavićević, 2019). But it was not until the grand conquests and takings of Napoleon, the rise of nation-states, and the increased likelihood of destruction in modern warfare that there began concerted efforts to regulate cultural property through national laws and international treaties (Shapiro 2005). However, more and more often, even during peaceful periods, cultural properties are smuggled, illegally exported from the country, and sold at an increasingly branched-out black market (Pavićević, 2019).

Today, thefts of art and antiquities are reported to join drugs, money laundering, and the illegal arms trade as one of the largest areas of international criminal activity (Hoffman, 2006). Most often, the reasons for this criminal activity are numerous: potentially very high profits, inadequate border control, facilitated transfer of cultural goods, and the inconsistency of legal regulations with international rules and standards. Also, the lack of awareness of the growing complexities of this problem is inversely proportional to the high demand for cultural goods, especially in market countries.[4] Unfortunately, their removal not only robs a vulnerable country of information about its history but may partially strip the cultural object itself of its identity (Ulph, 2011). Archaeological sites, artefacts, and monuments are sometimes the only witnesses of past times, meaning that, in the case of their theft, the value of historical knowledge is irretrievably lost.

At the international level, there is a complex application of soft law principles, enforcement tools, international conventions, and resolutions and there are different impositions of liability on individuals and legal persons (Caponigri, Piri, 2017). Several important international conventions were adopted, though not all focusing on the same subject-matter. In 1954, the Hague Convention[5] was adopted as the first universal legal instrument to protect cultural property during wartime. The aforementioned imperative led to the long-standing negotiations and recommendations that gave birth to the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property.[6] The 1970 UNESCO Convention was conceived as the lynchpin of an international legal framework for controlling traffic in illegally exported or stolen cultural property and is based primarily on an essentially public international law and administrative law model (Hoffman, 2006). However, those are precisely the reasons why the 1970 UNESCO Convention was not crowned with success. With the lack of congruency between the national laws and weak enforcement mechanisms embodied in non-binding diplomatic negotiations, a unified system of protection was not established, but instead, ad hoc solutions were given. The 1970 UNESCO Convention does not apply to cases involving non-state actors, it cannot protect private individuals, nor does it cover cultural property that does not belong to public collections (Pavićević, 2019).

4 Market states are those that usually advocate universal attainability and the free flow of cultural goods, such as the US, Japan, Germany, Switzerland, etc. On the other hand, states which own plenty of cultural heritage and therefore take a retentionist, nationalist view towards preserving it, include countries such as China, Italy, Mexico, etc.

5 Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention 1954, http://portal.unesco.org/en/ev.php-URL_ID=13637&URL_DO=DO_TOPIC&URL_SECTION=201.html, accessed 10.7.2020.

6 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property 1970, http://portal.unesco.org/en/ev.php-URL_ID=13039&URL_DO=DO_TOPIC&URL_SECTION=201.html, accessed 10.7.2020.

To provide more efficient legal mechanisms, the International Institute for the Unification of Private Law (UNIDROIT) adopted the Convention on Stolen or Illegally Exported Cultural Objects in 1995.[7] The purpose of the 1995 UNIDROIT Convention is to supplement the provisions of the 1970 UNESCO Convention by formulating uniform legal rules on the return and restitution of cultural objects to mitigate the illicit trafficking in cultural objects (UNESCO, 2018). The 1995 UNIDROIT Convention enables the framework for international court proceedings and curbs the illicit trade of cultural property from the private law perspective. The Republic of Serbia has acceded to the 1970 UNESCO Convention; however, it has still not acceded to the UNIDROIT Convention.[8] Additionally, from the wider aspect of organized crime, important international conventions that can contribute to the elimination of illegal trafficking are: United Nations Convention against Transnational Organized Crime[9] (UNTOC) and the 1999 International Convention for the Suppression of the Financing of Terrorism (CSFT)[10]. It is important to emphasize that the Republic of Serbia has adopted both conventions in 2003 and 2002. The UNTOC and the CSFT should be used, where appropriate, as a legal basis for extensive international cooperation in criminal matters pertaining to fighting all forms and aspects of trafficking in cultural property and related offences (INTERPOL, 2016).

THE STATE OF AFFAIRS IN THE REPUBLIC OF SERBIA - THE ROLE OF POLICE AUTHORITIES

The protection of cultural property is an undertaking that is generally associated with cultural heritage professionals such as archaeologists, art historians, anthropologists, and museum professionals (UNESCO, 2018). Consequently, we often forget about the role of the national actors, outside the sphere of the art world, but nonetheless crucial for the fight against cultural property - the police and customs authorities. In this context, the first national response was the formation, in Italy, of the *Carabinieri* (*Tutela Patrimonio Culturale* – TPC), the world's first police force specialized in the protection of cultural property (INTERPOL 2016).

In the Republic of Serbia, competent state bodies for the fight against cultural property trafficking in various forms are: the Ministry of Culture, the Ministry of Interior, but also the Customs Administration within the Ministry of Finance. Of course, the Ministry of Justice is competent when it comes to providing international legal assistance for civil or criminal matters, which may also be interpreted in the light of the requests for the return of foreign cultural property which is seized in Serbia.

When it comes to the Ministry of Interior, we believe that the activity of the police forces, although at first glance not so visible, is crucial in providing timely response to the criminal activities. In this regard, it is important to mention the activity of the Criminal Investigations Directorate, within the General Police Directorate of the Ministry of the Interior. In the Criminal Investigations Directorate,

7 UNIDROIT Convention on stolen or illegally exported cultural objects, Rome, 24 June 1995, https://www.unidroit.org/instruments/cultural-property/1995-convention, accessed 11.7.2020.

8 On the importance for the Republic of Serbia to access the UNIDROIT 1995 Convention, see more: "Legal challenges of the Republic of Serbia in the process of harmonization with the UNIDROIT Convention on stolen or illegally exported cultural objects", Vanja M. Pavićević, *Saopštenja*, Institute for the Protection of Cultural Monuments of Serbia – Belgrade, pp. 217-227.

9 https://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdf, accessed 12.7.2020.

10 International Convention for the Suppression of the Financing of Terrorism, https://treaties.un.org/doc/db/Terrorism/english-18-11.pdf, accessed 12.7.2020.

under the Bureau for the fight against organized crime, operates a special unit which is responsible for the fight against illegal trafficking of cultural property. This is of utmost importance, having in mind the fact that the Balkan area is rich with archaeological sites and relics dating back to prehistoric times, the Roman and the Byzantine Empire, etc.

According to the Serbian Law on Cultural Property, property under prior protection, situated underground or in water, or taken out of the earth or from water, shall be state-owned.[11] This is an appropriate solution since, as in the case of archaeological looting, protection is provided in advance for the property which is neither registered nor even familiar to the authorities at the time of theft.[12] Therefore, an equal protection status is guaranteed to both declared cultural property and the property under prior protection. Hence, the case of theft of cultural property, or the property under prior protection, would fall under the Serbian Criminal Code, as an Aggravated/Compound Theft. The article 204 of the CC states that a person committing the offence of theft shall be punished with imprisonment of one to eight years if the stolen object represents a cultural asset, or an asset subject to preliminary protection or natural asset (Article 204 paragraph 1 and 2 of the Serbian Criminal Code). [13]

In the last few years, good results followed a great shift in the work of the special unit. The unit's work centered around widening of the international cooperation and the application of innovative investigative techniques in this area of crime. In this respect, we will mention a few key actions successfully performed by the Serbian special police unit. In the famous *Achei* operation, which was led by the Italian Carabinieri Department for the Protection of Cultural Heritage (*Carabinieri*) supported by Europol and Eurojust, a successful contribution of the Serbian Criminal Investigations Directorate was outlined. *Achei* operation resulted in dismantling an international organized crime group involved in large-scale trafficking of looted archaeological items[14] (EUROPOL, 2019).

Another successful operation performed by the Bureau for the fight against organized crime special unit, within the framework of international police cooperation, certainly is the discovery of three precious religious objects that were stolen in 2018 from the Catholic Church in Vienna, and eventually found and seized in Kanjiža. The Bureau emphasizes that this kind of action efficiently contributes to better diplomatic relations and cultural cooperation between the two countries.[15] Also, as a result of the successful cooperation between the Customs authorities and the Bureau's special unit, a large numismatic collection was discovered and consequently seized at the Gradina border crossing in 2019.[16]

However, the Bureau for the fight against organized crime emphasizes that this special unit is responsible from the aspect of organized crime, not from the aspect of an individual criminal offence. The Serbian Criminal Code defines an organized crime group as a group comprising of three or more persons, which exists a certain amount of time, and acts in concert with the aim of committing one or

11 The Law on Cultural Property (LCP), Art. 12. ("Official Gazette of the RS" no. 71/94,52/2011, 99/11).

12 This criminal offence is regulated under Article 353a of the Criminal Code, as Unauthorized Archaeological Exploration, and the envisaged prison sentence is from six months to five years, including a fine, for an offence that has been perpetrated at an archaeological site or on some other immovable cultural heritage or asset subject to preliminary protection.

13 Criminal Code of the Republic of Serbia (CC), Art. 204. (Official Gazette of the RS, no. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019).

14 The French OCBC (*Office central de lutte contre le trafic de biens culturels*), the German Bavarian LKA (*Bayerisches Landeskriminalamt*) and the British Metropolitan Police Service – London also took part in this action. Europol Press Release, https://www.europol.europa.eu/newsroom/news/23-arrests-and-around-10-000-cultural-items-seized-in-operation-targeting-italian-archaeological-trafficking, accessed 15/7/2020.

15 Information acquired during the research for this paper conducted within the competent bodies, July 2020.

16 *Ibid*.

more criminal offences punishable with a term of imprisonment of four years or more the purpose of which is acquiring direct or indirect financial or another type of gain (Article 112 paragraph 35 of the Serbian Criminal Code). When it comes to an individual criminal offence, in each police department, at least one police officer is trained for dealing with the individual cases related to cultural property trafficking.

THE IMPORTANCE OF STRONG COOPERATION BETWEEN COMPETENT AUTHORITIES – PROCEDURAL AND SECURITY CHALLENGES

Analyzing the above-mentioned legislation and police competencies, we consider that the Republic of Serbia is able to provide an adequate response in the fight against illegal trafficking of cultural property, thus contributing to the European and international efforts/cooperation in this regard. However, having in mind that cultural property law is a dynamic field, there is always room for improvement. To reach additional specialization, several main challenges were identified in this field.

The role of the Public Prosecutor

According to the Serbian criminal procedure law, it is the decision of the Public Prosecutor whether he/she will undertake or defer criminal prosecution, abandon charges or file and represent an indictment before a competent court[17] (Article 43 paragraph 1 and 2 of the Serbian Criminal Procedure Code). However, since the prosecutors are not exclusively trained for the cultural property cases, there is a possibility that they will not recognize the specific importance of the cultural property in question, which often includes values that cannot be encompassed financially. In the case when the Prosecutor decides not to initiate further proceedings, the entire previous investigation conducted by the police would be fruitless. The Prosecutor not only has a primary role when it comes to decision making but also the burden of proof. Hence, it is important to have an ongoing dialogue between the Public Prosecutor, on the one hand, and the police and customs authorities, on the other.

However, to conduct a successful investigation that will lead to the indictment, a simple dialogue is not enough. It is crucial to actively include public prosecutors in joint training against trafficking of cultural property, along with employees of the Ministry of Culture, the Ministry of the Interior and the Customs administration. In this way, working methods could be determined directly in consultation with the police authorities, including investigation techniques, securing evidence, etc. Therefore, the responsibility cannot rest solely on the police authorities, since the Prosecutor has the final word on the case.

Customs offences vs Criminal offences?

For centuries, cultural property has been unlawfully exported or imported through various countries, regardless of whether it was stolen or not. According to the Serbian Criminal Code, whoever takes goods across the customs line evading customs control measures shall be punished by imprisonment of six months to five years and fined (Article 236, paragraph 1, SCC). However, if one consults the Commentary of the Criminal Code, one would be somewhat surprised - the attempt to smuggle goods across the border formally constitutes only a customs offense, and not a criminal offense. (Stojanović,

17 The Criminal Procedure Code (CPC), Art. 43, Para. 1, 2. (Official Gazette of RS, no. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014, and 35/2019.

The Commentary of the Criminal Code, 2018). Hence, it would fall under the Article 291 of the Serbian Custom Code.[18] Only if certain additional characteristics are fulfilled, such as, for example, continuous dealing with the unlawful transfer of goods, the customs offense becomes a basic form of a criminal offense. This situation could be seen as potentially problematic since in the case of customs offence only a fine would be imposed, without the imprisonment, thus the burden of responsibility could be avoided, at least during the first attempt.

Registers of the cultural property

We believe that one of the most important measures in the fight against cultural property trafficking should include comprehensive national inventories and registers of cultural heritage. Speaking of relevant international bases, only a few of them will be mentioned: the Republic of Serbia, as an INTERPOL member, has the right to use the INTERPOL Database of Stolen Works of Art and to manually enter information in the register.[19] Also, within the World Customs Organization, the ARCHEO platform was established, and the Serbian customs authorities are actively using it to track illegal activities in this regard. [20] ARCHEO platform is a WCO's real-time communication tool for the information exchange, through which the information on seizures of cultural goods is shared with other customs services, enabling enforcement officers to learn about new smuggling methods.[21]

Since unregistered archaeological sites are often destroyed in the Balkan area, the process of collecting the data could be highly onerous, since experts cannot identify what is stolen. Some of national museums periodically conduct their registers of cultural property, but they do not have a joint, unified register (database). According to the Action plan for implementing the new Strategy for Cultural Development of the Republic of Serbia for the period 2020-2029, the establishment of a database register on stolen goods is envisaged.[22] It will be followed by the training of police and customs authorities for its use, as well as identification and return of stolen goods. Updated, public, and a comprehensive national database of the stolen cultural property would represent a fundamental method for research and possible later restitution of the Serbian cultural property, especially when the property is located outside of its borders. The technology could also be used to create a mobile app that allows individuals to easily verify if a cultural object has an illicit provenance or not, as the free application *iTPC* created by the Italian *Carabinieri* Force for the Protection of Cultural Heritage (Caponigri, Piri, 2017). Auction houses, private foundations, internet service providers, museums, collectors, cultural heritage experts, and civil society members should be firstly enabled, but also willing to collaborate with police and customs authorities, thus to consult online registers of cultural property on a daily basis.

CONCLUSION

18 The Custom Code (CC), Article 291, (Official Gazette of RS, no. 18/2010, 111/2012, 29/2015, 108/2016 and 113/2017)

19 INTERPOL Database of Stolen Works of Art https://www.interpol.int/en/How-we-work/Databases/Stolen-Works-of-Art-Database, accessed 16.7.2020.

20 ARCHEO platform, http://www.wcoomd.org/~/media/wco/public/global/pdf/topics/enforcement-and-compliance/activities-and-programmes/cultural-heritage/archeo_brochure_en.pdf, accessed 16.7.2020.

21 WCO News, Serbia's valiant efforts to protect cultural heritage, https://mag.wcoomd.org/magazine/wco-news-86/serbias-valiant-efforts-to-protect-cultural-heritage/, accessed 16.7.2020.

22 The Strategy for Cultural Development is still in the process of adoption in the National Parliament. The draft is available at http://www.kultura.gov.rs/lat/dokumenti/propisi-iz-oblasti-kulture/strategija-razvoja-kulture-za-period-od-2020--do-2029--godine, accessed 16.7.2020.

Illegal trafficking in cultural property is becoming an increasingly important source of profit, linked with money laundering and financing of terrorist groups. Therefore, previously analyzed international cultural property framework is important, and - not only theoretically - it represents an opportunity for in-depth cooperation. However, to be effective, it has to be based on timely and well-structured national action, as well as on the growing awareness of the complex world of cultural property smuggling. We believe that the national response to this important issue rests on two main pillars:

- National legislation, that is harmonized with international conventions and relevant standards in this area, thus acceding to the 1995 UNIDROIT Convention;

- Cooperation and ongoing information-exchange between competent authorities, especially the police and customs officers with the Public Prosecutor office, the Ministry of Culture and the Ministry of Justice. This can be accomplished through joint capacity building and additional specialization in this multidisciplinary field;

- Establishing the register on stolen cultural property, but also a register of movable cultural property which will merge all the museums' registers at the republic level.

Having in mind that Serbia often represents the transit or the source country, rather than market country (the final destination), the Republic of Serbia must continue to provide a prompt reaction to aforementioned challenges in this area. The protection of cultural property, a topic of national interest, is increasingly gaining importance in an attempt to develop Serbia's cultural diplomacy and cultural identity.

REFERENCES

1. Caponigri, F., Piri, A., Summary Report of Conference on "A new perspective on the protection of cultural property through criminal law", *Aedon*, *Journal of Arts and Law Online, 2/2017, pp. 1-8.*
2. Hoffman, B., (2006), Exploring and Establishing Links for a Balanced Art and Cultural Heritage Policy In: B. Hoffman. (Ed.), *Art and Cultural Heritage – Law, Policy and Practice* (pp. 1-18) Cambridge University Press, NY, USA.
3. INTERPOL, Protecting cultural heritage an imperative for humanity- Acting together against destruction and trafficking of cultural property by terrorist and organized crime groups, (2016), pp. 1-24.
4. Pavićević, V., Legal challenges of the Republic of Serbia in the process of harmonization with the UNIDROIT Convention on stolen or illegally exported cultural objects in *Saopštenja*, Institute for the Protection of Cultural Monuments of Serbia – Belgrade, pp. 217-227.
5. Shapiro, D,. Cultural Property and the International Cultural Property Society", *International Journal of Cultural Property* (2005) 12, pp.1–5.
6. Stojanović, Z., The Commentary of the Criminal Code (2018), 8th edition, pp. 781-784.
7. Ulph, J., The impact of the criminal law and money laundering measures upon the illicit trade in art and antiquities, 16 Art Antiquity & L. 39 (2011), pp.38-52.
8. UNESCO, Fighting the Illicit Trafficking of Cultural Property", Property, in cooperation with UNIDROIT, INTERPOL, WCO, UNODC, ICOM, EUROPOL, EUROJUST, (2018), pp. 1-116.

LEGAL DOCUMENTS

1. Criminal Code of the Republic of Serbia (CC), Art. 204. ("Official Gazette of the RS ", no. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019)
2. International Convention for the Suppression of the Financing of Terrorism, https://treaties.un.org/doc/db/Terrorism/english-18-11.pdf
3. The Criminal procedure code (CPC), Art. 43, Para. 1, 2. (Official Gazette of RS, no. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014 and 35/2019.
4. The Custom Code (CC), Article 291, ("Official Gazette of RS ", no. 18/2010, 111/2012, 29/2015, 108/2016 and 113/2017)
5. The Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention 1954, http://portal.unesco.org/en/ev.php-URL_ID=13637&URL_DO=DO_TOPIC&URL_SECTION=201.html
6. The Law on Cultural Property (LCP), Article 12. ("Official Gazette of the RS" no. 71/94,52/2011, 99/11)
7. The Strategy for Cultural Development is still in the process of the adoption in the National Parliament. The draft is available at http://www.kultura.gov.rs/lat/dokumenti/propisi-iz-oblasti-kulture/strategija-razvoja-kulture-za-period-od-2020--do-2029--godine
8. UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property 1970, http://portal.unesco.org/en/ev.php-URL_ID=13039&URL_DO=DO_TOPIC&URL_SECTION=201.html
9. UNIDROIT Convention on stolen or illegally exported cultural objects, Rome, 24 June 1995, https://www.unidroit.org/instruments/cultural-property/1995-convention
10. United Nations Convention against Transnational Organized Crime, https://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdf
11. Websites and registers
12. ARCHEO platform, http://www.wcoomd.org/~/media/wco/public/global/pdf/topics/enforcement-and-compliance/activities-and-programmes/cultural-heritage/archeo_brochure_en.pdf
13. Europol Press Release, https://www.europol.europa.eu/newsroom/news/23-arrests-and-around-10-000-cultural-items-seized-in-operation-targeting-italian-archaeological-trafficking
14. INTERPOL Database of Stolen Works of Art https://www.interpol.int/en/How-we-work/Databases/Stolen-Works-of-Art-Database
15. WCO News, Serbia's valiant efforts to protect cultural heritage, https://mag.wcoomd.org/magazine/wco-news-86/serbias-valiant-efforts-to-protect-cultural-heritage/

REDEFINING THE ROLE OF THE EUROPEAN ANTI-FRAUD OFFICE (OLAF) IN THE FIGHT AGAINST CORRUPTION

Emina Radosavljević, MSc[1]

Abstract: The Office of the European Union Anti-Fraud Office (OLAF) during 20 years of existence as an independent and operational body has built up credibility by opening investigations into high-level corruption cases in EU member states with whom national judicial authorities simply could not cope with. The topic of this paper will be the role, competencies and functioning of OLAF in the fight against corruption. Therefore, in this research we will use the analysis, synthesis and comparative method of investigations launched by OLAF because of indications of the misuse of EU funds in Hungary, Romania and Italy in order to find common denominators of the highforms of corruption and social fields in which it occurs. From the scientific point of view the aim is to reach a certain level of scientific knowledge, and from a practical point of view, to determine whether OLAF's recommendations can serve to redefine and improve the legal framework for the fight against corruption, especially in the EU candidate countries.

Keywords: EU, OLAF, corruption, recommendations

OLAF'S PLACE, ROLE, COMPETENCE AND FUNCTIONING

The European Anti-Fraud Office (OLAF) was established in April 1999 as the successor to the Financial Crimes Prevention Coordination Unit, the first body of the European Union (EU) whose aim was to protect its financial interests, primarily through the fight against fraud and corruption by initiating administrative and criminal proceedings[2]. Given that the European Union is made up of 27 Member

1 ema_radosavljevic@yahoo.com

2 Although the topic of this paper is related to the conduct of OLAF in the fight against corruption in EU Member States, it cannot be overlooked that this body is also responsible for carrying out controls within the EU institutions. This is supported by the fact that a significant number of EU institutions, immediately after the establishment of OLAF, reported their staff on suspicion of causing serious damage to the EU budget.

States that use a large number of funds, which are also available to non-EU countries, it is quite clear that one of the basic goals of the European Commission (EC) is to spend those funds on purpose and to prevent and punish every abuse.

These intentions are essential given that it is inevitable that these funds attract the attention of fraudsters (Strengthening OLAF, The European anti- Fraud office, Report with Evidence, 2004)

especially with regard to the use of pre-accession funds and the various benefits that the EU provides to its less developed members (Škulić, 2018:16). That is why at the same time efforts to limit and suppress it have grown with its expansion (Ćirić et al, 2015). However, the adequate response of the European institutions has often been prevented by different legal systems or different definitions of fraud (Quirke, 2015:236).

Unlike other EU bodies such as Europol and Eurojust, OLAF has no legal personality of its own (Škulić, 2018:17), but it is an independent body of the European Commission (EC), which is competent to investigate possible financing frauds of the EU budget and conduct internal and external investigations as well. However, some authors believe that the fact that OLAF operates within the EK means that the EC is investigating itself (Quirke, 2009: 98).

In addition, at the request of other European Union institutions and bodies, it is competent to carry out investigations in the field of communitarian law. OLAF's significant powers are in relation to its preventive role in defining the appropriate legislative framework to combat fraud and corruption, which applies primarily to those countries where irregularities in the use of EU funds are registered. In this regard, OLAF can cooperate with other countries and their institutions with the aim to harmonize legislation on the prevention, detection and prosecution of financial crimes and, of course, corruption, and to develop appropriate strategies and to analyze and explore new modalities to prevent those criminal acts.

Although it is not a "police authority", in another words, it does not have enforcement powers (Herlin-Karnell & Ryder, 2017) since it is not authorized to deprive a person suspected of having committed crimes within its jurisdiction, OLAF has the possibility of engaging its own independent capacities (Škulić, 2018: 17). This means that it still has certain operational powers that enable it to cooperate directly with the police and judicial authorities of the country where the investigation is being pursued, whether or not it is a member of the EU [3]. In this regard, in order to conduct operational expertise, OLAF inspectors are authorized to have access to all information and documentation held by financial institutions, including computer data which are necessary for the conduct of an investigation, under the same conditions as national inspectors in compliance with national law. This means they have the right to unannounced and immediate access to all information held by the institutions, bodies, offices and agencies of those countries, access to the premises, right to inspect all accounts of institutions, bodies, offices and agencies, and the right to request information from institutions and other bodies (Čavoški and Reljanović, 2011, 90).

On the other hand, certain OLAFs powers are in relation to the requests that the office may make against countries which are connected to possible financial abuse. In this regard, at the request of OLAF, the competent authorities of those countries are obliged to inform the OLAF of their actions, the measures and decisions taken on the basis of OLAF's recommendations and information. In addition, they have an obligation to name the legal basis and the detailed reasons for each decision. This communication proceeds according to the same rules that apply to international cooperation. How-

3 If the country is not a member of the Union, it should sign an agreement which allows cooperation with the OLAF.

ever, as can be seen, OLAF acts in such situations only through national authorities which *de facto* conduct the proceedings (Xanthaki, 2010: 6).

After conducting an investigation and finding that there is doubt about the misuse of EU funds, OLAF may notify the European Commission and make recommendations for further action. However, OLAF does not itself bring the prosecution in the national criminal court. (Strengthening OLAF, The European Anti-Fraud Office, Report with Evidence, House of Lords Papers, 2004). In addition, it may also inform the competent authorities of the state concerned about the results, in particular in cases where certain offenses are suspected to have been committed.

Although some authors consider it as an inspection body, given that it has in a considerable number of investigations uncovered cases of high corruption, often involving senior government officials, OLAF's decisions have considerable political weight. Namely, after the completion of the investigation, OLAF proposes to the European Commission to request the return of unpurposely spent money, which is then often invested in projects that stimulate higher employment in Europe. The aforementioned authority could be considered as a kind of repressive role.

In addition, it should be borne in mind that the EU is characterized by general liberalization, which is defined as "free movement of people, goods, services and capital", and that the development of the state system and the level of morality of the nation is not the same neither in every EU member nor in those who aspire to that position. In this sense, OLAF also plays a preventive role by implementing one of the basic objectives of the EU, according to which all available funds should be allocated in accordance with its purpose. Moreover, corruption is not a consequence of a single risk factor but more of them, such as economic, social, cultural, historical, political, legal and others factors. It endangers the rule of law, public trust in state institutions and the rule of law, justice, equality and security of citizens (Stanojević, Dimovski and Milić 2014, 48).

Based on experience, OLAF lists several characteristics that indicate serious corruption. These are covert conflicts of interest, unfair bidding practices, and tendering for pre-tailor-made public procurement for specific bidders. Namely, in the practice so far, it has been noticed that some of the poorest EU countries, poorly prepared for EU membership found it difficult to allocate large amounts of money upon joining the EU, which led to corruption (Quirke, 2015:243). In this paper, we will analyze those phenomena in specific investigations conducted by OLAF in Hungary, Romania and Italy on suspicion of misuse of EU funds.

Hungary

According to OLAF reports, Hungary is a significant beneficiary of EU funds, given that it has withdrawn around € 25 billion from various funds by 2020. Nevertheless, it lacks a planned and systematic fight against corruption in the public and private sectors, which, among other things, includes the establishment of an independent and autonomous body for the prevention of corruption (Vasić, 2007, 187).[4] Also, it is considered that Hungary, although it became a member of the EU in 2004, still does not have a developed state apparatus for effective fraud detection (Murawska 2008:186). This is indicated by the perception of corruption of 56%, which is significantly above the average of 37% in the European Union (2018 European Semester: Assessment of progress on

4 On that occasion, it is considered that the systemic and planned fight against corruption implies the adoption of a national strategy and action plan.

structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011).

According to OLAF statistics, in 2018 Hungary was in first place in Europe regarding the number of investigations initiated because it was under suspicion of spending money from the EU budget unpurposely. At the same time, Hungary was in first place regarding the number of recommendations issued by OLAF to the European Commission and Budapest in the light of results of investigations.

Table 1: *Investigations into the use of EU funds managed or spent in whole or in part at the national or regional level concluded in 2018 (Source: The OLAF report, 2018)*

State	Number of launched investigations	Number of investigations completed with recommendation
Hungary	9	7
Greece	8	6
Poland	8	3
Romania	4	2
Bulgaria	4	2
Italy	4	2

So far, regarding investigations about misuse of EU funds in Hungary, OLAF investigators have identified a phenomenon known in science as "white elephants", which describe financing projects whose justification or need is questionable. In addition, they investigated a number of cases in which companies got money with the evident existence of nepotism and conflict of interest.

The subjects of the OLAF investigations were 35 cases of repairing public lighting in local government units in Hungary entrusted to company named "Elios", given that in one of the most important development projects in Hungary significant EU funds have been invested in very poor lighting quality. During the investigation, it was found out that co-owner of this company is the brother-in-law of the Hungarian Prime Minister Viktor Orban, Istvan Tiborc.

In addition, it was found that almost always, when applying for a tender, Elios beat the competition in a large number of cases by making a minimum higher bid than the value of the project was. It was also noted that one of the reasons for winning such a large number of tenders was that a close associate of Tiborc's, a co-owner of "Elios", at the same time was involved in the preparation of tenders, adjusting them to the company's offers.

Beside the abuses noticed in those projects, investigators found out that the winners of the tenderers in some cases presented false expense accounts where the prices of the equipment covered by the tender were significantly higher than real prices. Also, a case was investigated under suspicion of the winner of the tender having no intention to carry out the project as well as of his continual deceit of the investors.

One of the investigations referred to business examination of a company that received EU funds through the Hungarian Government to develop software for facilitating the use of the internet for blind and partially sighted people. During the process, it was found out that the basic activity of this company was, in fact, the chemical and pharmaceutical industries, and that the "new" software had been used from the very beginning.

Romania

In 2017, Romania like Hungary, was in first place in Europe considering the number of investigation launched by OLAF because of the improper use of EU funds (The OLAF Report 2017). However, even before it joined the EU in 2007, Romania was known for its high corruption index[5], without any strategic document both internally and externally, and without anti-fraud experts (Quirke, Б. 2009: 104).

Established in 2005, the National Anti-Fraud Directorate (DLAF) (Toade et al, 2009) in the next few years launched investigations in which the value of the estimated damage was around 1.13 billion euros, and filed charges against 14 deputies, 9 ministers including the former prime minister, dozens of mayors and their deputies, 18 directors of state-owned enterprises, as well as against 40 judges (Ćirić et al. 2015: 32).

With 11 launched investigations and 8 issued recommendations because of the irregularities found in those cases, Romania is followed by Hungary and Poland, which were under investigation in eight cases. What makes Romania specific is that OLAF investigators have detected frauds in infrastructure projects financed by both Romania and the EU budget, claiming that several offenses were committed, including forgery of documents with the aim to obtain resources from the EU funds.

Table 2: Investigations into the use of EU funds managed or spent in whole or in part at national or regional level concluded in 2017 (Source: The OLAF report 2017)

State	Number of launched investigations	Number of investigations completed with recommendation
Romania	11	8
Hungary	10	7
Poland	10	7
Greece	9	5
Bulgaria	7	4
Germany	5	3

In this period of time in many cases investigators found out that persons who applied for and received money from the EU budget tried to break the EU law. Furthermore, in a significant number of cases, investigators found out some elements of corruption between the person who won the tender and the advisor or end user of the funds. Very often, investigators found out the existence of conflicts of interest that sometimes involved representatives of the state leadership and high value public procurement projects.

These irregularities were noticed in projects funded by the European Regional Development Fund during road reconstruction. Specifically, OLAF investigators found that representatives of local authorities, who were the final beneficiaries of the funds, had a sort of agreement with the representatives of the companies that produced the technical documentation for road reconstruction. The aim was to adapt the offer of the specific company participating in the tender to such an extent so that the other tenderers would practically be eliminated from the tender process.

Such a scenario was noticed in the case of embezzlement of European funds, in which the Social Democratic Party`s (PSD) leader Liviu Dragnea, as the chairman of the Teleorman Council, played a

significant role. According to Romania's National Anti-Corruption Directorate, Dragnea organized a criminal group consisting of local government representatives and businessmen. The aim of this group was to fraudulently provide significant sums of money by participating in projects financed from the state budget or from the European Union. Specifically, the Anti-Corruption Directorate launched investigation into the business of the local construction company "Tel Drum" and its representatives and found that this company had been privatized in such a way that its ownership from the Teleorman County Council had been transferred to other individuals, even though the greatest influence to its business had Dragnea.

Following the investigation, the prosecution found that Dragnea, with several other related persons, had submitted to the Regional Development Agency forged documents, on the basis of which Tel Drum was awarded a 55 km rehabilitation road contract in Teleorman. The whole project was worth € 25 million, with half of the money coming from EU funds. Specifically, it was found that the data stated in the technical project were forged, as well as the signature of the responsible engineer, while the tender conditions were so defined that only Tel Drum could obtain the realization of the project. In the same scenario, Tel Drum won another tender, with total EUR 15 million damages to EU funds. Also, it was found that Dragnea, as a high-ranking Teleorman official, approved major funding for the implementation of infrastructure projects by Tel Drum, despite the fact Teleorman was one of the poorest districts in Romania. In addition, prosecutors found that the this criminal group, or the companies they owned, had donated some money to the Dragnea`s party.

OLAF has conducted another investigation against a company allegedly under the real control of Dragnea and accused two of its executives of using or presenting false, inaccurate or incomplete documents or statements in order to obtain EU funds when purchasing a mobile asphalt preparation mixture. The investigation also included executives from WFA Impex SRL who worked closely with Tel Drum. During the investigation, it turned out that the companies not only submitted forged documents to obtain EU funds, but also in the same way tried to refund almost EUR 1 million. The said investigation also included some representatives of the Ministry of European Funds, who acknowledged that they had signed a contract for the implementation of the project "Increasing European Competitiveness", funded by European funds, at the initiative of Tel Drum.

Italy

OLAF pays considerable attention to the fight against tobacco smuggling, as it causes enormous damage to the EU budget and, in addition, goes against all smoking and public health campaigns. Based on the organization's overall experience so far, cigarette smuggling had transnational elements that made investigations more complicated and long-term. Specifically, in March 2018, a court in Turin, Italy, finalizing proceedings against the largest cigarette smuggling network in Europe, sentenced a few people to several years in prison and ordered the seizure of their property worth several million euros.

Following a five-year investigation conducted by OLAF with police across the Europe, it has been revealed that the international smuggling network has smuggled cigarettes outside the European Union to third countries or imported them into Italy, all the time avoiding to pay mandatory customs and tax duties. The investigation was further complicated by the fact that the smugglers' network cooperated with organized crime groups that operated in both EU and non-EU countries. Smuggling was also facilitated by customs officers from individual countries issuing clearance documents, despite the fact that no cigarette containers crossed the EU border or confirmed exports when the trucks were already seized.

The Turin court accepted all the evidence gathered by OLAF and its partners. In addition to imprisonment and seizure of property, the court ordered the defendants to pay more than € 119 million to the Italian customs and € 36 million to the tax administration. Otherwise, this case has been prosecuted not only in Italy, but also in Belgium, Germany, Romania, Bulgaria, Spain, Lithuania and Poland as well.

CONCLUSION

Bearing in mind the contemporary security challenges, risks and threats, the aforementioned phenomenon of the free movement of people, goods, services and capital should be interpreted firstly from the standpoint of the free "movement" of security risks, since corruption cannot be observed for a long time only as an isolated, criminal phenomenon of a single country, but as an economic, legal, criminological, social problem of the wider region.

Precisely because of the above-mentioned transnational character of corruption, the establishment of the international legal standards has proven to be a necessary need to combat corruption. The first steps in this direction were made in 1990, when numerous international organizations, most notably the United Nations (UN) and the World Bank, began to study the political and economic aspects of corruption. Most of their activities were in relation to description and definition of corruption, listing and describing offenses that, due to their elements, could be considered corrupt, as well as directing mechanisms in the fight against corruption. The establishment a normative framework, standards and principles has been extremely slow process, which is why the implementation of anti-corruption regulations in every sense of the word is "winning freedom", step by step (Simonović, 2014, according to Bejatović et al 2014).

On this occasion, thirty years later, we are talking about redefining the role of the European Anti-Fraud Office (OLAF), bearing in mind that corruption offenses in modern society and market economies are experiencing real expansion and are often closely linked to various forms of economic and organized crime (Ignjatović Đ, Škulic M, 2010, 253-254), which could also be seen from the examples we cited. The importance of OLAF is also reflected in the fact that corruption is the most covert type of criminal behavior, and often the methods and forms of corruptive behavior are preferred over the means and methods of suppressing it (Stajić Lj, 2015, 154).

In addition, investigations conducted by OLAF have shown that corruption is often mentioned in business operations of companies, respectively as a criminal offense by legal entities, especially in cases involving large sums of money. In such cases, perpetrators of corrupt offenses are persons of middle or upper social classes who undertake their criminal activities in connection with the job or function they perform, but with the aim of keeping both parties - the recipient and the bribe taker – undetected. Such covert action actually creates a closed circle, making detection of corruption significantly more difficult. That is why detecting and clarifying corruption cases is a difficult job in the most developed countries, which results is an extremely high "dark number" - the number of unresolved cases.

In addition to the fact that it was founded on the basis of coordinated action of EU member states, OLAF's significant role is the power to suggest changes to the normative framework in order to prevent corruption. For that purpose, the implementation of the Early Warning System (EWS), a database with the names of individuals and legal entities that are linked or have been linked to fraudulent activities to the detriment of the EU's financial interests, is also important (Vega, 2017:258). In that sense, based on the data collected by OLAF, hundreds of people have been convicted so far, and

more than seven billion euros have been returned to the EU budget (Vega, 2017:258). However, part of the science still believes that the effectiveness of the measures taken by OLAF is limited by its competencies, i.e. the inability to initiate criminal proceedings. (Herlin-Karnell & Ryder,2017: 38).

Bearing in mind that the representatives of OLAF and the Office of the European Public Prosecutor have signed an agreement about "using all available means to safeguard the Union's financial interests through the complementarity of their mandates and the support that OLAF provides to the Office of the Public Prosecutor", it is expected that OLAF will become the main investigative body of Office of the European Public Prosecutor in the near future.

This is indicated by the structure of the European Public Prosecutor's Office, headed by the Chief Prosecutor. Formationally, OLAF will be subordinate to European prosecutors who will supervise prosecutors acting in the Member States. Given that prosecutors operating in member states will also be competent to start criminal proceedings against suspected of money embezzlers and misappropriation of EU funds before the national courts of Member States, it is expected that OLAF would also have wider operational powers. It is also considered that in such circumstances, an organized and institutionalized exchange of information will be encouraged, especially in joint investigations conducted by OLAF and the investigative bodies of the Member States (Xanthaki, 2010:13)

REFERENCES

1. Bejatović S, Ćirić J, Đorđević Đ, Matić M, Mrvić-Petrović N, Škulić M, (2014). Risk analysis in order to assess regulatory and organizational barriers to effective investigations and proceedings in corruption offenses. Belgrade. European Union and Council of Europe.
2. Čavoški A, Reljanović M. (2011). *The idea of creating an EU criminal law*. Belgrade. Association of Public Prosecutors and Deputy Public Prosecutors of Serbia
3. Ćirić J, Bejatović S, Đorđević Đ, Matić M, Mrvić-Petrović N, Škulić M, Orlović A, (2015). Risk analysis in the investigation and prosecution of corruption. Belgrade. European Union and Council of Europe.
4. Herlin-Karnell, E & Ryder, N. (2017). The Robustness of EU Financial Crimes Legislation: A Critical Review of the EU and UK Anti-Fraud and Money Laundering Scheme. European Business Law Review. 28 (4), 427-446.
5. Ignjatović Đ, Škulić M. (2010) *Organized crime.* Belgrade. Law school, University of Belgrade.
6. Murawska, A. (2008). Administrative Anti-Fraud measures within the EU: Necessity and Means. Nomos
7. Quirke, B. (2009). OLAF's role in the fight against fraud in the European Union: do too many cooks spoil the broth? Crime Law Social Change. 53. 97-108.
8. Quirke, B. (2015). The Routledge Handbook of White-Collar and Corporate Crime in Europe. New York. Rutledge.
9. Simonović B. (2014). International standards, criminal legislation and implementation of anti-corruption regulations in Serbia. *Criminal policy*. Serbian Association for Criminal Law Theory and Practice.
10. Stajić Lj,(2015) Basics of security systems with basics of security phenomena research. Novi Sad. Law school, University of Novi Sad.

11. Stanojević J, Dimovski D, Milić I, (2014) The impact of corruption on national competitiveness. Proceedings. Law school Univestity on Nis.
12. Škulić, M. (2018). Organizacija i nadležnost državnih organa čija je funkcija suzbijanje koruptivnih krivičnih dela. Finansijski kriminalitet, 11-42.
13. Toade S, Ungureanu M, Predescu I, Predescu A. (2009). The fight against fraud and tax evasion in the european union. The protection of community financial interests in Romania. Annales. 11(1), 546-555
14. Vasić, R. (2007). Nacionalna strategija za borbu protiv korupcije i planovi integriteta. Korupcija, osnovni pojmovi i mehanizmi za borbu.187-198.
15. Vega, D. (2017). The Fight Against Corruption in Europe: Lights and Shadows. Crimen. 242-267.
16. Xanthaki, H. (2010). What is EU fraud? And can OLAF really combat it? Journal of Financial Crime. 17(1),133-151
17. European Union (EU). Last approach 15.06.2020.
18. https://ec.europa.eu/info/sites/info/files/2018-european-semester-country-report-hungary-en.pdf
19. European Union (EU). Last approach 20.06.2020.
20. https://ec.europa.eu/anti-fraud/sites/antifraud/files/olaf_report_2017_en.pdf
21. Strenghtening OLAF, The European anti- Fraud office, Report with Evidence (House of Lords Papers). 2004. Last approach 15.07.2020.
22. https://publications.parliament.uk/pa/ld200304/ldselect/ldeucom/139/139.pdf

TOPIC II

POLICE ORGANIZATION – STRUCTURE AND FUNCTIONING

THE BEST PRACTICE OF THE BASIC TRAINING OF THE POLICE CADETS AT THE UPS FACULTY OF LAW ENFORCEMENT IN HUNGARY

Gabor Kovacs, PhD[1]
University of Public Service, Budapest, Hungary

Abstract: In Hungary, the University of Public Service Faculty of Law Enforcement prepares future officers in the field of law enforcement at the basic and master's level. The first stage of the bachelor studies is the basic training, where the police cadets meet the requirements of the law enforcement community. The basic training at the faculty consists of two phases, an intensive phase, which means continuous preparation for five weeks, and a further training programme which is integrated into the school-based education.

From the study, the reader learns about the main features and characteristics of the basic training of Hungarian law enforcement students, thus making the Hungarian system comparable with other law enforcement training institutions as an example good practice.

Keywords: selection of the applicants, law enforcement basic training for the cadets, law enforcement bachelor education, Faculty of Law Enforcement.

INTRODUCTION

The University of Public Service Faculty of Law Enforcement prepares experts with a higher education degree in law enforcement organizations in Hungary. The faculty is constantly expanding and renewing its training. The ordering organizations are the law enforcement organizations, the Hungarian National Police, Hungarian Prison Service, the National Disaster Management Directorate and the National Tax and Customs Administration. The organizations ordering the programme are more and more satisfied with the training of the specialists graduating from the faculty every year.

1 kovacs.gabor@uni-nke.hu

In the case of the faculty's uniformed bachelor programmes, admitted cadets take part in an intensive (law enforcement) basic training lasting five weeks from the end of August; the successful completion of the basic training is mandatory for all law enforcement students. After a five-week intensive phase, the students undergo a basic training until the end of the first semester, after which they take an officer candidate exam. After that, they can be deployed independently, with a gun to the police patrol service and to a professional practice as an officer candidate.

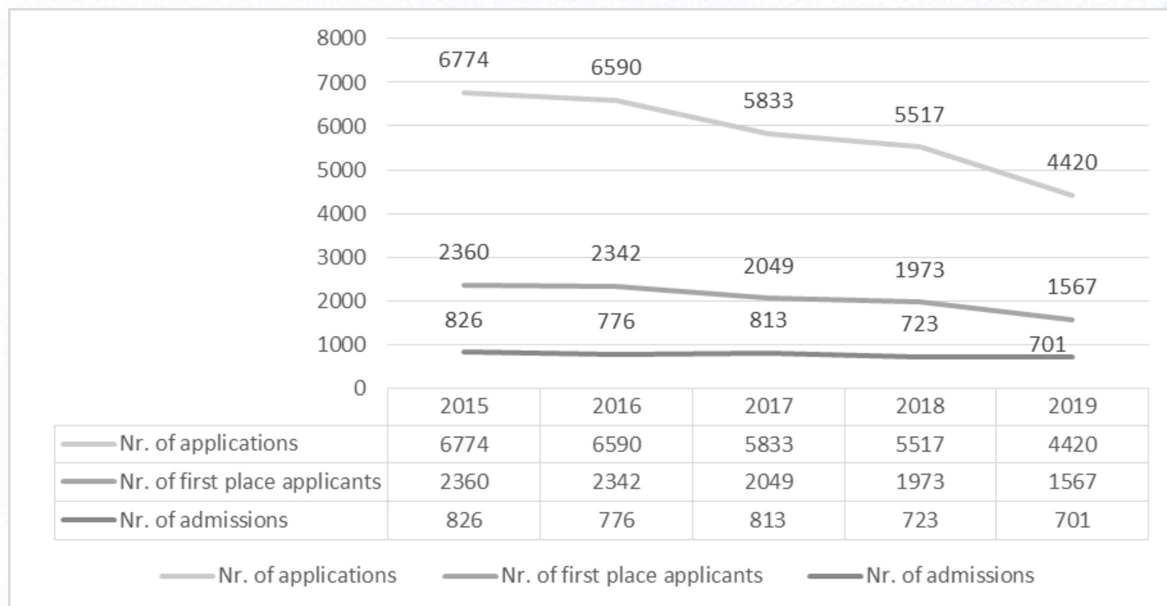
Basic law enforcement training is an important defining stage of the studies. This very strongly affects the entire police profession, therefore its planning, organization, and conducting is extremely important to the Faculty of Law Enforcement.

From this paper, the reader may benefit some information about the main features of the basic training of Hungarian law enforcement students and see that the Hungarian system is comparable with the systems of other law enforcement training institutions.

THE SELECTION PROCEDURE

The number of students enrolled in the Faculty of Law Enforcement is planned annually. It is determined by the Ministry of the Interior and is always tailored to the needs of the ordering organizations. The total number of applicants for the faculties has shown a significantly decreasing trend in recent years, especially between 2015 and 2019, with almost 1,000 fewer applications per year (one applicant can apply for more than one place). The number of first-place applicants is usually double the number of admissions, but this number is also steadily declining (Kovacs, G., 2019.1).

Overall, the Faculty's programmes are still popular among young people, and the number of students can be easily filled. The number of applications, the number of first place applicants and the number of admissions are shown in the graph.



	2015	2016	2017	2018	2019
Nr. of applications	6774	6590	5833	5517	4420
Nr. of first place applicants	2360	2342	2049	1973	1567
Nr. of admissions	826	776	813	723	701

Figure 1. Applications/first place applicants /number of admissions to the Faculty of Law Enforcement /2015-2019/ (Kovacs, 2019)

The admission system is closed and fully automatic; all external interventions are excluded and only objective data is taken into account. The university receives only the list of admitted students at the end of the admission procedure. Despite declining application numbers, faculty programmes are very popular among young people.

The condition for applying for the full-time programmes is the existence of a high school certificate and a B2 language exam certificate in one of the official languages of the European Union or Ukrainian, Serbian, Beas, Lovari, Russian and Chinese (Government Decree 222/2019).

The vast majority of full-time programmes are subject to a strict physical health and psychological aptitude test, which is supplemented by a career orientation and motivational interview, during which a committee examines the candidate's commitment to a professional career.

The high school graduation is decisive in the students' high school education. In the case of traditional secondary school courses, the number of students who have learned the basics of law enforcement fluctuates between 4-11%. Nearly a quarter of the students come from vocational secondary schools, where students study the basics of law enforcement, which also fluctuates between 5-7% per year.

Meeting the requirements of physical education is an important and necessary precondition for the law enforcement profession and it may sometimes pose a significant challenge to applicants. A lot of them (70% of the applicants) consciously prepare to meet the requirements, and accordingly the proportion (40%) of those who seriously prepare for this competition, even for more than half a year, is consistently high. There are also those (5%) who do not prepare or who spend only a few weeks preparing for the test - they say this is enough for them as they have been admitted. Kovacs, G. (2019.2).

In the case of bachelor programmes (where cadets wear uniform) admitted students take part in a five week basic training at the end of August each year, in order to help officer candidates acquire the basics of professional service requirements.

After five weeks, the basic training continues. The training has been integrated into the lessons, and a full day (officer candidate socialization day) is available to the trainers each week. A separate organizational unit, the Law Enforcement Department, is responsible for preparing the students.

At the end of the first semester, the students take an officer candidate exam, at which point the students' 6-month probationary period expires (until this date, both parties may terminate the legal relation without justification). The study contract is then concluded between a student and the organization ordering the programme, which includes an 8-year service obligation after graduation (Act of 2015).

PREPARATION OF THE INTENSIVE PHASE OF BASIC TRAINING

The training staff consists of police officers, deputy police officers and sophomores. The student trainers change every year, but the professional training staff is constant, so over the years they have gained significant professional experience in basic training.

The student training position is very popular among sophomores: they are appointed in June, the preparatory methodological sessions for them start, where in addition to pedagogical, teaching methodological and professional training, various training-type sessions are conducted under the guidance of psychologists, common work with the students and behavior is emphasised.

In the week before the start of the training, intensive methodological sessions will be conducted for the training staff. The five-week training plan includes the content of the curricula broken down into lessons. The training plan contains all the relevant information and data needed to conduct the sessions at a high level.

Subjects and lessons of basic training

The basic training material is grouped into four modules, which are the following: *basic service/law enforcement knowledge, shooting exercise, public order knowledge, police physical education and self defense.* Within these modules, a variety of subjects ensure the acquisition of knowledge.

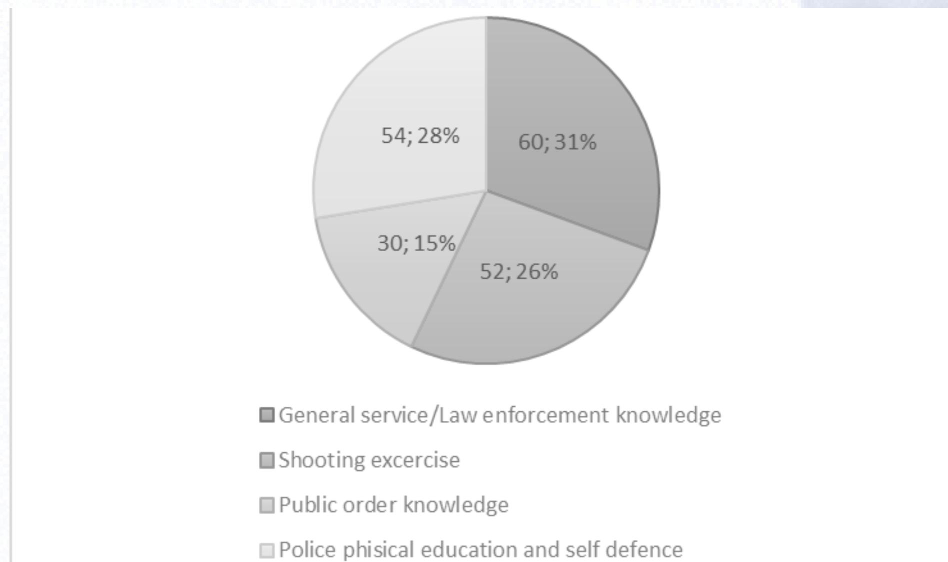


Figure 2. Number of hours (lessons) of basic training

GENERAL SERVICE KNOWLEDGE 60 LESSONS (36 THEORY CLASSES + 24 PRACTICE)

The general service knowledge module consists of four subjects: formal and dress code, document management, case management, basic service knowledge, and first aid. (FLE Dean's Office, 2019)

Figure 3. Subjects of the general service knowledge module

Topics of the subject formal and dress code 26 lessons (2 theory + 24 practice): basics of individual formality (superior-subordinate, ranks), rules of service contact, practice, the order of entering and leaving a place, lining up, basic shapes, turns in a stand, "watch and relax" position, starting, moving, stopping subunits, respect individuality, exit shape, march to foreman, practicing procession in bondage, formal inspection.

Topics of the document and case management course: confidentiality (4 lessons): document and case management rules, management of service documents, confidentiality rules, preparation of reports and minutes.

Topics of the Basics of Service course (12 lessons): Legislation and regulations concerning the employment of members of the professional staff. The importance and role of the hierarchy in law enforcement organisations. Staff groups and ranks at law enforcement organisations. Significance of the career model. The concept of protection, I and II degree of object protection features of the protection modes.

Topics of the Basics of Work, Environment, Fire and Health subject (18 lessons): Work-, Accident-, Fire-, Environment Rules and Possibilities of complying with rules. General and special rules for first aid. Theoretical and practical foundations of the injured and wounded care. Life-saving and resuscitation in simpler cases. Environmental regulations, environmental tasks. Environmental protection, procedure in case of environmental pollution detection. Basics of defense administration and disaster management, legal basis of qualified periods, order, implementation and operation procedures.

The course is supplemented by *Workplace health and safety* (4 lessons), First aid (6 lessons). Disaster management (4 lessons), Environmental protection (2 lessons), Information about the National Protective Service (2 lessons).

Topics of the 52 lessons (6 theory lessons + 46 exercise) *shooting course*: ballistics and its branches, the structure of the weapon, its operating principle, material knowledge, material knowledge of ammunition, its effects. Disassembling and assembling systematized weapons, trapping methods, targeting criteria, targeting errors and their correction. Elimination of obstacles during shooting, maintenance of weapons, knowledge of safety regulations, protective equipment, presentation of bulletproof vests. Performing various shooting exercises with regularized firearms within 7-15 meters.

Public order class 30 lessons (24 theory lessons + 6 practice) focus on three subject groups:

Topics of the course of *Basics of Service II.* 12 lessons (12 theoretical): The relationship between superiors and subordinates, superiors and lower-ranking ones. Subordinate reporting obligations; Rules of service contact; Significance of the service trip, rules of observance; Duties of a member of the professional staff, restriction of fundamental rights; Personal and labor, disciplinary and financial knowledge; Rules of compensation procedure; Provisions for examination of health, mental and physical fitness.

Topics of the 12 lessons (12 theoretical) course: The place and role of law enforcement organisations in society, forms of service at law enforcement organisations, suitability for service, requirements for entry into service, service briefing, acceptance of handover, reporting, service work (time) systems. General provisions for the performance of the service, cooperation between law enforcement organisations, rules for giving and requesting information, content and form requirements for written activity, significance of the use of coercive tools, types of coercive means, clothing, package inspection rules.

Topics of the 6 lessons subject of the *Integrated Practice of Public Order Protection*: Factors influencing police action, The right choice of the location of the police action, the position of the officer, safety distance, safety shapes, communication with the person subject to the measure, practical implementation of clothing and package screening.

Police physical education and self-defense 54 hours: (6+48) includes two main topics:

Topics in *Improving physical fitness* (26 lessons): Development of physical abilities according to the general requirements for members of law enforcement organisations. Field exercises. Preparing for and completing physical fitness examination. Completing obstacle course.

Basis of Self-Defense 28 lessons (6+22): The definition of self-defense, close-quarters combat, the essence of its application in official law enforcement proceedings. Psychology and anatomy of close-quarters self-defense. Anatomy of the human body, its sensitive and vulnerable points. Basics of self-defense: defense, attack, physical laws in self-defense. Position on the ground, falls, rolls. Basic punching and kicking techniques. Basic techniques of physical coercion, application of drainage grips in case of passive and active resistance. Practicing liberation techniques. Getting rid of grips and strangles. Mastering deviations from the direction of attack. Blocking punches and kicks by dodging, blocking, taking to the ground. Preventing device attacks with bare hand.

RESULTS OF A SURVEY OF OFFICERS CANDIDATES

In the course of the research, the willingness of students to respond is higher than what we experience in other research studies at the university. The questionnaires have been completed in the digital form, using the UniPoll system, anonymously, every year since 2013. The completion rate of the questionnaire is over 80%.

Knowing and analyzing the opinions expressed by the officer candidates will help the university management and the law enforcement trainers of the Department of Training and Education to continuously update and, if necessary, modify the basic training program for the coming years. It can be stated that the skills of the students developed significantly during the basic training.

For first-year university students, there are memorable moments in attending the opening ceremony of the academic year, which can only be reached by those who have successfully completed the requirements of the intensive phase of the basic training. The responses from the students revealed that 74-80% of the staff are proud to have successfully completed the basic training.

Their “pride after the opening ceremony of the school year” has risen since the low point of 2015, and overall the upward trend of previous years is authoritative, with a clear positive message Kovacs, G (2019.2).

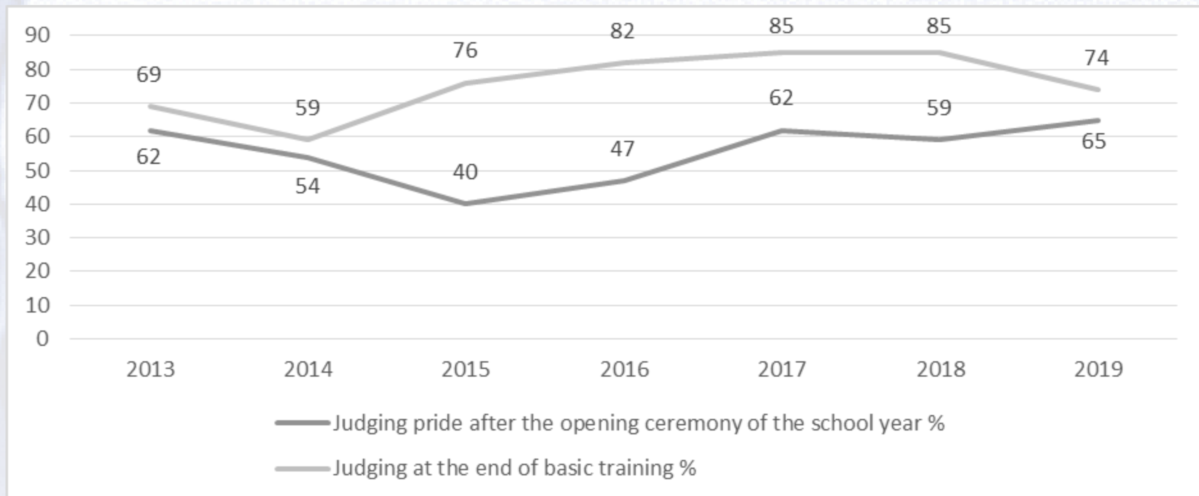


Figure 4. Judging pride after the opening ceremony of the school year or at the end of basic training (n=189;190;181;168;196;117;141) (Kovacs, 2019)

During the basic training, students are given serious tasks that they have to complete. As a result, the self-esteem and self-confidence of half of the students increase significantly during the basic training. The year 2017 was outstanding in this respect.

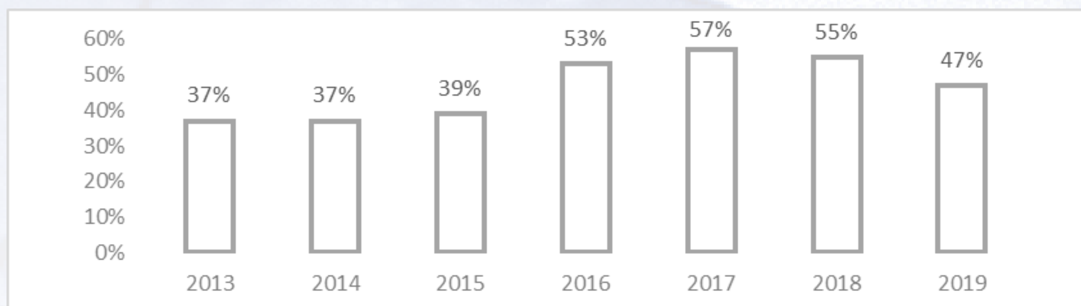


Figure 5. How much did the basic training increase your self-confidence / self-esteem? *(n=189;190;181;168;196;117;141) (Kovacs, 2019)*

The work and activities of student and faculty trainers, theoretical and practical instructors are very important for the success of the basic training. Respondents rated the work of their trainers with an overall improving trend from year to year. The result of this trend is probably due to the methodological and psychological preparation of the student training staff.

Thorough preparation brings the expected results, so in the future it is recommended that not only students but also professional trainers and educators receive methodological experience in preparation for the basic training.

Opinions on the overall assessment of the intensive phase of the basic training are generally positive. Students were mentally less weary of training (between 13% and 14% of those who were weary). Similar numbers are shown in respect of the difficulty and fulfilment of physical training (11% and 14% of students had difficulty, which is not a significant number). There is a consistently high proportion of those who consider that they learn a lot of new things in the basic training and who would like to take part in the basic training tasks. The perception of the instructors has clearly changed in a positive direction compared to the initial years.

Good practices

- The number of students applying for admission is constantly decreasing, therefore the active recruitment work should be continued; it is justified to find new methods by which the applicants can be reached more effectively.
- The involvement of secondary schools providing basic law enforcement training in partner schools is necessary.
- Further development of methodological sessions conducted among students and lecturers who are responsible for training is justified, which should include the joint processing of the results of the student questionnaire.
- Under the current admission system, the validity of the physical admission preparation course has been proven.
- In the intensive phase of the basic training, it is justified to gradually increase the physical requirements step by step.
- About 70-80% of the participants think about giving up the basic training, this deadlock can be expected to occur after 2 or 3 weeks, when it is recommended to involve psychologists to motivate and help the students.
- It is necessary to involve future head teachers in the intensive phase of the basic training (he/she gets to know its students and can provide significant help during the initial training, where he/she can also perform a kind of mentoring task).
- The formal education agenda needs to be further tailored to the students' needs.
- Through effective communication, the trainers need to be made aware that the implementation of the intensive phase of basic training is a significant achievement, the first serious stage of training that rightly makes the candidate proud.

CONCLUSION

The comparative analysis of the multiannual questionnaire and the annual surveys made it possible to make student opinions on the implementation of the intensive phase of the basic law enforcement training comparable in relation to successive classes. The popularity of filling in the questionnaire proves the actuality of the examined topic, the high willingness of the respondents provided good quality samples, the results of which can be used with great certainty for the further development of the intensive phase of law enforcement basic training.

The vast majority of students still come to the university from high schools and, overall, the proportion of students who have already encountered law enforcement skills within the walls of the high school is rising. The distribution of the responses of the studied classes shows almost similar values, but in the case of their comparative analysis a positive shift can usually be seen. Forms of basic training are evolving, the results are encouraging, but further development is in the common interest of faculty and students.

It can be stated that students are more physically prepared from year to year, as they feel that the period of the basic training is less physically exhausting. However, the extent of the psychological burden associated with the basic training remains negligible, with a consistently high proportion of students considering disarmament, during the five weeks, typically the second or third weeks they felt to be in a deadlock.

Striving for further development of various abilities and skills is a priority task.

Each year, the successful completion of the intensive phase of the basic law enforcement training is a priority task for the faculty. Asking for the opinion of the participating students to provide feedback after the formal training greatly contributes to the development of the training. Overall, the tendency can be identified from the majority of the data that the efficiency of the training develops from year to year and that its methods and content increasingly meet the needs of both trainers and students.

The intensive phase of the basic training is crucial for all participants. In the spirit of the relationship between police officer training institutions, it is recommended to study each other's good practices on the spot and share experiences.

REFERENCES

1. Act of 2015. XLII of The employment status of the professional staff of bodies performing law enforcement tasks. 112. 285-286. https://net.jogtar.hu/jogszabaly?docid=A1800115.TV×hift=20190201&txtreferer=00000001.TXT Accessed: 15 May 2020.
2. Faculty of Law Enforcement Dean's Office (2019). Common core curriculum for the law enforcement administration and criminal administration. Basic training programme. Budapest. No.: ODH 193/2019. pp. 14-32.
3. Government Decree 222/2019. (IX. 25.) The list of qualifications that can be obtained in the field of political science training and the training and output requirements of the trainings. The foreign language requirement for law enforcement administration and criminal administration in points 3.8.2. and 4.8.2. https://net.jogtar.hu/jogszabaly?docid=A1900222.KOR Accessed: 15 May 2020.
4. Kovacs, G. (2019.1). Applications/first place applicants /number of admissions to the Faculty of Law Enforcement /2015-2019/ National University of Public Service Vice-rector's Office. Management report. 02 December 2019. No.: ORH 185/2019. p. 3. – unpublished results.
5. Kovacs, G. (2019.2). Summary of some research on the NUPS Faculty of Law Enforcement /2015-2019/. National University of Public Service Vice-rector's Office. Management report. 02 December 2019. No.: ORH 185/2019. pp. 13-14. – unpublished results.

NEW WAYS IN ASSET RECOVERY

Richárd Nagy
Hungarian National Police Headquarters, General Directorate of Criminal Investigation, Budapest, Hungary

Vince Vári, PhD[1]
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

Abstract: It is the priority of the Hungarian investigating authorities to recover as much as possible the damage caused by criminal offenses, to deprive the perpetrators of the illegal accumulation of property, and to prevent the use of criminal property in the course of organized crime. In order to increase the efficiency of asset recovery, the Hungarian legal regulation developed, taking into account the obligations and recommendations of international law, correspondingly attaching increasing importance to this activity. In addition to detecting a perpetrator, as a result of priority asset recovery activities identified as a priority, the investigating authorities have achieved significant results in a number of cases in the recent past. Both domestic and international expectations are to map the property background of criminal circles and to take it away in order to prevent further crimes from being committed, which is why a property recovery office has been set up in recent years. To increase efficiency, a two-tier asset recovery activity has been developed. In order to meet the new challenges in the field, police officers will be trained in a new type of training system. Examining the effectiveness of measures taken to recover assets is necessary to determine future directions for development.

Keywords: asset recovery, compensation for damage, investigation, police, property background.

INTRODUCTION

In previous decades, the basic goal of criminal proceedings in Hungary was to detect and prosecute the perpetrators in the interests of general and special prevention. The previous rules of criminal procedure already allowed for various coercive measures to be taken in order to compensate for the damage caused by the crime, but these were pushed into the background in addition to detecting

1 variv@uni-nke.hu

the perpetrator, typically was not paid attention to during the investigations, and compensation was possible. It is known that the confiscation of property acquired through the commission of criminal offenses did not appear among the tasks of the investigating authorities during this period of the previous Criminal Procedure Act, no procedural acts were carried out for this purpose. As a result, the acquired property - despite the prosecution of the perpetrator after the serving of the sentence - was still available, from which the criminal lifestyle and the commission of new crimes were financed. This has changed radically with Act XC of 2017 on Criminal Procedure, which came into force on 1 July 2018 Act (hereinafter: Be.). From here, in addition to investigating the facts and holding the perpetrator accountable, it became a basic task to search for and secure things and property derived from the crime (§§ 353-354). The recovery of property by the authorities - the investigation of special criminal proceedings may be instituted at the time and after the final decision of the court, it becomes final (Law enforcement specialist lexicon, 2019, 594).

It required new solutions: an increase in the number of organized crimes, an increase in property acquired through crime, and an increase in the damage caused. The most effective methods of combating organized crime include imposing strict penalties for effective criminal offenses, effective detection and the freezing of the proceeds of crime (Directive 214/42 / EU). Recognizing this, significant changes have taken place over the past decade, affecting both the legal environment and the system of tasks of investigating authorities. Hungary's membership in the European Union means obligations on the one hand, and opportunities on the other. The transposition of the relevant acquis of the European Union into the domestic legal system has become an obligation, while at the same time new opportunities have opened up in international co-operation and in learning about good practices.

Accordingly, in order to increase the efficiency of the loss recovery indicator and the seizure of criminal property, domestic legislation formulated on the basis of international legal obligations and recommendations also attaches increasing importance to this activity. According to the researchers, it is therefore possible to talk about property recovery where the specific amount of damage can be determined exhaustively, i.e. primarily anti-property and economic torts are where substantial property recovery can take place (Mátyás. 2016, 220).

In recent years, the task of recovering assets has become a priority in order to recover as much as possible from the damage caused by criminal offenses and to deprive the perpetrators of illegal wealth, as well as to reduce the exploitation of criminal assets in organized crime.[2]

APPEARANCE OF ASSET RECOVERY ACTIVITY IN THE SYSTEM OF TASKSOF INVESTIGATING AUTHORITIES

For the purpose of tracing the proceeds of crime, the two main groups of offenses are the group of offenses against property resulting in the loss of property and the group of offenses generating property. In the case of crimes against property that result in the loss of property, compensation is a factor that significantly influences the subjective sense of public security of the victims and society and the assessment of the effectiveness of the work of law enforcement agencies. In the case of wealth-gen-

2 Between 2010 and 2014, according to a study carried out by Europol, perpetrators acquired some € 110 billion a year in criminal assets at the EU level. About 2.2% of these assets were confiscated by law enforcement authorities, while only half of these assets, or only 1.1% of the total, were confiscated, with a nominal value of about € 1.2 billion. (Source: https://www.europol.europa.eu/sites/default/files/documents/criminal_asset_recovery_in_the_eu_web_version.pdf.)

erating crimes, the main goal is to deduct the income necessary for the future criminal activity of groups committing serious and / or organized crime by tracing and recovering the criminal property resulting from its commission (Mihóné, 2013, 87). On the other hand, although restorative in nature, its measured goal is to restore the state before the crime was committed, together with the institution of the civil claim (Kelemen, 2018, 44).

The Council of the European Union has recognized the difficulties of the asset recovery process. Thus, „in order to facilitate this, it adopted a decision on 6 December 2007 obliging Member States to set up or designate their own national asset recovery office by 18 December 2008." (Kindelmann, 2014, 102). The decision (Decision 2007/845 / CEU) states that the objective is to ensure an efficient flow of information between Member States, as this is the only way to achieve an adequate level of asset recovery. Confiscation of property resulting from criminal activity is one of the most effective means of combating crime, therefore, as a member of the European Union, Hungary is also obliged to operate a national property recovery office. The purpose of the Office is to facilitate the tracing and identification of proceeds of crime which may be the subject of a freezing, seizure or confiscation order in criminal or civil proceedings. The main objective of the Member States' obligation is to deduct the proceeds of crime from criminal offenses committed by serious and organized cross-border crime, in particular drug trafficking, trafficking in human beings, illicit arms trafficking and corruption in order to prevent further crime. The European Union is united in its response to serious criminal offenses, which are also priorities of the European Multidisciplinary Platform Against Criminal Threats (EMPACT), such as drug, cybercrime, trafficking and smuggling of human beings and environmental crime. In the investigation of these categories of offenses, the recovery of the criminal property is expected. The deprivation of criminal assets can weaken the financial background of offenders, which hinders the formation and strengthening of criminal organizations.

Among the measures formulated on the basis of international legal obligations and recommendations concerning Hungary, the priority is to increase the efficiency of asset recovery activities and to make stronger use of the opportunities inherent in parallel financial investigations. Each investigating authority shall, in the course of its proceedings, take all necessary measures to detect and secure any thing or property that may be confiscated or is subject to confiscation. Given that the intention of the legislature to recover the criminal property in the ongoing main proceedings, due to all the facts that generated the property, it also provided the investigators with the legal possibilities to do so. The recovery of property was given a more prominent role than before, primarily for the repair of the victim (Be. §§ 818-822).

Forward-looking measures have already been taken in the field of asset exploration and asset recovery. In November 2017, the Criminal Department of the National Police Headquarters (hereinafter: ORFK) issued a methodological guide for the development of an uniform practice of investigations into suspicions of money laundering in which the prosecuting authorities were instructed to carry out essential procedural actions.

The Be. In view of the entry into force of the Act of Accession of 20/2018, all related sources of law had to be reviewed, in the framework of which Decree 20/2018 on the tasks of tracing, identifying and insuring the proceeds of crime and other property related to crime was created. (V.31.) ORFK instruction (hereinafter: Instruction). Pursuant to the Instruction, in the investigation of all property-generating crimes, the possibility of deprivation of property resulting from the commission of a punishable act must be examined.

The 2020 task plan issued to the criminal authorities of the police by the Directorate General of Crime of the National Police Headquarters summarizes the expectations related to ensuring the damage

caused by the crime and recovering the property from the crime in order to operate the field more efficiently and effectively.

ESTABLISHMENT, STRUCTURE AND ACTIVITIES OF THE ASSET RECOVERY OFFICE

The Asset Recovery Office (hereinafter: Office), established on 1 March 2015 within the organizational framework of the National Investigation Bureau of the Standby Police, performs the activities of the National Asset Recovery Office (hereinafter: ARO) and Camden Asset Recovery Inter- Agency Network (hereinafter: CARIN) office functions, which form a complete system of criminal, operational and operational analyst activities. In the course of its activities, the Office continuously shares the good practice acquired in the field not only within the organization, but also provides further training for other investigative bodies, as well as for the prosecutor's office and the court. It supports the implementation of asset recovery and recovery activities within the remit of all investigative authorities, performs international asset search, financial profiling, reporting from international company information systems, analysis of virtual means of payment, and enforcement of property coercive measures.

The Office initially operated with a two-class structure. On 1 April 2017, the current four-class structure was established on the basis of the recommendations of the 2016 report of the Council of Europe Committee of Experts on Money Laundering and Terrorist Financing (hereinafter: Money). The Asset Recovery Office, in its function as the national ARO and CARIN office, fully performs the international exchange of information relating to asset recovery, fulfills the necessary requests for criminal legal assistance, implements property coercive measures necessary in foreign proceedings, for example in European investigations, international Investigation Teams (JITs).

Instead of the initial two exclusive investigative powers, the new criminal procedure standard has given two national jurisdictions in addition to international exclusive jurisdiction (asset recovery proceedings and asset investigations), in addition to which the Office has national jurisdiction over certain ratings of terrorist financing and money laundering.

The Office also conducts property recovery procedures with national jurisdiction (Bezsenyi et al., 2016), which become necessary for the basic proceedings of the Police, the National Tax and Customs Office (hereinafter: NAV) and the prosecutor's office (Bezsenyi et al, 2016).

Since its establishment, the Office has built special operational analysis capacity and special operational operational skills, as well as extended its operational analysis and asset recovery capabilities to cryptocurrencies and seeks to provide these capacities as an independent service to counterparts. As a result, the department is virtually self-sufficient in its own powers and competences. Economic OSINT, economic and investment analysis, and financial profiling capabilities have been developed, and analytical skills and capabilities for financial intelligence and online payment systems are currently being developed. Given that we carry out various procedural acts for all domestic investigative bodies, the working relationship with the prosecuting investigative bodies and the NAV investigative bodies is also excellent, with around 200 ARO and CARIN Member States contact points in the framework of direct international criminal cooperation. Due to the intelligence platform, it also complements the economic sectors involved, as well as the range of penitentiary and domestic secret services.

The field of asset recovery is present in terms of wealth-generating facts, from intelligence to asset search that can be ordered following the failure of enforcement based on a final order. The proportion

of initial requests for property recovery proceedings, mainly from NAV and prosecutorial investigative bodies, in excess of police requests, began to turn from 2018, along the coordination procedures (Vári, 2017). Compared to the year in which the Office was established, in 2019, two more independent criminal proceedings, five times more property recovery proceedings, eight times as many international property searches, and dozens of European Investigation Decisions and letters rogatory were executed. The number of proceedings conducted has increased significantly in all categories, but the use of international criminal co-operation is outstanding. Specific procedures have been developed in this area, which have proved to be extremely effective, and its use has been encouraged by all investigative bodies.

Excluding the Office's activities relating exclusively to asset recovery proceedings, the activities of all prosecuting bodies in the investigation of property-generating offenses are also activities related to damages, activity to secure an asset (Frigyer et al., 2016). Their effectiveness is of paramount importance in terms of the social perception of the Police, compliance with EU directives, effective action against organized crime on the one hand, and the national economy on the other.

NEW DIRECTIONS, TWO-TIER ASSET RECOVERY ACTIVITY

As already mentioned, it is the general task of the investigating authorities, in addition to detecting the basic facts, to detect and recover criminal property during the proceedings in order to detect the criminal property. Each investigating authority shall, in the course of its proceedings, take all necessary measures to detect and secure any thing or property that may be confiscated or is subject to confiscation. In Hungary, 98% of cases are investigated by local level bodies struggling with a constant lack of capacity, as the value of the damage was set at HUF 50 million, above which the regional or central investigating authorities (25/2013 (VI.24.) BM Regulation).

The problem then was that only a central fundraising organization was set up and its responsibilities were not divided (Vári, 2014. 90). As a result, the local police bodies, which otherwise lacked capacity, also besieged the Office with their own requests. In view of the other tasks of the Office and the steady increase in the number of asset recoveries, it has become necessary to review the cases submitted for the recovery procedure in order to decide in which cases the Office's procedure is justified.

In the course of this activity, the principal body may, on the basis of instructions, involve the investigating authority's body responsible for the recovery of assets. The standard setter also opened up the possibility of setting up such a special body for all investigating authorities, while referring to the Office the types of procedures requiring its exclusive competence and special skills, thus facilitating the development of a national asset recovery system and structure with a more active role for local and regional authorities.

In all cases, the Office shall request information on the investigative measures taken by the authority in the main proceedings in order to ensure the enforceability of the confiscation of assets, in particular the ordering of coercive measures and the collection of any secret information. the results of the measures taken and the appropriateness of carrying out the asset recovery procedure.

This created a two-tier asset recovery activity: the first level is the asset recovery activity of the investigating authorities in the main cases, the second level is the special activity of the Office.

RESULTS, PRESENTATION OF GOOD PRACTICE

During the period under review, the following good practices were used by the investigating authorities.

- Act C of 2012 on the Penal Code (Criminal Code) 74 / A. Application of the extended confiscation of property specified in §.

- Act CIV of 2001 on criminal measures applicable to legal persons was overinsured in the framework of the provision of confiscation of property due to the provision of a future fine written in Section 6 of Act no.

- Seizure of virtual currency, primarily bitcoin and bitcoin cash.

- Contribution to the effective execution of an international arrest warrant issued by the principal investigative body.

- Carrying out investigative actions carried out abroad by the main investigating authority abroad on the basis of an international property search.

- Appointing of a trustee to ensure the legal rights of the companies involved in the proceedings.

- Securing the value of the damage caused by the crime by ordering the seizure of a business share.

- Application of monitoring of ownership changes to property ownership to allow the investigating authority to respond quickly and effectively.

In 2019, as a result of the continuation of parallel damages and asset recovery activities, which were identified as a priority in addition to the investigation of the main case, the investigating authorities achieved significant results in several types of cases. In cases of money laundering, fraud, but also other criminal offenses, the effectiveness of recovery was greatly enhanced by the extraordinary action taken after the report was lodged, when the investigating authority tracked the money and immediately took the necessary action to recover the amount of damages. According to the experience of the investigating authorities, the number of crimes aimed at obtaining funds from companies, in which the perpetrators are aimed at diverting bank transfers, is increasing. This phenomenon poses a particular challenge to companies that have business relationships with foreign partners and make larger amounts of cash. Experience has shown that a larger proportion of companies do not have adequate IT capabilities to deal with similar attacks. However, the prompt response of the victim and the investigating authority resulted in full recovery in several cases, thanks to the excellent working relationship between the financial institutions and the prosecuting authorities and the immediate action taken.

In the area of asset recovery, the investigating authorities are achieving better and better results in the investigation of key crime-generating crimes. This is also due to the lessons learned from the cases involving the Office and the use of good practices applied by the unit. The data of the table for monitoring the damage provided by the territorial bodies, requested and maintained by the Office on a monthly basis from 2019, provide a more accurate overview of the performance of an investigative body than the ENyÜBS[3] data. The gained experience is used by the employees involved in the asset recovery procedure during the asset discoveries in individual cases and shared with their colleagues.

It should be mentioned as a good practice that the unit among the territorial bodies in the country was the first to establish an independent property recovery support unit at the Budapest Police Headquar-

3 The Unified Criminal Statistics of the Investigative Authority and the Prosecutor's Office (ENYÜBS) is a follow-up statistical system in which data are recorded after the investigation is closed, i.e. not according to the date when the crime was committed, but the date of prosecution.

ters.[4] In addition to the data analysis and management activities in the field, its task is to carry out activities related to the investigation of the main proceedings at the request of the body conducting the main proceedings, in parallel with the investigation, if the scope, complexity or other reasons so warrant. The unit conducts asset detection not only in cases belonging to the classical field of economic protection, but also in drug-related investigations, human trafficking and other high-profile crimes.

FURTHER DEVELOPMENT OF EDUCATION AND TRAINING

In view of the legitimacy of the field of property recovery, the continuous training of the criminal staff and the development of uniform practice are of paramount importance. Since 2016, the Office funded by a BBA application[5] has trained line holders for the Police, NAV and prosecutors in order to set up and operate an asset recovery network. In addition, in 2019 for all territorial bodies of the Police, the so-called Through training with a hospital system, 4-4 line managers per body were also trained. In practice, the foundations of a larger national asset recovery network, with the participation of the Police, the NAV and the prosecuting investigative bodies, and a smaller national asset recovery network were established with the participation of the Police.

In addition to its core business, the Office regularly provides further training to other investigating authorities, as well as to the prosecution and the judiciary. It also participates in education related to the field in several departments of the Faculty of Law Enforcement of the National Civil Service University.

The topicality of the asset recovery field was presented in the framework of three trainings organized by the ORFK Directorate General for Crime (for heads of economic protection departments, auditors employed in the field of crime, and for corruption line managers). With this, and with the experience gained in the coordination realizations, it became possible to develop a two-stage national asset recovery system, which points in the same direction as the expectations of both Money and the General Prosecutor's Office.

OPTIONS FOR MEASURING EFFICIENCY

The damage caused by the crime, as well as the amount recovered, is currently recorded by the ENYÜBS. The ENYÜBS contains statistical data recorded in proceedings closed in the previous period, which are damages caused by criminal offenses investigated in police proceedings, damages recovered and insured, and the recovery rate (a percentage determined as the ratio of damages caused and recovered and insured).[6]

4 It should be noted that there are several model organizations in the European Union, notably a system with a smaller number of financial intelligence units at regional level, in addition to a central national office specifically for coordination and international relations (ARO), to support asset recovery activities, that the application of this field requires special, specific expertise.

5 The Internal Security Fund (BBA) is a new, complex, comprehensive instrument created in the 2014-2020 budget cycle, covering the management of external borders and, in this context, EU visa policy, crime prevention and the fight against terrorism, and the range of the EU funds to be redistributed on the basis of solidarity.

6 From 1 July 2018, the insured damage category is included in the ENyÜBS. Until the conclusion of the procedure on which the data is provided, the amount of assets and assets (movable, immovable, property claims, property rights, other) specified in HUF cannot be counted as compensation for damage.

However, the ENYÜBS does not always include:

the result of the freezing order applied in the framework of a precautionary measure,

damages recovered on the basis of redemption, settlement, civil law claim (Vári, 2018),

the outcome of the mediation procedure.

The ENYÜBS loss recovery indicator is not affected by the assets discovered and insured in the framework of the investigation of the crimes generating the priority assets. Highlighted as an example, in the case of crimes relating to drugs and human trafficking, no damage has been caused, the value of the acquired property is not included in the ENYÜBS statistics.

Precautionary measures relating to property arising out of, in connection with, or discovered on the basis of extended confiscation resulting from the commission of an offense are currently only recorded manually in order to monitor the extent of property recovery.

In order to keep track of the asset recovery activity, the Office maintains a manual table based on the data provided by the territorial bodies. The data included in the maintained table go beyond the ENyÜBS data and cover the entire asset recovery activity. The ENyÜBS recovery indicator contains the results of the crimes in which the damage occurred. Such classic crimes are theft, fraud, economic crimes, however, the results of money laundering are also included in the statistics.

The importance of the highest possible recovery of the recovery data is that in these cases the injured party who suffered the damage will receive his values or the corresponding higher compensation for the damage.

The requested data includes property taken from criminal circles and persons, which is also defined as an international obligation which would be used to commit new crimes (drug trafficking, human trafficking, etc.).

On the basis of the information provided, the precautionary measures taken by the investigating authorities, the seized, seized value, assets, etc. summarize, on the basis of which all the measures taken by the organizational elements in this field can be continuously monitored, on the basis of which the current activity of the investigative bodies can be measured.

From April 2020, a monthly report on asset recovery activities will be prepared for crimes relating to high-priority drugs and new other psychoactive substances.

SUMMARY

In addition to detecting the perpetrators of criminal offenses, it is the responsibility of local and regional investigating authorities to recover the damage caused by the crime and to take the necessary measures to confiscate the proceeds of crime. In the course of investigations, this activity begins to become part of the routine of investigating authorities. This activity is complemented by the activities carried out by the Office, in particular the conduct of asset recovery proceedings and the international exchange of information. This created a two-tier asset recovery system.

Thus, it can be seen that the recovery of damages and property is not only the task of the Office, but also of each investigating authority in the investigation of each property-generating crime, including the preparatory procedures. Parallel investigations, also for the purpose of property recovery, should

be gradually extended to all property-generating crimes (Government Resolution 1688/2017 (IX. 22.)). In the case of a realistic possibility of recovering the damage and the property, no distinction can be made between the so-called small or large matters. In the case of minor offenses, all necessary and possible measures must be taken in the same way as in cases of high damage. Victim reparation should be given the same emphasis as the prosecution of the perpetrator. This is a key objective, as among other things, citizens judge the work of investigative authorities in the light of these results.

In 2019, in addition to the asset recovery officers appointed by the regional bodies, several employees of several local bodies participated in the hospital hospitality program. As a result, more staff have been trained in each regional body to assist the local investigative authorities. Territorial bodies can turn to the Office for professional guidance, even for professional support in a specific case.

REFERENCES

1. Bezsenyi, Tamás – Frigyer, László – Mátyás, Szabolcs – Nyitrai, Endre (2016): A vagyon-visszaszerzési eljárás és annak szabályozása Magyarországon. (The asset recovery procedure and its regulation in Hungary.) Kritische Zeiten. 2016/3-4., pp. 117-127.
2. Frigyer, László – Mátyás, Szabolcs – Nyitrai, Endre (2016): Asset recovery proceedings and investigation. pp. 1-22 no. 2(14) (elektronikus folyóirat) (Ukrajna) (http://lj.oa.edu.ua/archives/n2-2016, http://lj.oa.edu.ua/articles/2016/n2/16msspai.pdf) Часопис Національного університету „Острозька академія". Серія „Право" Острозька академія». Серія «Право». – 2016. – № 2(14) : [Електронний ресурс]. – Режим доступу : http://lj.oa.edu.ua/articles/2016/n2/16msspai.pdf
3. Kelemen, József (2018): A büntetendő cselekményből származó vagyon elvonásának célja, elmélete és elvei. (Purpose, theory and principles of deprivation of property resulting from a punishable act.) Büntetőjogi szemle. 1. szám. pp. 43-47.
4. Kindelmann, Dóra (2014): Good Afternoon! A vagyon-visszaszerzés egyes kérdései az Egyesült Királyságban, egy csésze tea mellett. (Good afternoon! Some issues of foreclosure in the UK, along with a cup of tea.) A Pázmány Péter Katolikus Egyetem Jog- és Államtudományi Karának könyvei, Jogi tanulmányok tehetségesek tollából, Budapest, 2014. pp. 102-116.
5. Mátyás, Szabolcs (2016): A vagyon-visszaszerzési eljárás a hazai és a közösségi jogrendben. (The property recovery procedure in the domestic and EU Community legal order.) Pécsi Határőr Tudományos Közlemények. Pécs, pp. 219-224
6. Mihóné, Leitner Judit (2013): A bűncselekményből eredő vagyon elvonása – Vagyonelkobzás. (Withdrawal of property resulting from a criminal offense - Confiscation of property.) Magyar Jog, 2013/2. szám. HVG-ORAC Lap- és Könyvkiadó Kft., Budapest.
7. Rendészettudományi Szaklexikon (Law enforcement specialist lexicon) (2019): Editor in chief: Boda József. Dialóg Campus publisher. Budapest
8. Vári, Vince (2014): Hatékony vagy eredményes a bűnüldözés? (Is law enforcement effective or efficient?) Magyar Rendészet, 1. szám. pp. 87–97.
9. Vári, Vince: A nyomozás változó szerepe az új Be.-i törvényben. (The changing role of investigation in the new Be. Act) II. Turizmus és Biztonság Nemzetközi Tudományos Konferencia. Tanulmány Kötet. Pannon Egyetem. Nagykanizsai Kampusz. pp. 2017. 129-140.

10. Vári, Vince: Az elterelés szerepe és az ügyész nyomozó hatóság kapcsolatának formái az új Be.-ben. (The role of diversion and forms of relationship between the prosecutor's investigative authority in the new Be.) III. Turizmus és Biztonság Nemzetközi Tudományos Konferencia. Tanulmány Kötet. Pannon Egyetem. Nagykanizsai Kampusz. 2018. pp. 52-62.

11. https://www.europol.europa.eu/sites/default/files/documents/criminal_asset_recovery_in_the_eu_web_version.pdf.

LEGAL SOURCES

1. Act XC of 2017 on Criminal Procedure (Be.)

2. Act C of 2012 on the Penal Code (Btk.)

3. Act CIV of 2001 on criminal measures applicable to legal persons. law

4. 25/2013. (VI. 24.) BM decree on the powers and competences of the police investigative authorities

5. Decree 20/2018 on the tasks to be performed for the tracing, identification and property insurance of proceeds of crime and other property relating to criminal offenses. (V.31.) ORFK instruction

6. Decision 2007/845 / JHA of the Council of the European Union of 6 December 2007 on cooperation between Asset Recovery Offices of the Member States in tracing and identifying the proceeds of crime and other property relating to crime Framework Decision.

7. Directive 214/42 / EU on the freezing and confiscation of instrumentalities and the proceeds of crime in the European Union

8. 1688/2017. (IX. 22.) on the action plan for the implementation of the anti-money laundering recommendations formulated in the Council of Europe's Moneyval country report for Hungary

INTERNATIONAL POLICE COOPERATION BETWEEN SERBIA AND THE COUNTRIES OF THE REGION IN COMBATING THE MOST SERIOUS EMERGING FORMS OF CRIME[1]*

Željko Nikač, PhD[2]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Božidar Forca[3]
Faculty of Business Studies and Law, Union - Nikola Tesla University, Belgrade, Serbia

Abstract: The paper presents the legal framework and institutional mechanisms of international police cooperation between the Republic of Serbia and the countries of our region, primarily in the suppression of the most serious emerging forms of crime. The legal framework for work and co-operation in the fight against crime consists of important international sources such as conventions, treaties and other acts adopted at the multilateral, regional and bilateral levels. The most important internal sources are the Law on Police and the regulations in the field of criminal legislation: the Law on International Legal Assistance in Criminal Matters, the CPC, the Criminal Code, the Law on Organization and Competences of State Bodies in Combating Organized Crime, Terrorism and Corruption and others. Institutional mechanisms of cooperation include forms of work, institutions, organizations and bodies established at the international level, especially at the regional level. A critical review of the legal and institutional mechanisms of cooperation is aimed at increasing the efficiency of the engaged entities in the suppression of the most serious forms of crime. In the final part, some proposals for improving the legislative framework and criminal-operational practice of the police and other law enforcement agencies are given, especially in the context of Serbia's application for the EU accession.

Keywords: organized crime, legislative framework, institutional mechanisms, international cooperation, Serbia and EU

1 * The paper is the result of the research of the projects "Development of institutional capacities, standards and procedures for the suppression of organized crime and terrorism in the conditions of international integration" No. 179045 and "Innovations of forensic methods and their application" no. 34019, which are supported by the RS Ministry of Education, Science and Development.

2 zeljko.nikac@kpu.edu.rs

3 bozidar.forca@fpsp.edu.rs

INTRODUCTION

At the beginning of the third millennium, in addition to technical and technological progress and the development of human civilization, modern society is burdened by numerous challenges, risks and threats. Among them, crime and its most dangerous forms have a special place because it threatens to destroy the achievements of human society and endanger the future of the modern community. Organized crime, terrorism and other most serious forms of crime have long since acquired a transnational character and in peacetime are the greatest threat to society and the rule of law.

Particularly vulnerable are the countries in transition that have gone through a difficult path in their development, such as the countries of the former socialist bloc and the underdeveloped countries. After the collapse of communism in these countries, the process of social reforms on the political, social and economic level was initiated, which have been largely completed to this day. In an identical way, the wave of changes affected the former common state of Yugoslavia, which went through a difficult period of political and economic instability, war conflicts and finally the disintegration of the federation. The Republic of Serbia has gone through probably the most difficult period in its recent history, marked by civil unrest, a huge number of refugees from the former Yugoslavia, NATO aggression, withdrawal from the territory of Kosovo and Metohija, economic collapse and an enormous increase in crime. After the signed international agreements in Dayton-Paris (1995) and Kumanovo (1999), and the UN Security Council Resolution 1244 (1999), the war conflicts in this area were stopped, but the severe consequences and numerous problems that still burden our community have remained.

Organized crime, terrorism and other most serious forms of crime have seriously threatened to undermine the good initial results in the post-war reconstruction of the community. This was facilitated by fragile democracy, parliamentarism in the initial phase, weakened state institutions, the lack of valid mechanisms for fighting crime and other circumstances. The penetration of organized criminal groups into all pores of society was further affected by the severance of political and other relations between the former Yugoslav republics, today independent states.

The fight against organized crime, terrorism and other most serious forms of crime at the national level implies primarily a multi-agency approach, while at the international level it includes the cooperation between states and international organizations at the bilateral, regional and multilateral level (Nikac, 2015: 79-87). After social changes and return to the Interpol, our country has established criminal-law and police cooperation with numerous countries and international organizations, then the EU (Europol and other law enforcement agencies), the countries of the Balkan region and especially the former Yugoslav republics. In that sense, (Forca, Nikač, 2020: 148-183), for now in the projected indications, is a special focus of police cooperation of the Western Balkan countries within the EU Strategy for the Western Balkans (2018) and its continuation – the New EU model for the Western Balkans (2020).

A LEGISLATIVE FRAMEWORK OF INTERNATIONAL POLICE COOPERATION

The normative-legal framework of international police cooperation consists of more significant provisions of international and domestic law.

International legal sources are primarily the norms of general international public law and specific individual sources: resolutions, declarations, conventions, memoranda, treaties and binding legal acts

such as the Statute of the International Court of Justice - Article 38 (Kreća, 2016). In the field of international criminal and police cooperation par excellence, the legal sources at the multilateral level are the UN Convention against Transnational Organized Crime, better known as the Palermo Convention (UNCATOC, UN, Treaty Series, vol. 2225) and the Additional Protocols I-III to the Convention: the Protocol for Prevention, Suppression and Punishment of Trafficking in Human Beings, Especially Women and Children, and the Protocol against Smuggling of Migrants by Land, Sea and Air (Law on Ratification of the UN Convention against Transnational Organized Crime and Additional Protocols, Official Gazette RS, 06/01), and the Protocol against Illegal Production and Trade in Firearms, Their Parts, Assemblies and Ammunition (Official Gazzete SCG, International Agrement, 11/2005). Earlier a set of important international conventions for the suppression of terrorism in air traffic was adopted: Tokyo 1963 (crimes in aircraft, hostage-taking), The Hague 1970 (hijacking) and Montreal 1971 (illegal violation of civil aviation security), ratified by the former SFRY (Laws on the ratification of international conventions, OG SFRY, 03/54, 47/70, 33/72) and which were important for the development of international criminal law and police cooperation. A particularly important source at the global level is the Statute of Interpol (The Constitution) (https://www.interpol.int/Who-we-are/Legal-framework/Legal-documents) which is in the rank of the highest law for the constitution, organization and operation of these specialized international organizations for the fight against crime.

At the regional level, the most important international sources are the Convention on International Police Cooperation in SEE (Law on Ratification of the Convention on Police Cooperation in SEE, OG RS-IA, 70/07) and the SELEC Convention (Law on Ratification of the SELEC Convention, OG-IA, 08/11). Some regional initiatives and mechanisms such as the SEE Cooperation Average (CPSEE), the SEE Stability Pact (SPSEE) and the Regional Cooperation Council (RCC) are also significant sources (Nikač, Juras, 2015: 283-302).

At the bilateral level, the most important source of international police cooperation are numerous agreements, treaties and other international documents signed by the Republic of Serbia (Ministry of Interior of the RS) with other countries and organizations. Bilateral agreements with the neighboring countries, the countries in the Balkan region and the most important leading countries in the world, such as the United States, Russia and Israel, are especially important (Nikač, 2015: 86-87). Of particular importance are the agreements signed by Serbia with the former Yugoslav republics, because most criminals seek refuge in the area because of language, culture, mentality and other related elements.

National legal sources include the norms of domestic legislation, primarily criminal law, which regulate international criminal law and police cooperation. According to the hierarchy of norms, the most important general source is the Constitution of the RS (OG, 98/06), then the Law on Foreign Affairs (OG, 116/07, 126/07, 41/09) and others. Within the criminal legislation, the Code of Criminal Procedure (CPC, OG, 72 /11, 101/11, 121/12, 32/13, 45/13, 55/14, 35/19), the Criminal Code (CC, OG,85/05, 88/05, 107/05, 72/09, 111/09, 121/12, 104/13, 108/14, 94/16, 35/19), Law on International Legal Assistance in Criminal Matters (OG, 20/09), Law on Organization and Competences of State Bodies in the Suppression of Organized Crime, Terrorism and Corruption (OG, 94/16, 87/18-state laws) stand out.

The Law on Police (OG, 06/16, 24/18, 87/18) is the most important internal legal source for the issues of international police cooperation, engagement and participation of the MOI forces in multinational operations abroad (Articles 19-21). The Ministry of Interior cooperates at the level of ministers and representatives of the ministry with the competent foreign bodies, international and other organizations.

SUBJECTS, FORMS AND TYPES OF INTERNATIONAL POLICE COOPERATION

At the operational level, the police cooperate with foreign police (security) services and other law enforcement agencies on the basis of valid international agreements and special international agreements concluded on police cooperation, respecting the principle of reciprocity and on the basis of the membership in international police organizations (Law on Police).

The most important subjects of international police cooperation within the Ministry of Interior of the are the Minister (Cabinet of the Minister), the Sector for International Cooperation, European Affairs and Planning, the Police Directorate and within it the Directorate for International Operational Police Cooperation (Serb. UMOPS) and other lines of work within the MoI.

The Minister of the Interior and the Cabinet of Ministers are in charge of, conditionally speaking, political cooperation and relations, protocol and normative-legal affairs in the part of cooperation with other subjects of international (police) relations - foreign states (police services and agencies) and international (specialized) organizations. The position of the Minister and the Ministry of Interior derive not only from the provisions of the Law on Police, but also from the context of the Law on Ministries which specifies the Ministry of Interior and its competencies as part of the RS Government (Art.11, Law on Ministries 44/14, 14/15, 54/15, 96/15-state laws, 62/17).

The Sector for International Cooperation, European Affairs and Planning is the legal successor of the Bureau for International Cooperation and European Integration within the Cabinet of Ministers, responsible for planning and organizing the European integration process, planning and managing projects financed from the EU funds and other international sources. In this context, the Sector plans and organizes: a) bilateral and multilateral international cooperation, b) participation of MoI members in regional initiatives and peace operations of the EU, UN and other organizations, c) the development of strategies, action plans and other documents, monitoring and evaluation of their implementation, d) expert advice and coordination in the implementation of plans (strategic, medium-term and operational), e) strategic analysis within the scope of work. Organizationally, the Sector consists of several departments: for European affairs, international cooperation, strategic management and development and project management (http://www.mup.gov.rs/ Sectors).

The Police Directorate is the most important part of the MoI of the RS, the bearer of classic police jobs and tasks in the community. The Directorate is the legal successor of the former Department of Public Security and is organized according to the linear and territorial principle, according to the principles of hierarchy and subordination (Nikač, 2019: 36-39). In terms of international police cooperation, the most important place is occupied by the Directorate for International Police Cooperation (UMOPS), as the holder and coordinator of police cooperation with foreign partners. The Directorate was established as a joint body for the implementation and improvement of international operational police cooperation in connection with the fight against crime. It includes the departments for Interpol affairs, Europol affairs, information management and coordination of other forms of international cooperation (Nikač, Simić, 2012: 360-368). The Criminal Police Directorate (UKP) is indisputably the most important line of work of the RS Ministry of Interior, whose inherent competence is the fight against crime and especially the most serious forms - organized crime (SBPOK), terrorism, etc. An important role in international police cooperation is also played by the Border Police Administration (UGP), which is engaged in the suppression of cross-border crime, as well as other lines of work within the MoI of the RS (Decree on the principles for internal organization of the Ministry of Interior, OG RS, 60/2017).

In the doctrine and practice of international (police) relations, there are different forms and types of international (police) cooperation that differ according to the subjects, character, content and other criteria. According to the number of subjects, bilateral, regional and global (multilateral) forms and types of cooperation are listed (Đorđević, 2010: 214-230). Bilateral cooperation includes cooperation between different countries and their bodies, and in our case the cooperation primarily with the RS Ministry of Interior state in this area. As stated, the Ministry of Interior of Serbia has concluded bilateral agreements on police cooperation with a large number of foreign police services in the surrounding countries and other countries (http://www.mup.gov.rs). Regional cooperation includes the Balkan countries and especially the member states of the former Yugoslavia, which today have significantly better police and other expert relations than political relations. The legal basis for regional cooperation are the mentioned conventions from Vienna and Bucharest, which were accepted by the countries of the region. As an example of the strongest regional cooperation on our continent, we cite the the EU under whose auspices the Europol and the Schengen Agreement were developed (Lopandić, Janjević, 1996). The global type of cooperation takes place at the broadest level on the basis of the signed multilateral agreements, conventions and important resolutions under the auspices of the UN, OSCE, Interpol and others.

In terms of content, international police cooperation includes the connections of our and foreign partners within the tasks in general and the tasks performed by specific lines of work. The exchange of information is the most important type of international police cooperation related to the activities of criminal groups and individuals, especially organized crime and terrorism. Today, the Joint Investigation Teams (JITs) are very relevant as joint investigative bodies of the signatory states (Nikač, Božić, 2017: 269-284), as well as the measures and actions taken at the request of a foreign state such as arrest warrants, arrest, interrogation, detention, extradition of persons (Nikač, Božić, 2016: 431-443). We further list joint police actions, mixed (joint) working bodies, training and education of members of the police of domestic and foreign services. The members of the RS MoI police are engaged outside the territory of Serbia within diplomatic and consular missions (liaison officers, police attachés) and in missions in multinational operations around the world (Articles 20-21 of the Law on Police).

MECHANISMS OF REGIONAL POLICE COOPERATION

The PCE SEE (Police Cooperation Convention for SEE, 2006) provides for several important forms and types of cooperation such as: exchange of information, standardization of equipment and communications, joint police actions, protection against "information leakage", and the measures to prevent interference with investigations. Particularly important tools for proving criminal offenses and determining criminal responsibility are special investigative techniques (SIT) and methods (SIM): witness protection, cooperating witness, controlled deliveries, exchange of DNA profiles and identification materials, staff training, reception and sending of liaison officers (Lopandić, Kronja, 2010: 195-212). Based on the Convention, the signatory states concluded bilateral agreements on mutual cooperation and accepted the obligation to harmonize national legislation, protect personal data and standardize communication systems (Nikač, Simić, 2012).

The Convention on SELEC provides for the establishment of a Center for the Enforcement of Rights in SEE, as the legal successor to the former SECI (Southeast Cooperation Initiative) Regional Center for Combating Transborder Crime (1999). The reorganization has contributed to greater engagement and cooperation of states in the fight against organized crime, terrorism, smuggling of people and goods (http://www.secicenter.org/m106/About+SELEC). In addition to the national contact points, the sig-

natory states of the Convention are represented at the SELEC headquarters with the representatives of the police and customs. The Centre's activities are aimed at efficient exchange of information, coordinated action of national police forces and law enforcement agencies, joint regional operations and investigations, organization of multilateral operations and coordination of investigative procedures in the Member States (Article 3, Law on Ratification of the SELEC Convention, OG - IA, 08/11). The Center carries out a significant scope of activities through specialized working groups for: narcotics and human trafficking, stolen vehicles, smuggling and customs fraud, financial and computer crime, terrorism, environmental protection and safety of transport of dangerous goods (http://www.secicenter.org/m115/Operational_Activities).

SELEC has achieved good results in several areas: smuggling of migrants (Operation "Hit" with the participants of RS and SRM), drug trafficking "Walker" - BiH, Croatia, Montenegro, RS; "Kranj" - RS, BiH, SLO, Austria, The Netherlands; "Vlasina" - Bulgaria, RS), terrorism ("Epopee" - Bulgaria, RS) (http://www.secicenter.org/cautare.php?q=serbia&cauta=Search).

The Regional Initiative for Migration, Asylum and Refugees (MARRI - Migration, Asylum, Refugees, Regional Initiative, 2003) was formed with the aim of preparing assistance programs for migrants, asylum seekers and displaced persons. The initiative is a form of coordination of signatory states within the integrated management of borders and processes of migration, asylum and visa regime. Within the Initiative, several significant projects have been implemented related to a single database for combating trafficking in human beings and supporting victims, combating illegal migration and increasing the security of documents (Lopandić, Kronja,2010: 205-207). The initiative relies on good practice from the developed countries, universal standards and international law.

The Regional Anti-Corruption Initiative (RAI) is a mechanism for cooperation in the field of anti-corruption in the countries in the region that are particularly vulnerable during the transition process and due to underdeveloped institutions. Under the auspices of the RAI, independently and in cooperation with the UN, several significant projects and research on the independence of the judiciary, the development of mechanisms for the supervision of judicial bodies and law enforcement agencies have been implemented. Also, RAI is conceived as a regional forum for cooperation between the government and civil sector in each of the communities (Nikač, Božić, 2016: 431-443).

In addition to the government initiatives, we mention the significant non-governmental (civic) organizations, forms and mechanisms of cooperation such as the Association of Police Chiefs - SEPCA (Southeast Europe Police Chiefs Association), Women Police Officer Network - WPON (Women Police Officer Network), Police Forum – (PF Police Forum) (Nikač, 2015: 199-209), who have contributed to the development of international police cooperation within their missions.

International police cooperation between the RS Ministry of Interior and Europol is significantly expected as part of the activities on the implementation of the EU Strategy for the Western Balkans (2018) and the New Model published by the European Commission in February 2020 (Forca et al., 2019: 279-294) .

CONCLUSION

In peacetime, crime is undoubtedly one of the biggest problems of modern society and the international community as a whole. The consequences of crime are devastating, especially its most severe forms, such as organized crime and terrorism. The problem is even more complex in the societies that

are in the process of economic transition, political and social change, as is the case with ex-socialist countries and the states of the former SFRY. On the other hand, organized criminal groups know no borders and have established criminal cooperation in the function of making extra profit, to the detriment of the community and its members. All this has contributed to the enormous growth of the crime rate and its most severe forms in the developed, underdeveloped and transition countries.

The social response to galloping crime starts from the measures that countries take at the national level and with a multi-agency approach. The effective fight against crime, especially organized terrorism, has conditioned international criminal law and police cooperation between states and specialized international organizations. Regardless of political and other differences, international cooperation is an imperative for the survival of modern society and the international community. International (police) cooperation in the fight against crime takes place on a global (multilateral), regional and bilateral level and starts primarily from the principles of anti-criminal solidarity, apoliticalism and other principles and standards.

Regional international police cooperation of the Balkan states, especially the countries of the former SFRY, is today significantly above political cooperation and is based on the common interest in the fight against crime. The signing of the Convention on International Police Cooperation in SEE and the SELEC Convention, which have established the known mechanisms and have given good results, are of the greatest importance in that cooperation. The conventions were further implemented in the national legislation of the states and initiated the signing of bilateral agreements on cooperation between Serbia (MoI RS) and the states of the region.

In the context of the current migrant crisis and other challenges, risks and threats to national and international security, the implementation of the signed documents should be monitored in the coming period and international cooperation should be improved, especially with regard to human trafficking, cybercrime and new forms of crime. The idea of the possible adoption of a national strategy on international police cooperation in accordance with the existing strategic documents in the field of defense and security should also be considered.

REFERENCES

1. Constitution of the RS, Official Gazzete RS, 98/06
2. Code of Criminal Procedure (CPC, OG, 72/11, 101/11, 121/12, 32/13, 45/13, 55/14, 3/19)
3. Criminal Code (CC, OG, 85/05, 88/05, 107/05, 72/09, 111/09, 121/12, 104/13, 108/14, 94/16, 35/19)
4. Forca, B., Nikač, Z. (2020). A Sublimated Aspect of the European Union's Strategy for the Western Balkans, International Monograph "The Scope of the Strategy of the European Union for the Western Balkans", Faculty of Business and Law, Belgrade, p. 148-183.
5. Forca, B., Novković, D., Damjanović, B. (2019). Pretpostavke implementacije strategije EU za Zapadni Balkan, Savremeni problem i moguća rešenja strategije i strategijskog menadzmenta-Monografija, Fakultet za poslovne studije i pravo Univerziteta "UNION-Nikola Tesla", Beograd, str. 279-294.
6. Interpol, The Constitution, Legal documents, https://www.interpol.int/Who-we-are/Legal-framework/Legal-documents (28. 07. 2020)
7. Kreća, M.(2016). Međunarodno javno pravo, Pravni fakultet, Beograd, 2016.

8. Laws on the ratification of International Conventions, OG SFRY, 03/54, 47/70, 33/72
9. Law on Ratification of the Convention on Police Cooperation in SEE, OG RS-IA, 70/07
10. Law on Ratification of the SELEC Convention, OG-IA, 08/11
11. Law on Foreign Affairs, OG, 116/07, 126/07, 41/09
12. Law on International Legal Assistance in Criminal Matters, OG, 20/09
13. Law on Organization and Competences of State Bodies in the Suppression of Organized Crime, Terrorism and Corruption, OG, 94/16, 87/18-state laws
14. The Law on Police, OG, 06/16, 24/18, 87/18
15. Law on Ministries, OG, 44/14, 14/15, 54/15, 96/15-state laws, 62/17
16. Law on Ratification of the UNCATOC, OG-IA, 06/01
17. Lopandić, D., Kronja, J. (2010). Regionalne inicijative i multilateralna saradnja na Balkanu, Beograd, str.195-212
18. Nikač, Ž. (2015). Međunarodna policijska saradnja. Beograd. Kriminalističko policijska akademija
19. Nikač, Ž., Juras, D. (2015). Međunarodna policijska saradnja u JIE u funkciji bezbednosti, Institut za uporedno pravo, Strani pravni život 03/15, Beograd, p.283-302
20. Nikač, Ž. (2019). Policija u zajednici. Beograd. KPU
21. Nikač, Ž., Simić, B. (2012). Uloga i zadaci MUP RS u međunarodnoj policijskoj saradnji, sa osvrtom na formiranje nove jedinice za operativnu saradnju. XI tematski međunarodni naučni skup „Relevantna pitanja primene međunarodnog krivičnog prava u nacionalnom pravu, Udruženje za međunarodno krivično pravo, Zbornik radova, Tara, str.360-368
22. Nikač, Ž., Božić, V. (2016). International Cooperation of Southeast Europe in the fight against crime, Lavovski državni univerzitet unutrašnjih poslova, Međunarodna naučno-stručna konferencija Theory and Practice of Law Enforcement Activities, Zbornik radova, Lviv, str.431-443
23. Protocol for Prevention, Suppression and Punishment of Trafficking in Human Beings, Especially Women and Children, and the Protocol against Smuggling of Migrants by Land, Sea and Air, Law on Ratification of the UN Convention against Transnational Organized Crime and Additional Protocols, Official Gazette RS, 06/01
24. Protocol against Illegal production and Trade in Firearms, Their Parts, Assemblies and Ammunition, OG SCG- IA, 11/05.
25. UN Convention against Transnational Organized Crime, UNCATOC, UN, Treaty Series, vol. 2225
26. http://www.secicenter.org/m106/About+SELEC) (02. 08. 2020)
27. http://www.secicenter.org/m115/Operational_Activities (02. 08. 2020)
28. http://www.secicenter.org/cautare.php?q=serbia&cauta=Search (02. 08. 2020)

NEUTRALIZATION TECHNIQUES AS A FORM OF RATIONALIZATION OF DEVIANCE IN THE WORK OF THE POLICE[1]

Zoran Kesić, PhD
Radomir Zekavica, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: The paper discusses various techniques that police officers, as individuals, use to neutralize all the negative effects of their deviant behaviour. These techniques are not unique only to the police, but to every individual who, for various reasons, needs to reduce the negative effects of his deviant behaviour. These effects are not related only to possible social condemnation, but are often of an internal nature, in the form of conscience and self-condemnation. This phenomenon is problem especially in the work of the police.

Keywords: police, neutralization techniques, deviance, rationalization

INTRODUCTION

People tend to use different methods of justifying their behaviour that is not in accordance with the rules of a valid normative system (law, morals, religious norms, etc.). One of the ways to do that is to use the so-called neutralization technique. These techniques mentally prepare an individual for a deviant act by enabling him to justify such an act by rationalizing his illegal actions. In this way, they provide themselves with the necessary cognitive basis for violating current norms as well as a partial justification for subsequent deviant activities (Kappeler, Sluder, & Alpert, 1998: 114).

Although this is common to all people, the implementation of these techniques by of the police is of particular concern. Namely, the police are the state authority in charge of controlling the implementation of the law. But, by their illegal actions the police increase the general scope of illegalities in a society. Thus, all the phenomena that can encourage the practice of illegal work of the police are unacceptable. One of such phenomena is the process of rationalization of deviance through the implementation of neutralization techniques. In the text that follows, we will try to point out all the specifics of the implementation of these techniques, their characteristics and manifestations, but also the consequences that their implementation can lead to in the work of the police.

RATIONALIZATION OF POLICE DEVIANCE THROUGH THE APPLICATION OF NEUTRALIZATION TECHNIQUES

When considering the process of rationalization of deviance, it is important to keep in mind the fact that deviant persons do not resort to justifications of their behaviour only so that they can personally morally distance themselves from a specific act, but also to make it easier for the public to accept their behaviour. In other words, by justifying deviant behaviour, the perpetrator seeks to avoid characterizing his act as deviant, and thus to avoid negative reactions and legal consequences due to such behaviour. However, in order to achieve this, a concrete justification must be placed in a context that is understandable and acceptable to the public. The literature mentions how members of the police "construct" their excuses in order to adapt them to the public, especially those outside police circles. In this regard, the following explanation is significant: "Neutralization techniques are not limited to obviously deviant actions, but serve to neutralize the 'stain' that would otherwise accompany the implementation of coercive authority over fellow citizens. The police officers convince themselves and others that those over whom coercive authority is applied are despised by the general population and that they deserve such treatment, which is why no moral dilemma accompanies their action." (Waddington, 1999: 301).

One of the most commonly used neutralization techniques is the use of euphemistic rhetoric. For example, material rewards from corruption can be justified by police officers as "compensation for the underestimated work they do" (denial of injuries), while the victims of harassment are often characterized as "social scum that deserves it" (denial of the victim's existence), etc. With euphemisms, criminals try to present their deviant actions in a completely different light, trying to distance themselves from them. They also provide them with important moral justification, but at the same time help them maintain the self-perception of responsible police officers.

In order to obtain acceptance, it is usually sufficient for a police officer to use language that characterizes the unworthy nature of the victim (e.g. "scum", "crime"). However, in order to "convince" the general public, police officers must use stronger arguments. In that sense, the victim of police action (e.g. police violence) is most often given the attribute of danger and danger to the citizens themselves, in order to elicit enough compassion for their actions by ordinary citizens. Also, as Kappeler, Sluder and Alpert point out, the characterization of victimized citizens as "drug addicts", "deviant persons", and "criminals" serves that function. As these authors explain: "Because the public has learned that drug use is dangerous, that drug dealers are well organized and heavily armed, that certain deviant segments of society deserve less full protection of the law and that criminals pose a threat to social and moral order, concrete actions of the police, even deviant ones, are considered more acceptable by the public. In this way, police officers play the victims of their actions in the light of the existing social feelings." (Kappeler, Sluder and Alpert, 1998: 125).

This is exactly the reasoning that Jerome Skolnick noticed during the research in the Eastville Police Department. Instead of characterizing their personal immorality as bad behaviour, the police officers in this department are graded a label of immorality among the crimes. Thus, those who accept bribes and gifts from gamblers are not characterized as "dishonest" but as "real", since gamblers and bookmakers are actually considered as "business" and not as "immoral" people. On the other hand, in the area of drug abuse, the concept of morality was completely different. All interviewed police officers believed that drug abuse posed a serious danger to the community and that, therefore, accepting "dirty" money from drug dealers had no justification (Skolnick, 2011: 186).

In the analysis of the use of euphemisms, the example of the Argentine junta seems especially interesting to us. In his study *The State of Denial - Knowing about Crimes and Suffering*, Stanley Cohen notes how the use of torture led to a changed meaning of the word, while neutral words received a new interpretation. Thus, for example, the word assado (barbecue) has become a bonfire on which corpses are burned; la parilla (a plate for frying meat), became a metal table on which victims were laid to be tortured; submarino did not mean a submarine, but the continuous immersion of the head in dirty water (often mixed with urine and faeces) and its extraction just before the prisoner drowned (Cohen, 2003: 104).

Rationalization of deviant behaviour through the application of neutralization techniques is obviously common to the police. There is, however, a fear that this tendency will take root within the police subculture, as many of its members consider them to be fundamental and valid standards and opinions. In fact, if more than a few officers in an organization internalize these techniques, it is certain that a collegial justification for deviant behaviour will be established. The degree of acceptability of a specific justification is also important for the general public, because if it rejects the justification offered by a deviant person, then it no longer serves the purpose of removing the label of deviant behaviour and then either the justification or the behaviour itself must be changed. If the public accepts this justification, then it will continue to be used as a technique to protect the actor, and specific behaviour can continue, or as Kappeler, Sluder, and Alpert explain: "When a justification is accepted by the public, the next behaviour becomes easier to an actor who now has confidence that either the particular act was justified or that the justification was appropriate to remove the label of deviance. In both cases, the actor is free to continue the course of action until the public responds differently." (Ibid: 127).

In order to understand the criminal actions of certain people, it is sometimes not necessary to look for the conditions under which their usual moral inhibitions weaken. Lars Svendsen points out five elements that lead people to agree with something that is evil, although they themselves cannot be characterized as evil: 1) *representation* - it is crucial how the actors are presented with something (there is a big difference between participating in a massacre of innocent people and self-defence from a powerful group that threatens to destroy us); 2) *distancing* - creating the greatest possible distance between one's own actions and the people who represent the object of those actions (the decision is made in an office, and the consequences are manifested in a completely different place, which one probably never sees), 3*) task division* - each actor performs only a fraction of the task and therefore feels little responsibility for the overall result; 4*) escalation* - a person does not make any radical changes in his choice of values, but changes them little by little, as he encounters various problems he wants to solve; 5) *socialization* - a person is introduced into a culture in which certain actions, which would otherwise be unacceptable, suddenly become the norm (since all actors in that culture accept the norms, one loses different ideas) (Svendsen, 2006: 177).

Herbert Kelman points out three processes that, according to him, contribute to the weakening of moral restraint versus participation in torture • *approval* - frees individuals from the responsibility to make personal moral choices based on standard moral principles; • *routine* - allows torturers to ignore the global meanings of the tasks they perform and eliminates the possibility of moral issues; • *dehumanization* - excludes victims from the moral community of perpetrators, making it unnecessary to bring them into contact with them in a moral sense (Kelman, 2005: 131).

In a study symbolically titled *The Lucifer Effect: How Good People Become Evil*, Phillip Zimbardo points out how each of us can morally distance ourselves from any kind of destructive or evil behaviour when it activates one of the four cognitive mechanisms. First, we can redefine our harmful behaviour by declaring it honourable. We achieve this by creating a moral justification for a particular action, by

accepting moral imperatives that justify violence. Second, the denial of personal responsibility minimizes our sense of direct connection with our actions and their disastrous results, thus protecting ourselves from self-condemnation. Third, we can change the way we think about the actual damage our actions have produced. We can ignore, distort, diminish or disbelieve in any negative consequences of our rule. Finally, we can reconstruct our perception of victims by seeing them as deserving of punishment, blaming them for the consequences, or dehumanizing them (Zimbardo, 2009: 277).

Denying personal responsibility for one's actions is also one way of neutralizing deviant behaviour. Such denial is a powerful means of justifying cases of abuse and misuse of police powers. Maurice Punch believes that the excuses of police officers are usually focused on official needs and organizational pressures, and the most common denials of personal responsibility are the following: "You had to accept it if you wanted to fit in", "Boss wanted the results", "I undertook what was expected of me" (Punch, 2009: 180). By using such justifications, the members of the police want to emphasize that their decisions are the result of the influence of other people and a consequence of consistent respect for the demands of their authorities.

Kelman and Hamilton give a significant explanation in this regard in their book *Crimes of Obedience*: "An important consequence is that participants often do not consider themselves personally responsible for the consequences of their actions. It is true that there are individual differences that depend on the ability and willingness of participants to assess the legitimacy of the orders received. However, since they feel they have no choice in what they do, they do not feel personal responsibility. As perpetrators, they are not personalities, but only an extended hand of power. Therefore, when their actions cause great harm to others, they may feel relatively free from guilt" (Kelman and Hamilton, 1989: 16). This statement can be related to the observation made by Stanley Cohen, who claims that ideologically the repertoire of denial of responsibility is the richest, stating that the most common segment of this repertoire is obedience to authority (Cohen, 2003: 142).

With this in mind, we consider it quite justified to draw attention to obedience to authority and the issue of responsibility for crimes out of obedience to authority, as part of the explanation of the mechanism of denial of responsibility. Here it is important to recall the so-called "Nuremberg Principle", adopted after the Second World War, which emphasizes that the orders of the superiors cannot be used as an absolute defence for criminal actions committed by the subordinates. The UN Convention against Torture applies this principle to torturers in the sense that an order from a senior official or public authority cannot be taken as a justification for torture. Faced with such a temptation, individuals have an obligation to assess the legality of orders and to disobey those orders that they know or should know are illegal. Supervisors, on the other hand, have an obligation to consider the implications of the policies they pursue and to monitor the ways in which those policies are translated into specific orders and actions as they move down the ladder. In this sense, the responsibility of the superiors arises from omissions and shortcomings in their control, which may, directly or indirectly, encourage the use of torture by the subordinates.

The fact is that many police tasks are extremely complex, which is why their execution requires the engagement of several participants and the distribution of competencies among them. One of the logical consequences that arise from such situations is the waste of responsibility. This process helps each participant to deny personal responsibility, that is, to shift the blame for possible omissions to another. In the literature, the waste of responsibility is often associated with a phenomenon that social psychologists call "deindividuation" - a psychological state in which people reduce their sense of personal identity and responsibility. Zimbardo specifically points out that various factors contribute to that, and above all the anonymity and diffusion of responsibilities. These factors act especially in

the group, because by membership in it, individuals feel more anonymous or do not feel responsible, since they behave in accordance with the roles assigned to them, and not in accordance with personal values (Zimbardo, 2009: 370).

In the already mentioned book, Philip Zimbardo explains how any situation that makes people anonymous reduces the sense of personal responsibility. As this author points out: "When people feel anonymous in a situation, they can be more easily induced to antisocial behaviour, because in such a state people are no longer guided by the usual cognitive and motivational processes that control their behaviour in a socially desirable direction, reason, and behaviour over thinking about it" (Ibid: 277). This outcome is even more likely in a situation where it is permissible to act impulsively, especially if a particular policy allows for involvement in anti-social or violent action against others, as was the case in Brazil during the rule of the military junta.

To illustrate, a Brazilian police officer and interlocutor in one interrogation, who was transferred from a torture unit to an execution unit, pointed out during an interview the importance of anonymity in the use of violence, comparing his experience in both units: "While I was in the unit for execution, I could only put a hood over my head or over the victim's head and eliminate my enemy as a normal part of the job, unlike the experience in the torture unit where I had to somehow personally get involved with the victim" (Huggins, Haritos-Fatouros and Zimbardo, 2002: 259).

However, even if we exclude such extreme situations and experiences that are mostly related to totalitarian regimes, the fact remains that police officers in most democracies often act in groups, in the dark, with masks over their faces (which is especially evident when arresting dangerous criminals). It is certain that these props help police officers to create deindividual anonymity, which makes it easier for them to commit violence or some other illegal procedure. Related to this is Hodgson's interesting view that in addition to weakening the personal stamp in behaviour, deindividuation can result in a decrease in interest in normative standards in the sense that individuals easily overlook common rules and prohibitions, while impulsive behaviour becomes very possible (2001: 526).

Many studies show the extent to which deindividuation facilitates violence in both adults and children, especially when the situation supports such antisocial practices. The hypothesis that anonymity may encourage modification of internal constraints and release from learned controls and the obligation to take responsibility for a violent act was scientifically confirmed in an experiment conducted by Phillip Zimbardo at a college in the United States, in which he gave students the task of releasing "electric shocks" to other women. The participants who acted under a sense of anonymity were twice as aggressive in their behaviour as those who could be identified. The results of the experiment were clear – the women in conditions of deindividuation gave their victims twice as long shocks as the women in the control group. Moreover, the anonymous women gave equal shocks to a woman who was judged to be pleasant and to a woman who was judged to be unpleasant. On the contrary, the women who acted in conditions of individuation distinguished between a pleasant and an unpleasant goal, so they gave a pleasant woman shorter shocks than to an unpleasant one.

The connection between anonymity and the ability to participate in acts of violence is especially confirmed in wartime conditions. The presented data suggest the conclusion that it is easier to make a person hurt and kill other people when he disguises himself and steps out of his ordinary personality. The anonymity experienced by these warriors obviously had the effect of easing the extreme atrocities they committed.

Just as the connection between an individual and his act can be neutralized by a denial of responsibility, so the connection between an act and consequences can be neutralized by a denial of injury. Con-

sidering it as a form of "act adjustment" or redesign (as opposed to "perpetrator adjustment"), Stanley Cohen believes that denying injuries aims to neutralize crime by minimizing the resulting pain or injury. For example, vandalism is just "mischief"; car theft is "borrowing"; a gang fight is a "private quarrel", etc. (Cohen, 2003: 103). Unethical and illegal conduct by members of the police is also often accompanied by the justification that the specific conduct did not cause significant harm despite the fact that it is contrary to professional ethics or service rules.

This reasoning is especially present when police officers try to justify their actions by carrying out legitimate police objectives (e.g. false testimony is only a "beautification" of the facts). Kappeler, Sluder, and Alpert point out that among the large number of police officers of all ranks, there is a deep-rooted view that there is nothing wrong with falsifying facts to fight real-world crime. For most of them, it is necessary and justified. This belief is especially present among police officers working in areas with a high crime rate. This is evidenced by the statement of a member of the NYPD accused of perjury, who addresses the members of the Mollen Commission (1994) with disbelief in the following words: "What did I do wrong? I just wanted to get the criminal off the streets?" (Kappeler, Sluder and Alpert, 1998: 117). On the other hand, criminal behaviours that cause extreme consequences do not allow such an easy denial of the injury. For example, the perpetrators of a brutal act can hardly claim that their victims were not actually injured. However, although the ability to deny injuries is limited, denial can still occur. Stanley Cohen argues that giving a different framework to a bad act (especially one committed for ideological motives) is more common in official discourse than in the vocabulary of individual perpetrators, especially when victims belong to a devalued ethnic group. As this author explains, it is usually claimed that victims do not feel pain like other people, and the most common argument is that violence is not only foreign to their culture, but it is the only language they understand"(Cohen, 2003: 151).

Even when they admit some responsibility and damage, offenders can still claim that it was not wrong to inflict injury in the given circumstances. More precisely, other targets or circumstances would not be appropriate, but the given "victim" got what she asked for (Ibid: 103). A typical example of denying the existence of a victim is the perpetrator's argument that the victim was in fact the first to do the wrong thing ("The first one to hit me"), while he only reacted to that attack in order to self-defend. Unlike this, not so suspicious a case, in reality there are much more delicate situations of denying the existence of the victim. For example, when it comes to political atrocities, Stanley Cohen believes that denying the existence of a victim is more ideologically rooted in the narrative of blaming another. All recent perpetrators of political violence repeat the refrain: "Look what they have done to us" (Ibid: 152). There is also a noticeable tendency among police officers to rationalize illegal behaviour by denying the existence of a victim, which is especially pronounced in the case of the use of excessive force.

The police rhetoric of rationalizing deviant behaviour is significantly adapted to the type of crime, which is especially evident in the case of denying the victim. Thus, for example, completely different arguments are used for corrupt behaviour than for excessive force, and as particularly indicative, the following stand out: "Money taken is 'compensation' for the risk taken in performing dangerous work", "Theft from drug dealers is justified because they would certainly be out on bail and dealing again" (Punch, 2009: 180). The formulation of such excuses is especially affected by the fact that corruption is in fact a "victimless crime", since the transaction usually takes place with the consent of the will of its actors. Undoubtedly, the interlocutor in the documentary "Bad Cops" Neil Putnam also acted under the impression of this fact, justifying his corruption in the following way: "Not only were there no victims, but everyone benefited. The department made arrests and achieved fame, and the informant received a monetary reward. Even the arrested dealer was not unhappy, because he was aware that he

would have received a higher prison sentence if we had not "eased" him, by taking a certain amount of narcotics and money from him" (Ibidem).

Considering the fact that corruption usually does not have a human being as a victim, it could be easily concluded that corrupt behaviour does not require denying the existence of a victim. It is certain, however, that there are certain types of corrupt behaviour in which there is such a victim, and a typical example is "extortion" (i.e. shakedown). However, the rationalization of these crimes by denying the existence of the victim is facilitated by the fact that they are most often persons whose credibility has already been shaken (e.g. drug dealer, brothel owner), of which the police themselves are aware.

Dehumanization of the victim is a process very close to denying the existence of the victim. Euphemistic rhetoric also has a special role in it, which includes semantic distortions and play on words. In this way, the human character of the victims is replaced by "trivial" expressions, thus making concrete victimization inconspicuous or harmless. At the same time, justification is provided for committing the most morbid crimes. As Huggins, Haritos-Fatouros and Zimbardo explain: "The identity of the victims is darkened when their murder turns into 'elimination'. The victim loses any presence when described as a 'contract fulfilled'. There are no people who bleed, maim, or die where mass murder is presented as 'ethnic cleansing' or where bomb victims are portrayed as 'collateral damage'" (Huggins, Haritos-Fatouros and Zimbardo, 2002: 255).

The dehumanization of victims is especially characteristic of ideologically motivated crimes and crimes of obedience, and it takes place more on a collective (social, cultural, state) and much less on an individual level. In fact, the role of the state is usually crucial in the process of dehumanization of victims, especially in those cases when certain categories of people are defined as "enemies of the state". In his work *Faces of the Enemy*, Sam Keen shows how visual propaganda, used by most nations against those they consider dangerous to "others" or "enemies", creates archetypes of enemies. As this author explains, "visual images create a common social paranoia, which is focused on the enemy who would like to harm women, children, the state and the nation, destroying its fundamental beliefs and values" (Zimbardo, 2009: 379).

This is exactly the approach used by Hitler's propaganda machinery when it sent a clear message to its compatriots through films and posters depicting Jews as pests that feed on the granaries of national resources. The fact is that most of us do not feel guilty when we kill an "annoying" insect. When people are viewed in the same way, it is certain that restrictions on how to treat them are moved or completely lifted. Herbert Keman also offers significant insight into this problem. This author points out that the view of victims of torture as "non-citizens" was evident in the conversations Heinz had with "masters of torture" in Latin America: "When they identified guerrillas as Communists, they saw them as foreign agents and therefore, in fact, as 'denaturalized'. Then, torture increased when guerrillas started killing military officers and their families, which is why they began to be considered not only as outsiders, who have no right to protection by the community, but also as dangerous elements from which the community has the right to be protected"(Kelman, 2005: 133).

When it comes to torture victims, Kelman believes that their dehumanization is largely due to the fact that they often do not belong to the ethnic or religious community of torturers and the dominant segment of society, citing Kurds in Iraq, the Bahamas in Iran, Palestinians in Kuwait and the territories occupied by Israel and Irish Catholics in Northern Ireland. In most cases, the ethnic or religious identity of the victims is the main reason for their tendency to be tortured. In other cases, ethnic or religious identity is one factor of disagreement or rebellion. In all cases, it facilitates the exclusion and dehumanization, that is, the removal of one of the restrictions against torture and other serious human rights violations (Ibid: 133).

From this follows the logical conclusion that labelling certain individuals and groups, as particularly dangerous, can easily lead to their dehumanization, resulting in very serious consequences for their lives and security, especially when the current socio-political situation gives legitimacy to violence. To illustrate, the potential victims of the Brazilian repressive system have been dehumanized by being characterized as something to be feared of and not to be shown any respect and dignity that normal people deserve. This image justified police officers from committing violence against political dissidents during the rule of the military junta (Huggins, Haritos-Fatouros and Zimbardo, 2002: 256).

Like other delinquents, dishonest police officers, when their deviance is revealed, tend to retaliate by counter-attacking criticism of the organization, leaders, or the integrity of the investigation against them, hypocrisy in the criminal justice system and double standards in society at large. As Punch (2009: 181) points out, deviant police officers take on the role of victim, stating that internal control inspectors are focused on them, and that funding and political will disappear when higher-level actors are in danger of being discovered. With this technique, police officers try to neutralize the deviant character of their actions, but also to prepare for new deviant "feats" by transferring part of the responsibility to those who make formal rules.

A common way to justify deviant behaviour is to call for a "higher goal" (e.g. by arresting dangerous criminals). Guided by "good intentions", police officers easily decide to abuse the legitimacy of the police function. Looking at their role from the position of a "true fighter against evil", they usually adopt the logic that "a good goal justifies the means". In this regard, Punch warns: "A noble goal can have emotional and professional validity in certain situations for the police officers concerned, but it can also be used inappropriately" (Ibidem). By relying on "street justice" methods, police officers actually encourage injustice, questioning the "goodness" of their profession. However, in order to alleviate the disturbed utilitarian self-perception of the police function, they justify the application of illegal measures by achieving a noble goal. As one British police officer said: "If I act dishonestly, with the intention of doing good to the community, I am right, I am reliable, I am right. Honest intentions really make work easier by making you feel better about what you do" (Goldschmidt, 2008: 127).

Considering the phenomenon of the negative social hero, Olivera Pavićević and Biljana Simeunović-Patić point out the specific pattern of behaviour according to which the perpetrator seeks to rationalize his actions, among other things, with the need to satisfy justice. The use of such arguments is usually observed in criminals whose act can be characterized as "taking justice into one's own hands". These can be individuals or groups of ordinary citizens who try to alleviate their frustration or anger by implementing "raw justice", rationalizing the use of cruel methods with various neutralization techniques, and especially by "calling for a higher goal" (see Pavićević, Simeunović-Patić, Kron: 2011).

This pattern of behaviour, however, is perhaps more characteristic of police officers than ordinary citizens, because police officers view the satisfaction of justice not only as an expression of anger, disappointment or revenge, but also as a moral obligation and their professional duty. As Skolnick points out, "police officers see themselves as 'craftsmen' who love their job and consider it fair" (Newburn, 1999: 119). Viewed in the context of police work, the "correct offender" pattern is undoubtedly linked to "Dirty Harry" syndrome, as it helps police officers address one of the key ethical dilemmas they face during their work, giving them the opportunity to rationalize violations as obligations and duties materialized in a "noble" goal.

Finally, we will draw attention to another mechanism that contributes to the weakening of moral restraint from committing various forms of unethical-illegal conduct, and which can also, to some extent, be considered a kind of neutralization technique. It is about routine. Namely, the logic is that due to the frequent repetition of a certain behaviour, there is a high probability that it will eventually

become acceptable (justified), i.e. common, and thus "normal" (non-deviant) behaviour (primarily in the opinion of the perpetrators, but also people close to them). In other words, a given behaviour becomes a routine in the daily activities of certain individuals and groups. Routinization of deviant behaviour is certainly a much more complex process than it seems based on this explanation, especially if we take into account the fact that it is not isolated, but runs in parallel with other processes and that its occurrence often depends on a number of other factors and circumstances (e.g. the degree of gratification of the manifestation of a given behaviour in the past, the probability that a particular action will be rewarded or punished, etc.). The question that logically arises here is whether it is possible to routinize unethical behaviour in the police. The results of some research on police deviations and especially data on the frequency, intensity and degree of manifestation of corrupt behaviour in some police organizations undoubtedly imply the conclusion that this is possible (see Kutnjak-Ivković, 2005; Punch, 2009).

CONCLUSION

The need of individuals to justify their crimes is an old social phenomenon. It is as old as human civilization, that is, culture as a set of values and norms that make up a given civilization. In every society and at every time, there are individuals whose actions violate the norms contained in the valid normative system. Violation of these norms has always brought with it the appropriate condemnation of society, but often the very feeling of guilt in the violator of these norms. Hence, the need of the offender to reduce the negative effects of deviant behaviour is quite clear and understandable. There are many ways to achieve this.

In this paper, we have dealt primarily with those techniques of neutralizing deviant behaviour that are inherent in the police. They point to a rich repertoire of these techniques used by all deviant individuals, not just the members of the police. Of course, the members of the police are more likely than citizens to find themselves in a situation where their actions can be valued as legal or illegal, moral or immoral. Namely, the very nature of the police profession is such that it requires from the members of the police not only legal, but also moral judgment in almost everyday situations, and this then means the possibility to make mistakes and do something that is not only socially unacceptable, but also unacceptable from the point of view of personal moral values. Therefore, the need to rationalize the deviant procedure is understandable, i.e. to neutralize its significance and character of deviance. Although it is possible to understand this phenomenon, it does not mean that it should be tolerated. On the contrary, the recognition of these mechanisms is crucial in preventive work to combat illegal police work. Ignoring the use of neutralization techniques, especially those that are clearly visible (such as euphemistic rhetoric), leads to a greater extent to illegal police work and, thus, the negation of one of the basic police functions - law enforcement.

REFERENCES

1. Cohen, S., (2003): Stanje poricanja: znati za zlodela i patnje: Beograd. (The state of denial: knowing about crimes and suffering: Belgrade).
2. Goldschmidt, J. (2008): The necessity for dishonesty: Police Deviance, "making the case" and public good, Policing and Society, 18 (2), pp. 113-135.

3. Huggins, M., Haritos-Fatouros, M. and Zimbardo, P. (2002): Violence Workers - Police Tortures and Murderers: Berkeley.
4. Hodgson, J. (2001): Police violence in Canada and the USA: analysis and management, Policing: An International Journal of Police Strategies and Management, 24 (4), pp. 520-549.
5. Kappeler W., Sluder R., Alpert G. (1998): Forces of Deviance: Understanding the Dark Side of Policing, Illinois.
6. Kelman, H.C. and Hamilton, L. (1989): Crimes of Obedience. Toward a Social Psychology of Authority and Responsibility: London.
7. Kelman, H.C. (2005): The policy context of torture: A social-psychological analysis, International Review of the Red Cross, pp. 123-134.
8. Newburn, T. (1999): Understanding and Preventing Police Corruption: Lessons from the Literature, Home Office - Policing and Reducing Crime Unit: Research, Development and Statistics Directorate: London.
9. Pavićević, O., Simeunović-Patić, B., Kron, L (2011): O negativnom drustvenom junaku: Beograd. (About a negative social hero: Belgrade).
10. Punch, M. (2009): Police Corruption - Deviance, Reform and Accountability in policing: London
11. Kutnjak-Ivković, S., (2005): Fallen Blue Knights: Controlling Police corruption: New York
12. Skolnick, J., (2011): Justice without trial: law enforcement in a democratic society, New York.
13. Swendsen, L., (2006): Filozofija zla: Beograd (Philosophy of Evil: Belgrade)
14. Waddington, P.J., (1999): Policing Citizens: Authority and Rights: London
15. Zimbardo, P. (2009): Luciferov učinak: Kako dobri ljudi postaju zli: Zagreb (Lucifer's effect: How good people become evil: Zagreb).

PREVENTIVE WORK OF THE POLICE IN THE PROCESS OF DERADICALIZATION[1]

Slaviša Vuković, PhD[2]
University of Criminal Investigation and Police Studies, Belgrade

Abstract: The process of radicalization has been perceived as a significant problem in many countries, especially in developed Western democracies that have faced with homegrown terrorism. At the same time, the police are expected to take action to prevent this process as successfully as possible. The police have been committed to strengthening their preventive activities for several decades, so the question inevitably arises as to how much their activities have achieved the desired goals and whether such activities can be expected to contribute to the process of deradicalization. Therefore, the aim of this paper is to point out to the achieved results in strengthening the preventive role of the police and in terms of the possibility of using the acquired experiences to prevent the process of radicalization. Experiences gained by police in developed countries can be useful for the police in the Republic of Serbia, provided that the specifics of their application in the domestic environment are taken into account.

Keywords: police, prevention, deradicalization, effects

INTRODUCTION

Prevention of radicalization leading to violence, i.e. the process of deradicalization, attracts great attention not only of practitioners, but also of researchers and the general public. This is evidenced by a large number of scientific papers that deal with the topic of radicalization. Nevertheless, it seems that there is always space to look again and again in the light of new research for examples of good practice that can improve the engagement of certain services whose competence includes the prevention of

1 his paper was created within the project "Development of institutional capacities, standards and procedures for combating organized crime and terrorism in the context of international integration" funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia (No. 179045), and implemented by University of Criminal Investigation and Police Studies in Belgrade.

2 slavisa.vukovic@kpu.edu.rs

radicalization. Therefore, this paper will first review the assessments of the current state of the problem in the countries of the European Union and Serbia and the characteristics of the radicalization process, and then in the second part special attention will be paid to current forms of preventive action in the deradicalization process, viewed from the angle of the possibility of improving the role of the police. It has long been clear that traditional repressive policing in terms of detecting, and providing evidence of terrorism-related crimes and locating and apprehending their perpetrators is not enough to protect modern society from the dangers of radicalized violence. On the other hand, the preventive action of the police in the phase of expressing attitudes and beliefs that can lead to violence must not be neglected, because not all the features of a crime have been realized in order to take legally prescribed repressive measures and actions. It is becoming increasingly clear that precise procedures can be established for the competent state authorities to act in these cases in order to adequately assess the risk and determine the necessary preventive activities. In many cases, these procedures have already been established and work needs to be done to improve them.

CHARACTERISTICS OF THE RADICALIZATION PROCESS OF IMPORTANCE FOR POLICE ACTION

According to the Europol report on terrorism situation in Europe in 2018, a total of 129 foiled, failed and completed attacks were reported by the EU Member States (EUROPOL, 2019). In the same year 1056 individuals were arrested on suspicion of terrorism-related offences, with the highest number in France (310) and in the UK (273). Ethno-nationalist and separatist attacks continued to represent the largest proportion, but all fatalities were the result of jihadist attacks: 13 people lost their lives and 46 people were injured. The EU Member States reported 16 thwarted jihadist terrorist plots. All jihadist terrorist attacks were committed by individuals acting alone and targeted civilians and symbols of authority. The motivation of the perpetrator and the links to other radicalised individuals or terrorist groups remained often unclear. Mental health issues contributed to the complexity of the phenomenon. IS maintain an online presence largely because unofficial supporter networks and proIS media outlets. There is a risk that individuals with criminal background and those imprisoned are vulnerable to radicalisation. The number of European foreign terrorist fighters was very low, and also the number of individuals returning to the EU. The abuse of migration flows by terrorists to enter the EU does not seem to be systematic (EUROPOL, 2019).

According to the assessment of the Ministry of Internal Affairs, the Republic of Serbia may be endangered by terrorist activities directly, and there is a danger that its territory will be used for transit, preparation and execution of terrorist attacks in other countries. Nationalist and extremist activities of individuals and groups, threats of radical Islamism and ethnically motivated terrorism have been identified as a threat to its security, and it is estimated that there is a danger of various forms of extremism. There is a constant danger of terrorist activity in the area of the Land Security Zone, although in the period from 2014-2016 no terrorist attacks were recorded (MoI, 2017). The expansion of terrorist activities in the Middle East and North Africa and the movement of migrants through the territory of Serbia on the way to developed European countries affects the perception of the presence of a potential danger from terrorist activities. Sources of potential threats include persons (domestic and foreign) who have participated in armed conflicts in the Middle East and other areas covered by similar conflicts, members of terrorist organizations known to the police, especially ethnically motivated terrorist organizations, individuals prone to violent extremism who are not registered as security interesting persons.

This situation and trends in the countries of the European Union inevitably stimulate the interest of professionals, researchers and the public in the process of radicalization and the possibility of its prevention. Although there is no single definition of violent radicalization, it seems that the definition from the handbook of the UN Office on Drugs and Crime (2016) is acceptable in which it is defined as the process by which people acquire radical or extremist beliefs and attitudes involving the use of violent measures to achieve objectives from ideological, political, religious, social, economic and/or personal reasons. At the same time, it defines deradicalization as the process of changing the belief system, rejecting the extremist ideology, and embracing mainstream values, which refers primarily to a cognitive rejection of certain values, attitudes and views resulting from activities intended to help individuals to renounce radical or extreme ideas, beliefs and groups. Thereby, disengagement from using, or supporting the use of, violence does not necessarily mean a change in an individual's commitment to a radical or extremist cause, and his fundamental beliefs (UNODC, 2016).

In particular, the research of the process of radicalization and the possibility of its prevention is directed towards individuals who have suddenly decided to carry out violent activities and who in an earlier period of life did not indicate to people around them that they could become terrorists. The term "lone wolf" is often used for them, because they have radicalized themselves. However, Antinori (2017) indicates that it is useful deleting the word "lone" because the jihadi wolf is not alone. In his opinion, he is a product of the "cultural" and (cyber-) globalized dimension of terrorist narratives which inspire and promote the "Lone Jihad" against the West. He is completely mobile connected and immersed into interacting and (cyber-) socializing jihadisphere (the terrorist infosphere) produced by the massive uploading of 'open' jihadist multimedia products. It is this specificity that imposes the need to engage more public and private entities, including the police, in order to reduce the opportunities for self-radicalization via the Internet. There is no doubt that the Internet provides significant opportunities for inciting terrorist activities, but to what extent its impact is more dominant than other environmental factors is a question that captures the attention of a large number of researchers.

Undoubtedly important in the process of radicalization are internal risk factors, which are largely formed under inadequate upbringing influence of parents in childhood, starting with the formation of guilt (own or potential victims), low self-esteem, narcissism, paranoia and various other mental problems. However, studies have been conducted throughout the previous decades and almost all of them emphasized that most of the terrorists were rational individuals and not victims of psychological or mental diseases (Zahra, 2019). Therefore, special attention should be paid to external factors that may encourage the process of radicalization, such as the already mentioned impact of terrorist organizations propaganda through the media (especially via the Internet), life in a violent environment, easy access to illegal firearms and narcotics, social exclusion, environmental influences that can cause deprivation and frustration and others. When it comes to persons who are in prisons for committing a crime, whether it is a crime related to terrorism or not, there is a growing indication of the possible negative impact of radicalized persons in prisons. The activities undertaken by the police with the aim of preventing radicalization should be based on the analysis of the impact of these negative environmental factors in order for its preventive activities to be successful in the process of deradicalization.

THE SCOPE OF POSSIBILITIES OF PREVENTIVE ACTION IN THE PROCESS OF DERADICALIZATION

The range of possibilities for police action in the process of deradicalization is very wide. It ranges from the broadest educational activities aimed at strengthening the security culture of citizens and

especially vulnerable categories such as youth, through other activities to strengthen trust and cooperation between police and citizens, especially through the model of community policing, combating actions that encourage and enable radicalization with the aim of terrorism (inciting national, racial and religious hate and intolerance, public incitement to commit terrorist acts and similar crimes), to participate in the process of resocialization and reintegration of persons released from prisons. The Radicalisation Awareness Network (RAN) Secretariat has selected a variety of practices and has classified them under seven different approaches: 1) Training for first line practitioners working with individuals or groups at risk of radicalisation through raising awareness; 2) Exit strategies: deradicalization programmes to reintegrate violent extremists and disengagement programmes to at least dissuade them from violence; 3) Community engagement and empowerment establishing a trust in authorities; 4) Educating young people on citizenship, political, religious and ethnic tolerance, non-prejudiced thinking, extremism, democratic values, cultural diversity, and the historical consequences of ethnically and politically motivated violence; 5) Family support for those vulnerable to radicalization and those who have become radicalized; 6) Delivering alternative narratives to extremist propaganda and worldviews either online or offline; and 7) Creating counter violent extremism institutional infrastructures to ensure that people at risk are given multi-agency support at an early stage (RAN, 2016).

Tore Bjørgo combined elements of three main schools of crime prevention, criminal justice-based prevention, social crime prevention and situational crime prevention, and form one holistic model of crime prevention which includes nine preventive mechanisms that can be applied to all forms of crime including violent extremism and terrorism. Those preventive mechanisms are: 1) establishing and maintaining normative barriers; 2) reducing recruitment; 3) deterrence; 4) disruption; 5) incapacitation; 6) protecting vulnerable targets; 7) reducing harm; 8) reducing rewards; and 9) desistance and rehabilitation (according to: Bjørgo & Smit, 2020). Many actors have important role in these mechanisms, such as parents, teachers, youth workers, staff of civil society organisations, social workers, prison and probation staff. In all these mechanisms the police have a greater or lesser role. Given that police role is significant, it is necessary that police strengthen trust and cooperation with these actors. Trust is the basis for cooperation between the police, citizens and public agencies and its basic forms such as information exchange and coordination of activities. Unlike cooperation between the police and local services, building trust between the police and citizens is a more complex process.

Murray, Mueller-Johnson & Sherman (2015) indicate that in Western democracies, targeting resources on local “hot spots” of low confidence in the police is essential for making strategies for countering terrorism evidence based. They carried out research to explore the relationship between police scoring of human intelligence data and public opinion surveys (N = 30,412) two kinds of evidence for targeting resources across 335 neighbourhoods in a large metropolitan area. The results suggest that while Muslim respondents have lower levels of confidence in the police than other ethnic minority groups, their confidence levels are even lower in areas where intelligence suggests the greatest risk of extremist violence. One of the most important models of police work that is encouraged with the aim of strengthening public trust and legitimacy of the police is community-oriented policing. That model of work emphasizes positive, non-enforcement contact with the public. To determine whether positive, non-enforcement interactions with uniformed patrol officers actually cause meaningful improvements in attitudes toward the police, Peyton, Sierra-Arévalo & Rand (2019) conducted a randomized field experiment in New Haven, CT. The obtained results showed that a single instance of positive contact with a uniformed police officer can substantially improve public attitudes toward police, including legitimacy and willingness to cooperate. These effects persisted for up to 21 day and were not limited to individuals inclined to trust and cooperate with the police prior to the intervention.

Such a conclusion is supported by the results of research conducted at the national level in the US, which were reached by Schanzer, Kurzman, Toliver & Miller (2016). They found out multiple obstacles to creating community partnerships focused on preventing acts of violent extremism. Among these obstacles, they pointed out the following: Muslim Americans see police outreach efforts as a double standard, because similar programs are not directed at non-Muslims; many of them have experienced trauma since 9/11 and link police outreach and engagement efforts with aggressive surveillance tactics they oppose; actions of federal government agencies affect Muslim Americans' attitudes toward the police; some believe that their public safety concerns are not being fully addressed; and police have limited resources for outreach and engagement. On the other hand, the same authors made the following recommendations: effective community partnerships require committed police leaders and a community open to engagement; community policing strategies should involve the whole community, not just Muslim Americans; community outreach and engagement programs should be separate from intelligence gathering and criminal investigation; law enforcement agencies should recruit and hire a workforce that reflects the composition of the community; successful outreach and engagement requires multiple types of training; law enforcement agencies should conduct a wide range of engagement activities designed to establish trusting relationships; and the police should work with communities to develop non-criminal law enforcement intervention models (Schanzer, Kurzman, Toliver & Miller, 2016).

The cooperation between the police and other local services in the prevention of violent extremism can be more effective if there are institutionalized forms of cooperation in crime prevention at the local community level that are established by appropriate legal regulations. Bjørgo and Smit (2020) remind that the Nordic countries have developed varieties of the so-called SSP model for collaboration between schools, social services and the police at the local level. They pointed out two models in multi-agency cooperation with the aim of preventing violent extremism: the Danish info-house model (the Aarhus model) and the United Kingdom approach. The Danish info-house model encourages cooperation between police, municipalities, social workers and other relevant professionals in protecting society against terrorists and providing social care for individuals at risk. Legislation allows practitioners from different agencies to share sensitive information about individual youths for preventive purposes but the police are not allowed to use this information in criminal investigations. Finland and Sweden have stricter legislation and practices making such collaboration less operational and person-oriented. On the other side, in the United Kingdom educational institutions, the health and welfare sector have a legal duty to report suspicious behaviour to local authorities. Police or security service then assess these reports and cases may be followed up by positive social interventions to redirect the young person towards a pro-social track, or to surveillance and criminal prosecution (Bjørgo & Smit, 2020).

The Aarhus model was created in 2007, when the municipality of Aarhus and the East Jutland Police (National Police) established a pilot project to prevent radicalization, inspired by a project carried out as early as 2004 in Amsterdam, *Wij Amsterdammers* (EFUS, 2016). The municipality of Aarhus considers that the prevention of radicalization is a specialised branch of the general crime prevention policy. The prevention of radicalization policy is based on Pyramidal Model, or three levels: 1) General level focused on awareness raising and capacity-building against radicalization through workshops, presentations and seminars; 2) Specific level focused on individuals or groups considered as extremist, for example because they are planning to travel to Syria or Iraq, and main activities are: family network, survey and risk assessment, and Info House; 3) Targeted level aiming at individuals already engaged in criminal acts or considered as being in "imminent risk" and includes The Info House and the multi-agency strategy (EFUS, 2016).

According to description of the Danish model by the European forum for urban security (2016), the Info House is composed of two part-time police assistants and a team of the Aarhus Municipality. It receives initial inquiries from citizens or public officials about an individual in risk of radicalization. After assessment, if a case is a threat to security, it is sent to the Danish Security and Intelligence Service Centre for Prevention, but if it is not the case, it is referred to the police or the municipality which might provide advice and guidance, social activities, or mentor support (participation is optional). The final decision regarding a mentor-based intervention is made by social services advisors. Returnees may be required to take part in debriefing sessions, psychological therapy, medical assistance, individual mentoring or tailored exit programmes depending on the risk assessment. In the case of mentoring, the case is referred to a person who the individual in question already knows and trusts, from a specially trained mentor to a football coach or a teacher, but no former extremists are involved as mentors. In the Aarhus model, local partners are Municipality Social Affairs and Employment department, Children and Youths department and East Jutland Police, while national partners are Danish Security and Intelligence Service Centre for Prevention, Ministry of Immigration, Integration and Housing, and Danish Agency for International Recruitment and Integration. The traffic to Syria has been reduced from 31 individuals in 2013 to a couple in 2014 and 2015, and a dialogue has been established with communities and minority groups at risk of recruitment into violent extremism. It is not possible to demonstrate a causal relationship between this decrease and the prevention strategy. Specific parts of the programme has been evaluated separately, but no overall evaluation of the programme is conducted yet (EFUS, 2016).

The preventive role of the police is important not only in relation to the treatment of persons at risk who have not previously exhibited problematic behaviour, but also in relation to persons who have served a prison sentence. In relation to both categories of persons, the police are instructed to make security assessments, i.e. risk assessments, independently or in partnership with other services. The knowledge of the police should enable a special assessment of the reintegration needs of persons released in order to take into account which interventions should be undertaken. Cooperation between the police and penitentiary institutions is necessary before the release of persons from prison in order to consider the risk assessments of the prison service. The social reintegration requires a holistic and multidisciplinary approach, with strong coordination among many relevant actors, such as families, civil society organizations, public services, the private sector, and communities. If relevant, psychological and religious counselling, employment assistance and/or support to the family should continue. The assessment should include the family's willingness to participate in the reintegration process, as in some cases it may be part of the problem in the process (UNODC, 2016)

CONCLUSIONS

The state and trend of terrorist activities in the countries of the European Union inevitably stimulate the interest of professionals, researchers and the public in the process of radicalization and the possibilities of its prevention. In particular, the research of the process of radicalization and the possibility of its prevention is directed towards individuals who have suddenly decided to carry out violent activities and who in their earlier period of life did not indicate by their behaviour that they could become terrorists. Activities undertaken by the police to prevent radicalization should be based on an analysis of the impact of internal and external risk and protection factors. The scope of opportunities for police action in the deradicalization process includes educational activities to strengthen the security culture of citizens (especially vulnerable categories), strengthening trust and cooperation of citizens through community policing, combating actions that encourage and enable radicalization for terrorism and

participation in resocialization and reintegration of persons who have served a prison sentence. The preventive role of the police is important in relation to persons at risk who have not previously exhibited problematic behaviour and persons who have served a prison sentence. In relation to both categories of persons, the police should make security assessments, i.e. risk assessments in partnership with other relevant entities. Cooperation between the police and other local services in the prevention of violent extremism can be more effective if there are institutionalized forms of cooperation in crime prevention at the local community level that are established by appropriate legal regulations. The Danish Aarhus model encourages cooperation between police, municipalities, social workers and other relevant professionals in protecting society against terrorists and providing social care for individuals at risk and can be a good example for police work in Serbia.

REFERENCES

1. Antinori, A. (2017). *The "Jihadi wolf" threat the evolution of terror narratives between the (cyber-)social ecosystem and self-radicalization "ego-system"*. The Hague: European Union Agency for Law Enforcement Cooperation.
2. Bjørgo, T. & Smit, Q. (2020). *Lessons from crime prevention in preventing violent extremism by police*. Issue paper. Radicalisation Awareness Network, Centre of Excellence.
3. EFUS (2016). *Practice Sheet: Aarhus model – prevention of radicalisation*. Paris: European Forum for Urban Security.
4. EUROPOL (2019). *European Union Terrorism Situation and Trend Report*. The Hague: European Union Agency for Law Enforcement Cooperation.
5. MoI (2017). *Strategic assessment of public safety*. Belgrade: Ministry of the Interior, Police Directorate. (Serbian only)
6. Murray, A., Mueller-Johnson, K., & Sherman, W.L. (2015). Evidence-based policing of U.K. Muslim communities: Linking confidence in the police with area vulnerability to violent extremism. *International Criminal Justice Review*, 25(1), 64-79.
7. Peyton, K., Sierra-Arévalo, M. & Rand D. (2019). A field experiment on community policing and police legitimacy. *PNAS – Proceedings of the National Academy of Sciences of the United States of America*, 116(40): 19894-19898.
8. RAN (2016). *RAN collection - Preventing radicalisation to terrorism and violent extremism: Approaches and practices*. Radicalisation Awareness Network.
9. Schanzer, D., Kurzman, C., Toliver, J. & Miller E. (2016). *The challenge and promise of using community policing strategies to prevent violent extremism: A call for community partnerships with law enforcement to enhance public safety, final report*. Triangle Center on Terrorism and Homeland Security & Sanford School of Public Policy, Duke University.
10. UNODC (2016). *Handbook on the management of violent extremist prisoners and the prevention of radicalization to violence in prisons*. New York: United Nations Office on Drugs and Crime.
11. Zahra, H. (2019). Who is a terrorist? Exploring the utility of interdisciplinary fields. *Review of Economics and Political Science*, 5(2), 149-161.

ROLE OF THE SERBIAN POLICE IN MAINTAINING SECURITY IN THE CONDITIONS OF THE EPIDEMIC OF INFECTIOUS DISEASES

Dalibor Kekić, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Miloš Milenković[2]
Emergency Management Sector, Ministry of the Interior of the Republic of Serbia

Abstract: There have been many epidemics of various infectious diseases in the history of the Republic of Serbia. Starting from the epidemics of plague and cholera in the Middle Ages, to the appearance of smallpox, swine flu and COVID 19. So far the police have played, and in the current situation have, a very important role in combating epidemics, but also in detecting various types of malversation. Recent events have indicated the need to pay as much attention as possible to the performance of security services. The first thing that was very important was how to protect police officers from possible infection, without diminishing the effects of their actions. And secondly, how to reduce the need to use extended use of force in dealing with citizens which is enabled by declaring a state of emergency. For these reasons, police officers have a very delicate task to ensure the safe and uninterrupted activities of citizens.

Keywords: police officers, epidemic of infectious diseases, use of force, role

ANTE INTRODUCTIO

Before talking about the role of the police during epidemics of infectious diseases, some of the unknown or lesser-known terms must be mentioned first. The terms are mostly of medical origin.

Epidemic is a phenomenon in a community or a certain population, deaths or ill from a condition in numbers above the usual expectation for a certain period of time (Last, 2009:116);

1 dalibor.kekic@kpu.edu.rs
2 milos10jul@gmail.com

Prevalence is the relationship between the pathological condition of the affected inhabitants at one time point (practiced for one day) and the number of inhabitants at that same point. Prevalence is the proportion of injuries or illnesses of citizens that is divided by the total number of inhabitants (Kekić, 2016:35);

Infectious disease (contagious) is caused by a specific pathogenic agent or its toxic products resulting from the transmission of the agent or its toxic products through or from an infected person, animal or other reservoir to a susceptible host (Last, 2009:568);

Bioterrorism is the use of violence through the use of biological agents, with the aim of deliberately spreading infectious diseases in humans, animals and/or plants, their disease and death (Jović, Savić, 2004: 127);

Quarantine is a measure that restricts freedom of movement and determines mandatory medical examinations for healthy people who have been or are suspected to have been in contact with patients with plague, smallpox and viral hemorrhagic fevers or some other respiratory or other highly contagious disease (Savović, et all, 2006:247).

INTRODUCTION

Police officers are leaders in times of public crisis and emergencies. Police units generally have prepared "pandemic plans", which serve in response to natural and man-made disasters or in some cases in response to terrorism, which serve as a procedure for police officers in order to maintain order in society. During the Spanish flu pandemic, police officers were officials on the streets who implemented decisions made by public health officials to reduce the spread of an incredibly contagious disease and ultimately save lives (Jaćimovski, Kekić, 2010). Police officers were tasked with patrolling the "quarantine zones", which were cities that were considered "hot spots" of the disease. With the increase in the number of deceased, problems arose in the funeral industry. Coffins and other funeral equipment were almost non-existent. The bodies were wrapped in white sheets and left on the sidewalks. From there, during the night, they were taken by truck, accompanied by police and priests to mass graves.

The police also played a significant role during 1972. Namely, during the smallpox epidemic, the police had the role of securing quarantine. Belgrade was the seat of as many as eight quarantines in which the sick were accommodated, which everyone remembers as well-guarded "fortresses". Four quarantines were in hospitals, while four were housed in adapted civilian facilities - hotels and motels.

From 1918 until the current events regarding the control of COVID 19, the role primarily of the police leadership during the pandemic did not change much - police officers continue to patrol the communities taking care to keep the public well informed and do everything in their power to maintain the safety of the citizens for whom they have committed themselves to protect. Given that the criminal justice system is vulnerable to the rapid spread of COVID-19, maintaining the status quo means endangering the lives of those connected to the system. Many officials have focused on the need to urgently reduce prison numbers and prison populations, primarily because of a lack of adequate medical care, poor hygiene and overcrowding, among other obstacles, all of which could create an environment in which respiratory function could spread rapidly.

Depending on the level of danger, the role of law enforcement, which is generally entrusted to the police under normal circumstances, may include the implementation of public health measures (e.g. quarantine, travel restrictions, restrictions on public gatherings, etc.), securing high prevalence areas,

providing health facilities, investigating suspicious scenarios of biological terrorism and protecting stockpiles of vaccines or other drugs within the state. (Gonzales, Schofield, Herraiz, 2006:7). Those diseases that are mostly spread rapidly by direct contact by air or some other means and that can cause death or severe consequences can cause the authorities to restrict the movement of individuals. If such diseases with a high mortality rate are not brought under control, they can lead to pandemics, social disorders and the need to use restrictive regulations. If not isolated, an infected person and thus cause hundreds of deaths. In these circumstances, certain civil servants will decide whether quarantine or isolation is required. Police officers and other law enforcement and public health officers should then work closely together to decide when to move from recommendations to mandatory procedures, how to enforce quarantine and isolation orders, and if necessary maintain instruments of legal force.

GENERAL ROLE OF THE POLICE IN COMBATING INFECTIOUS DISEASES

In each legal system, choices, but also the doubts that the authorities face in the conditions of dangerous epidemics, which also applies to the police, are classified into five main categories: implementation of quarantine or complete blockade; finding alternatives to arresting and detaining criminal suspects; support and assistance to health professionals; dealing with new forms of crime, such as the sale of counterfeit medical and protective equipment; and police information on social networks, especially in countries where the offense of insulting the government or inciting social unrest is sanctioned. (Stone, 2020). Some of the priorities set by law enforcement at the start of the pandemic seem to have missed the most urgent needs of the public. Advice given to police organizations in late March 2020 (during the COVID-19 pandemic), Interpol recommended that attention be focused on new criminal threats - deliberate spread of viruses, trafficking in counterfeit medical products, fraud and cybercrime - emphasizing the measures police officers should take to protect themselves. Interpol especially emphasized the support that the police should provide to health workers, above all assisting public health authorities in restricting movement and seeking contact. Interpol, as an international police organization, made recommendations that did not include support for ambulance escorts or assistance to health workers, especially community epidemiologists. In practice, the police in many countries support health workers in all the aforementioned ways and much more, probably at the same time building public trust. The challenges of police coverage only become more complicated as the pandemic continues. As governments around the world try to maintain restrictions on movement and socializing, trying to restart their economies, the potential for reduced voluntary compliance and even organized protest is growing rapidly.[3]

In some cases, the police suspended their authorizations. Thus, with the appearance of swine flu, which reached epidemic proportions, the traffic police in some cities in India temporarily suspended their regular action - checking drunk driving, which helped significantly reduce traffic accidents.

The police and the world in general have faced very few pandemics in recent decades, but there is still a large amount of data on the basis of which best practices could be identified. The poorly defined nature of the role of the police in pandemics presents a difficulty in providing concrete recommendations. This is because roles and expectations can change significantly, both because of the changing

3 Serbian citizens first took to the streets on July 8 2020, soon after Serbian president announced that Belgrade would be placed under a new three-day lockdown following a second wave of confirmed coronavirus infections. But the demonstrations quickly morphed into a wider expression of frustration. The protests continued on Wednesday, even after suspended decision to enforce a second shutdown.

needs of governments and society, and because of the needs of the police themselves as a context for a pandemic change.

With the appearance of SARS (Severe Acute Respiratory Syndrome) and an epidemic that threatened to break out all over the world in 2003, in Canada the key actors in Police Operation were: Police Incident Manager, the Police Incident Specialist and Liaison Officer, the Public Information Officer, the Communication Operators, the Planning Staff and the Logistics Staff. Although Toronto Police Service was praised for its performance during the outbreak of the SARS epidemic, lessons were identified for future improvements in the areas of infectious disease training and health crisis legislation, managerial training in incident management, etc. (Fantino, 2005:22).

The coronavirus pandemic has highlighted the need for law enforcement agencies around the world to rely more on electronic means, from surveillance cameras to monitoring network communications and the use of artificial intelligence. In some cases, these tools are needed to fight crime, but they should not be abused, endanger civil liberties and serve as a means of control and political manipulation. But the opposite has often happened: there are states that do not "recognize" democratic values, so endangering freedoms is a routine thing. These are predominantly East Asian countries.

The main limitation in validating best practice advice is that pandemics are very complex events, often exceeding the state's ability to respond regularly to risks and threats. Epidemics of acute infectious diseases are dynamic, often unpredictable and subject to significant rapid changes, where any action can have a chain of intended but also undesirable consequences (Roberts, 2020).

Police officers must clearly identify how to properly communicate with the community and enforce the rules. They should be prepared to answer many questions, such as those about the availability of test kits, travel restrictions, quarantine and isolation, as well as personal safety measures. The role, but also the obligation of all law enforcement services, is to keep their members focused on informing the public about current restrictions and encouraging citizens to adhere to state and local health recommendations and regulations (Jones, 2020:6).

Law enforcement officers must have insight into how clear guidelines police officers have on prescribed procedures regarding the isolation and quarantine of infected community members. Police officers should be informed about how to detain or isolate a person who is considered to be infected, including behavior in situations where the person is not following orders. The police should clearly define how they will deal with arrests in the conditions of an epidemic, especially in the case of complete closure. They will also have to identify the location where people who do not follow health orders would be evacuated to. These locations should ensure compliance with regulations on physical distancing, but also other requirements, depending on the nature of the infection.

Like medical workers, law enforcement and other members of the security forces are most at risk in terms of contact with an infected person. In addition to the potential dangers associated with the infection, police officers could also experience significant stress during a pandemic. Increased pressures and constant obligations outside of work, including the high probability that their family members will get sick, will create stress, fear and anxiety. Due to various high-stress situations, law enforcement agencies should establish a stress management plan for critical incidents, which would address the physical and emotional well-being of employees and provide support to employees and their families. It is important to encourage police officers to be prepared in case they are asked to be away from their families for a longer period of time (Stogner, Lee Miller, & McLean, 2020:725).

Police staff should be further trained for the temporary schedule to ensure proper coverage of basic duties. All security services should assess which services require an on-site police presence compared

to those that can be handled in an alternative way, such as telephone or the Internet. During a pandemic, policing generally have neither specific guidelines nor a clearly defined role in shaping responses. The forces are directed towards the imposition of isolation, but never on such a large scale. Although they make a great effort, the police officers, who are the first to be hit in this case of infectious diseases, are often in public denounced as poorly informed and show themselves in a very bad light. Sometimes they do not have advanced and adequate equipment, which is hindered by frequent breakdowns in the communication network and thus endangers police mobility, the police system is still committed to providing its best capabilities in the given circumstances.

While police are asked to extend their tasks to the day-to-day activities of citizens, in other areas they are withdrawing from traditional roles. It is likely that the police react in such conditions only to essential security problems. Even then, the response time could be longer than before. You do not need to worry about what impact this will have on public safety - it is essential that the police must perform predominantly peacekeeping functions.

During epidemics of acute infectious diseases, enforcement measures that require close proximity or even physical contact between law enforcement personnel and the public should be minimized, except in situations where it is necessary to stop, search or arrest a person, which in turn poses an immediate, serious risk to life or serious bodily injury to police officers or others. The suspension of most detentions is not sufficient. At least during an emergency, law enforcement, state and municipal authorities should also suspend or abolish most sentences (Brooks, Lopez, 2020:4).

Police officers face a unique challenge, when it comes to epidemics. Everyday society asks law enforcement agencies to take risks that can be minimized but not eliminated. The nature of the work of police officers includes frequent close contacts with members of the public, including close physical contact. Even in crisis situations, when many others stay at home, police and other law enforcement personnel, such as nurses, health workers, cashiers and salespeople, have no alternative to working from home.

The paradox is obvious: the practice and activities carried out by the police to improve public safety is one that is most likely at high risk of public safety in the face of contagion (Brooks, Lopez, 2020:9). Namely, all stops, inspections, searches, and arrests involve physical proximity to a minimum, and close physical contacts between police officers and potential perpetrators are required for search and arrest. Searches, but often also examinations, require police officers to physically touch the suspects, crossing their hands over the suspects' clothes and the like. Detentions require officers to handcuff suspects and transport them to police stations, often in the back of patrol cars. During the process of bringing in, the police station staff searches again and takes fingerprints, and then places them in small cells where they are often together with other detainees. Even those who are quickly released usually spend several hours in detention. Those detained pending trial can spend weeks or months in overcrowded prisons.

THE ROLE OF THE SERBIAN POLICE IN COMBATING EPIDEMICS

In Serbia, the plague appeared on several occasions in the Middle Ages, in 1348, 1362, 1428, 1430 and 1438. Due to well-organized medical care and administrative-police authorities, the last cases of this disease in Serbia were in 1836 to 1838 and was very successfully suppressed. A sanitary-police cordon was built at the borders of the then state, with quarantines, with the detention of passengers from three days to six weeks, depending on the level of danger (Mihailović, 1951:581-594).

Much later, in 1972, smallpox appeared in Serbia, and within two months the epidemic of this disease was suppressed, when there were 175 cases and 20% ended in death. The Serbian public was very excited even by the hints that a suspicion of bird flu appeared in Bački Monoštor and Bajina Bašta in March 2006. Police provided a sanitary cordon in the vicinity of Bajina Basta, which was set up 5 km from the place of suspension.

Inspectors from the Fight Against Organized Crime Service (SBPOK) should soon file criminal charges against suspects for abuse during the procurement of vaccines against "swine flu" at the end of 2009. After the pre-criminal procedure, which was conducted with the Prosecutor's Office for Organized Crime, the police collected material evidence of embezzlement, examined witnesses and obtained extensive documentation from all competent institutions.

The central place in the organization of the security services is represented by the National Security Council, which is in constant contact with the Republic Headquarters. In case of danger caused by the epidemic of acute infectious diseases, the Council meets in order to determine the priorities in the activities of the services in charge of the security of the citizens of Serbia.

If the epidemic occurred naturally, the Serbian police would have to ensure the work of medical and sanitary teams in the field and hospitals and quarantine facilities of a temporary nature. Members of the criminal police should increase their activity on the ground, as criminal activity is expected to increase by at least 30%. The traffic police would have the task of providing corridors for the movement of vehicles of medical and security services to hospitals and quarantines, alternative routes for access and evacuation, and to regulate traffic in the wider environment (Kekić, 2016:125).

Special tasks and tasks to be performed by Serbian police units in conditions of contagious epidemics relate to: maintaining order and controlling entry and exit from hospital and quarantine facilities, providing transportation and escorting drivers with medical supplies and pharmaceutical vehicles, and providing disinfection points and approaches endangered areas, declared by the Government of Serbia.

Border police cooperate closely with the customs service, phytosanitary inspection and veterinary inspection. Border police must ensure the unimpeded passage of goods, materials, vehicles and people, but when an epidemic of a contagious disease is declared on the territory of Serbia, various restrictions are introduced. The ALERT system informs the EU countries that there is a danger of infectious diseases on the territory of Serbia.

The security apparatus is a set of bodies and services in charge of effectively and efficiently implementing constitutional, legal and other provisions relating to the security of citizens and the preservation of order and integrity of the state. The main functions and activities of this device are prevention, management, implementation of resolutions and suppression of all forms of threats and security challenges.

The legislation of the Republic of Serbia recognizes the criminal acts of spreading false news and causing panic. Furthermore, the criminal offense of violating the ban on isolation in the case of large epidemics is provided by the Criminal Code. These were the central affairs of the Ministry of the Interior during the pandemic. Anyone who did not find himself at the address where he should be in house isolation was notified to the sanitary inspector and the competent prosecutor's office, and in accordance with their decisions, they were further prosecuted in terms of whether they would be held criminally or criminally liable. The inspection bodies of the Ministry of Health are responsible for the supervision of persons who are infected with the corona virus or are suspected of being infected, while the control of those persons to whom a decision on isolation has been issued is carried out by the

police. The police were also in charge of enforcing the temporary restriction of freedom of movement, the so-called curfew.

The main activity of the Serbian police during the state of emergency was to take care of the observance of restrictive measures restricting and banning movement and assembly, health supervision and quarantine, and to get permission to move during curfew to people who really needed it. However, Serbian police did not always act professionally, proportionately, and politically neutral taking into account the needs and rights of citizens first. This was primarily due to frequent changes in regulations.

PROBLEMS OF SERBIAN POLICE ACTION DURING THE COVID EPIDEMIC 19

The criteria on the basis of which the Ministry of the Interior issued movement permits during curfew were not prescribed, which is why it is suspected that they were misused for political purposes. Although it is prescribed that the Ministry of the Interior issues movement permits, in practice they were also issued by other ministries, public companies or municipal emergency headquarters, which introduced additional confusion, both among citizens and police officers. Often, the police did not properly respond to calls from citizens who reported violations of curfew. There is also suspicion of politically neutral conduct by the police.

Although not in accordance with the Constitution, the Minister of the Interior issued an order restricting and banning the movement of persons. The Constitution does not recognize an order as a basis for restricting freedom of movement, but a decree. The Constitution only allows the right to free movement to be limited, but not completely abolished, which was done during the state of emergency. Police recorded over 7,800 curfew offenders. Police harassment was observed in at least a few cases (which was recorded through social networks), but it is estimated that the number is many times higher. Internal control of the police reacted publicly in only one case (Đorđević, 2020).

Not all offenders of house quarantine measure were remanded in custody, meaning that prosecutors did not fully implement the Ministry of Justice recommendations. According to the latest data, 173 people were detained during the coronavirus crisis. The percentage of those punished for violating isolation measures is small in relation to the number of those who did not respect those measures.

Arrests were made in several cities across Serbia for violating the ban on movement during curfew and self-exclusion measures. Many citizens were arrested due to the existence of grounds for suspicion that they committed the crime of non-compliance with health regulations during the epidemic. Namely, the suspects did not respect the order on restricting and banning the movement of persons on the territory of the Republic of Serbia, since they stayed outside their homes from 8 PM to 5 AM, more precisely during the curfew.

There are also examples of rigorous measures against citizens who committed criminal acts during curfew. Thus, e.g. a young man from the vicinity of Veliko Gradište, who was arrested for attempted theft during curfew, was sentenced to one year of house arrest. There were also cases of abuse of official position by police officers. A police officer was arrested because he enabled a fellow citizen to violate the isolation measures. The Sector for Internal Control of Police arrested a police officer for abusing his position by allowing an eighty-year-old fellow citizen to move in a public place, despite the measure of self-isolation imposed on him upon his return to the country. How complicated it was in terms of the work of the police during the state of emergency is the issue of allowing farmers to perform

work between 5 AM and 8 PM, and only if they have a registered farm and are allowed to transport only by tractor.

Similarly problematic is the issue of several days of demonstrations during the month of July 2020 in several cities and towns in Serbia, during which several dozen police officers were injured, but also several dozen demonstrators. Dozens, and probably several hundred demonstrators, were arrested. At the same time, great material damage was done, which all goes in favor of the issue of the affairs of police officers.

First of all, Serbian citizens on temporary work abroad, who arrived in Serbia from abroad before the declaration of the state of emergency, were not properly informed that they had to stay at home in temporary self-isolation. It happened that the police informed the citizens about the obligatory house isolation, only after ten days after entering the country, or that they did not inform them at all. Some of them were arrested by the police during the state of emergency for violating that measure, although they did not even know about the measure. The control of respect for house quarantine was excellent at the beginning of the state of emergency, but over time it became inconsistent and was reduced to a telephone check. None of the control bodies has raised the issue of controlling the work of the police during a state of emergency.

The curfew in Serbia during the state of emergency was from 17:00 to 5:00 during the week and from 13:00 on Saturday to 5:00 on Monday (sometimes it started on Friday at 17:00, and even on Thursday). People over the age of 65 were not allowed to leave their homes at any time, but retirees could go shopping on Sundays from 4 to 7 P.M. Pet owners could walk from 11 P.M. to 1 A.M. every day (for the first few days they could not walk their pets at all), but not further than 200 meters from the house and not with more than two people together. In addition to regular police activities and duties, police officers had to check the citizens whether they adhered to all those restrictions.

In a state of emergency, the police should have taken care to respect the measures of restriction and prohibition of movement and assembly, health supervision and quarantine, and of giving permits for movement during the curfew to people who really needed it. The legal acts on the basis of which the restrictive measures were introduced were changed several times during the state of emergency, which indicated the absence of a plan to control the infection or to adapt to the situation given the lack of medical information on COVID-19 (Đorđević, 2020).

Frequent changes in regulations hampered the work of security agencies, especially the police and prosecutors, who had done most of the work on the ground related to specific tasks in controlling population movements and implementing health surveillance and quarantine measures. Due to legal inconsistency and almost daily changes in regulations, police officers and prosecutors were not completely sure, and often did not even know which regulation was in force that day, i.e. which rules were currently in force at the time of the procedure. In his work as a police officer, he often had to act on the basis of statements from press conferences, and not on an act published in the Official Gazette. It was similar in the practice of the prosecution.

CONCLUSION

Finally, the role and activity of the Serbian police during epidemics historically, have not changed much in recent decades. In addition to the restrictive role, i.e. sanctioning citizens, the police have had and continue to play a stimulating role in establishing and maintaining a satisfactory level of security. Some of the constant tasks of police officers during the epidemics are: providing sanitary corridors, providing quarantine and maintaining curfew, providing supplies of medicines and medical workers, monitoring epidemiologists, prosecuting criminals, etc.

Recently, and this was confirmed by the last epidemic, due to the increase in the number of infected people, but also due to the large number of deaths and contagious diseases, police officers were lenient in some cases, which was not a crime itself, and only warned citizens of the offense. Furthermore, the problems that appear and have appeared, especially from the appearance of smallpox in 1972 until today, arise mostly due to political pressures and doubts and unclear orders and orders of the authorities. In that sense, the police have huge problems in carrying out their tasks. In this sense, the role of the police is important and it is necessary to profile a clear role in the near future, and thus the tasks of the police during epidemics, as such challenges, risks and threats are expected with greater frequency.

REFERENCES

1. Brooks, R. & Lopez, C. (2020). Policing in a Time of Pandemic: Recommendations for Law Enforcement. Georgetown: Georgetown Law, Center for Ethics.
2. Chung, E. Pearl, B. & Hunter L. (2020, April 14). Policing During the Coronavirus Pandemic. Criminal justice. Accessed on July 30, 2020, https://www.americanprogress.org/issues/criminal-justice/news/2020/04/14/483165/policing-coronavirus-pandemic/.
3. Đorđević, S. (2020). Policija u vreme vanrednog stanja. Beograd: Beogradski centar za bezbednosnu politiku.
4. Fantino, J. (2005). SARS Outbreak 2003: The Response of the Toronto Police Service. *Police Chief,* Volume 72, No. 4, 22-28.
5. Gonzales, A, Schofield, R. & Herraiz, D. (2006). The Role of Law Enforcement in Public Health Emergencies. Washington: U.S. Department of Justice Office of Justice Programs.
6. Jaćimovski, S., Kekić, D. (2010). A Mathematical SIR Model for Epidemic Emergency. *NBP – Journal of Criminalistics and Law*. 15(3), 65–76.
7. Jones, J. D. (2020). The Potential Impacts of Pandemic Policing on Police Legitimacy: Planning Past the COVID-19 Crisis. *Policing*, Volume 0, Number 0, 1–8.
8. Jović, R, Savić, A. (2004). Bioterorizam – Biološki rat – Biološko oružje. Beograd: Institut za političke studije, Centar za istraživanje bezbednosti i terorizma.
9. Kekić, D. (2016). Upravljanje bezbednosnim sistemima u uslovima zaraznih (kontagioznih) epidemija. Beograd: Kriminalističko-policijska akademija.
10. Last M. Džon (2009). Rečnik javnog zdravlja. Beograd: Medicinski fakultet.
11. Mihailović, V. (1951). Iz istorije saniteta u obnovljenoj Srbiji 1804–1860. Beograd: Naučna knjiga.

12. Savović, M., Prlja, D., Stepić, D. (2006). Zdravstveno zakonodavstvo. Beograd: Pravnici za demokratiju.

13. Stogner, J., Lee Miller, B. & McLean, K. (2020). Police Stress, Mental Health, and Resiliency during the COVID-19 Pandemic. *American Journal of Criminal Justice.* 45, 718–730.

14. Stone, C. (2020, May 5). Policing a Pandemic: How Police Were, and Were Not, Prepared for COVID-19. Oxford. Accessed on July 29, 2020, https://www.worldpoliticsreview.com/articles/28736/policing-a-pandemic-how-police-were-and-were-not-prepared-for-covid-19.

15. Walton, R. & Falkner, S. (2020). Policing a pandemic: The challenges of maintaining law and order during the Coronavirus response. London: Policy Exchange.

POLICE CRIME RECORDING PRACTICES: EVIDENCE FROM SKOPJE CITY'S POLICE STATIONS

Vesna Stefanovska, PhD[1]
Faculty of Security, Skopje, University "St. Kliment Ohridski", Bitola, North Macedonia

Abstract: Police crime statistics are starting point for understanding crime rate in one country. They are important not only for the public in order to improve their confidence and perception of the police in controlling and reducing crime, but much more. Police statistics are important to the police themselves to improve their efficiency, to plan their activities in order to detect and clear up crimes. But, according to most research related to this issue, the main problems in crime recording are located in police practices and police discretion in collecting crime data and deciding what to record as a crime.

No detailed scientific research has been conducted in Macedonia on the manner and process of crime recording, as well as on the wider process of generating police statistics. This area should be of interest not only to the scientific community but also to the police services themselves in order to provide objective, confidential and accurate information on the crimes committed. In many national legislations there are national standards and analyzes for police crime recording in order to obtain objective and realistic data essential for further monitoring, detection and processing, both by the criminal justice system and by the police services themselves. There is a need for consistency and uniformity among police officers when recording it, while on the other hand, the establishment and proper application of such standards can increase public confidence in police statistics.

The above mentioned issues are subject of research and elaboration within this article.

Key words: crime recording, police practices, police station, crime data

INTRODUCTION

Police crime statistics have great importance in crime prevention theory and policy because they are an indicator of the crime state in one country and serve to observe crime dynamics, geographical

1 vstefanovska77@gmail.com

distribution and time variations and trends. They are also an indicator of the police efficiency in detecting, and clearing-up crime, and they have a great importance in crime prevention strategy. But they can help to achieve the stated goals, under assumption that they are accurate, confidential and an expression of the actual reported and recorded crime by the police. Bearing that in mind, the value, objectivity and usefulness of statistical data are issues that did not remain outside theoretical perspectives and research studies within various theoretical trends in criminology (Ignjatovic, 2008: 76). The studies start from the assumption that police crime statistics are the result of several processes and stages: reporting to the police; detecting; classifying reported incident as a crime;[2] putting legal qualification[3] of certain crime; and its recording in official police records. Those processes, from reporting to recording, are also subject to selection and decision-making by several stakeholders within police service (Magir, 2002). Namely, the police officers have certain police discretion to decide which reported incidents will be recorded as crimes, because the fact that one incident is reported does not means that it will be recorded as crime. In that regard, there are different attitudes about the importance and objectivity of crime statistics.

The dominant view within social constructivism and critical theories is an institutional approach which means that police data are suspicious and subject to manipulative practices by the police. The basis is that crime statistics are subject to construction and primarily serve to achieve certain organizational goals and priorities (Patric, 2014). They are the expression of individual and institutional policies and practices by the police services to record crime, and not show the real crime occurrence (Kitsuse & Cicourel, 1963, stated in Jupp, 1989: 93). Therefore, crime statistics can explain much more police organization, its values, culture, priorities and efficiency. Because of that, according to the institutionalism, crime statistics should not be analysed as merely sources of crime data, but the process of their production should be subject of exploration (Lomell M. Heidi, 2010: 122). In other words, crime data are socially constructed and they do not reflect the reality of crime, but, in certain way, create that reality.

Having in mind that, the crime rate in one country depends much more on police discretion, police practices and politics and is not merely based just on committed criminal behaviours. A wide range of personal and social factors is likely to affect both whether an incident is perceived as criminal and whether the observer then decides to report the incident to the police. In addition, although the police have a statutory obligation to record a crime, considerable discretion remains about whether it is considered sufficiently serious to warrant police attention. For examples, violent disputes between neighbours or members of a family may be classified as domestic – advice is given and the alleged offence is not recorded. Similarly, how a recorded offence is classified by the police as “theft from a person” or “robbery” as burglary, no loss or “vandalism” as “wounding” or “common assault” for example – will affect the rate at which certain crimes appear to be committed. Problems inherent in recording and variations due to police ‘targeting’ will also affect understanding of the extent of particular crimes (Eterno A. John, Verma, A. & Silverman B. Eli, 2014).

Thus, most frequently the question related to police recorded crime is whether the data show true or false picture of crime. The answer depends on many issues: the adoption of police recording standards to harmonize different police practices and to establish legal rules and guiding principles at national level, determination of organizational goals and priorities within certain period, establishment of police performance indicators, cognitive and other capabilities of police officers, etc. (Stefanovska, 2019).

2 Under classification of a reported event we mean classifying the event as a crime, misdemeanour or just complaint according to the already established classification (differentiation) scheme of the reported events to the police.

3 Under legal qualification of reported crime we mean determining and naming what exact crime is according to the Criminal Code.

Those issues should be considered not only by the scientific community but also by the police itself in order to recognize possible social, institutional and situational factors that affect the production of crime data.

In that part, a distinction should be made between crimes reported to the police or detected through immediate observation by police officers and crimes registered in the official police records, because the fact that a particular crime has been reported does not mean that it will be registered as a crime. Police decision in major part depends on police crime recording practices, which means on police organization, police resources, police perception, expertise and skills to recognize, classify and record the reported crime in the official crime records (Coleman & Moynthan, 2002). Also, the important factor for proper and unified crime recording among many police units at national level is the adoption of national standards for police crime recording (Tierney, 2006). They can ensure consistency and uniformity among police recording practices, while on the other hand, the establishment and proper application of such standards can increase public confidence in police statistics.

METHODS

The above mentioned issues were considered within the project *"The process of registration and statistical presentation of the classical forms of crime[4] by the police"* undertaken by the Faculty of Security – Skopje (February 2018 – May 2019) (Stefanovska, Gogov, Peovska, 2019). The study employed a descriptive survey design targeting a sample size of 56 respondents (uniformed police officers from nine local police stations in the Skopje City and police inspectors from Property and Violent Crime Police Units). The main goal of the research study was to identify strengths and weaknesses in the process of police production of the official crime statistics. In that sense, the study was aimed to investigate crime recording practices, competencies and challenges that police officers and police inspectors encounter.

Within the study, three aspects were subject of examination: (1) classification of reported events, (3) legal qualification of crimes, and (4) crime recording in the official police records within local police stations. For that purpose, several research questions were posed:

- How are the reported events classified by the police? Are there any dilemmas in classifying the reported events?
- Are there any dilemmas in legal qualification of crime? Who dismisses them?
- Where are the reported incidents and crimes recorded? Who is in charge?

For the purposes of data collection, semi-structured protocols for interview were developed. All respondents interviewed gave their written consent that their participation in the research study is voluntary. With regard to audio recording, each respondent was requested prior consent before recording. The collected data were categorized into three basic categories (thematic areas) and several subcategories: the classification of the reported events to the police, legal qualification of crime and police crime recording in police records.

4 Only property and violent crimes (Including blood and sexual crimes) were subject of examination within research study.

RESULTS AND DISCUSSION CLASSIFICATION OF REPORTED EVENTS

When a victim/injured party (or other citizen) reports a crime, whether on the phone number 192 or directly in the police station, the police need to clarify whether that case has really happened and is it a crime? In order to determine that, depending on the case and if it is possible, the police officers (patrol or from emergency response unit) go to the place of incident to check the reported event circumstances and eventually to block off the surrounding area as well as to keep track of who comes in and goes out. Actually, the initial responding officer plays a crucial part in maintaining the integrity of the place/scene and he/she also documents his/her initial observations, as well as the condition of the place/scene upon arrival. In most of the cases, the frontline police officers report whether there are elements of certain crime and whether there is a basis for further inspection and examination by the inspectors from the property or violent crime units. Although, the police inspectors need to determine the factual situation of the crime, the police practices indicate that they do not observe the place of occurrence for less serious crimes. As the respondents' state:

- a police officer goes to the scene, looks first at what is going on, takes data what, how, where the crime is committed... He/she informs the inspector for property crimes and the inspector decides whether he will come out or not.
- The uniformed police first go out at the scene ... they are obliged to go out to secure the event and to let us know... we (inspectors) generally go out (at the place occurrence) for a more serious type of crimes.

Upon finding that a particular incident has been committed, the police should determine whether the reported event fulfils the legal elements of particular crime (act of commission, object of attack, consequences, and other circumstances). Depending on the type of crime, determination of some crime elements can be done through examination of the place of occurrence (Article 62/1 of the Law on Police). But, when there is no need to make scene examination (for example, when the victim reports pick-pocketing, body injures or physical assaults), then the crime elements are determined through the victim's statement in the police. Based on the victim's allegations, the police officer records the reported event as a crime, which means that *the first impression* or (prima facie) *allegation-based model* is accepted. In this regard, police officers who make official report usually do not make additional verifications of the victim's allegations.

As they state: *usually the first contact is sufficient to record the incident as crime.* In addition, they state that "every citizen is individually warned that the false reporting is crime" (Article 366 of the Criminal Code) and the police officer with the warning given is exempted from responsibility if the reported crime is found to be false. This shows that an incident will be recorded as a crime if, on the balance of probability: the incident is defined as a crime by the law, and there is no credible evidence to the contrary. One reason for this policy seemed to be the desire not to have too many incident logs open on the command and control system. Whilst there can be advantages to this policy – information is available more quickly to crime pattern analysts; victims receive a crime number immediately if they require one for insurance purposes – a majority of officers believed criming early led both to the misclassification of crimes and the recording of 'spurious' reports of crime.

However, and given that crime recording is a social construction that often depends on the perception, knowledge and expertise of police officers to decide whether an event contains elements of a crime, several dilemmas might raise: when there is no clear evidence about severity of certain behaviour in order to classify as a crime or as minor offences, are there possible mistakes or police manipulation in crime recording and what purposes do they serve?

Although the legal nature of each crime is clearly defined in the Criminal Code, certain dilemmas and ambiguities are possible, especially between violent crimes that encompass body harm or other serious violent acts (such as: participating in a brawl, violence, bodily harm, coercion according to the Criminal Code) and misdemeanours (less offences) against public order and peace (such as: physical assault or participation, provocation or incitement to another) which are prosecuted under the Law on Misdemeanours. Why is this so important? The recording of one event as a minor offence although it fulfils the elements of crime, distorts the real crime rate. Consequently, less crimes means the false picture about police efficiency and clearing up crime rate. What our police officers state about such kind of police gaming?

For the grey figure of crime[5] *we can make a lot of shades (of colours), from dark grey to light grey.*

This statement clearly indicates that the police has discretionary power to decide one way or another, particularly in certain cases when there is a thin line to classify them under the Criminal Code or under the Law on Minor Offences. What cases are most controversial which can be subject of manipulation and improper classification?

One of them is the act of physical assault that, according to its severity and other circumstances can be classified as a crime (violence, participating in a brawl or bodily harm) or as a misdemeanour against public order and peace. How it will be classified depends on perception, knowledge and expertise of initial responding police officer who receives a report of the event and is the first to arrive at the place of occurrence. Sometimes one element can be decisive for an incident to be classified one way or another. That is way the professional judgement and knowledge of the law and recording rules need to be on a high level for each police officer. The police practice, according to the respondents, is to classify the event as a misdemeanour in the official records, and if in the further proceedings come up any other evidence that proves certain elements of crime, then to reclassify the already recorded misdemeanour as a crime. These practices have certain shortcomings because in many cases the event is closed without any further investigation. In addition, some of respondents state that frontline officers had insufficient knowledge to make consistently accurate classification decision which resulted in incomplete crime reports. Sometimes the police officers downgrade crimes to less serious offence (misdemeanour) to improve the likelihood of securing a conviction under misdemeanour law.

Or in other cases, although there are visible injures on the victim's body inflicted by the offender, the police officer demands medical documentation that proves serious bodily harm in order to classify the event as a crime. Without such documentation, it remains as less serious offence. Other police practice shows that sometimes certain reported cases with clear elements of a specific crime, for certain reasons, are not recorded as such. One of the reasons is the existence of so called unwilling victims. "Unwilling" victims are those who, for whatever reason, do not wish to cooperate with the police to establish that an offence has occurred, or provide information that might correctly classify an offence. In circumstances where a crime was subsequently deemed not to have taken place, or where a reported event had been correctly recorded but the wrong classification applied, the frontline officers often appear to be required to pursue victims for additional information to support reclassification or no-criming decisions. Several explanations were offered for why some victims are reluctant to cooperate with the police. Some incidents are fairly trivial and victims may simply want the police to know about it, but do not expect them to investigate. Other incidents are reported by the third parties, and the victims do not want police involvement. So, the phenomenon of not-recording, reclassification (or no-criming)[6] occurs when the injured party (the victim) does not wish to make a statement on the record or does not wish to proceed further (to institute criminal proceedings against the offender).

5 Under grey figure of crime we mean the crimes that are reported and known by the police, but not detected, and thus they are not the part of police crime reported data.

6 Under no-criming we mean when one already recorded crime needs to be removed from records after

Those phenomena often occur in domestic violence cases. When the victim does not want to prosecute the violent offender, but only to be intimidated, the police can only classify the reported domestic violence incident as misdemeanour "harassing another in the apartment" (Article 7) or "scolding, shouting or indecent and insolent behaviour" (Article 4) under the Law on Misdemeanours. The police officers explain "taking" an easier way when classifying abusive violent behaviour that they cannot classify the violent behaviour as a crime because if the victim does not want to initiate criminal proceedings against the perpetrator, an official statement cannot be taken by her side. On the other hand, even after receiving an official signed statement, the victim may further refuse to proceed with the case. For example, according to respondents' statements, over a period of about six months, out of 113 official criminal reports for "bodily injury", in 15 cases the victim changed their mind and gave up from further criminal prosecution. But given that domestic violence often recurs over a longer period of time, those victims who have repeatedly reported violence to the police without the intention to prosecute, at the end, after several reported incidents decide to submit criminal charges against the perpetrator.

In addition to the withdrawal of the victims, when classifying domestic violence incidents, obtaining an evidence for committed crime is also an obstacle to prove certain elements of crime. According to the statements of some of the respondents, for the determination of physical or psychological violence in order to classify certain violent acts as crimes such as "bodily injury", "coercion", "endangering safety", it is necessary to submit medical documentation for the harm inflicted or certain report by a psychiatrist that, also prove the inflicted injures. In the absence of such evidence, the reported incident of domestic violence is classified as a minor offense (misdemeanour or complaint).

Such a classification because of the victim's withdrawal or lack of evidence does not reflect the true severity and seriousness of the family violence. Although, the police, ex officio, take measures and exercise police powers to detect the reported crime and, when there are grounds for suspicion, have to fill criminal charges against the offender, the police practices show that even if the victim's will is irrelevant, they close the case after victim's withdrawal. This practice needs to stop, because the retraction of the injured party from prosecution is irrelevant for further action by the police. Crimes violate basic human rights and fundamental values in the society and therefore the criminal justice system, including the police, has an obligation to prosecute the perpetrators. In this way the special and general prevention of prosecution, i.e. punishment, is realized, which means deterrence and intimidation not only to the perpetrator, but also to the potential perpetrators of committing crimes. In addition, any criminal reaction should provide a public assessment of the crime and at the same time send a message to potential perpetrators and victims that such behaviour is unacceptable. Thus, the police and criminal justice response should protect the public interest in resolving and preventing crimes. Therefore, the victim's will to prosecute serious crimes is irrelevant for further action by the police.

LEGAL QUALIFICATION OF CRIMES

When the police have verified that the reported event is a crime, the next step is its legal qualification, i.e. put the crime under a specific article of the Criminal Code. This process is also important because on the type of crime depends the extent of criminal responsibility, the way of further proceeding (ex officio or by private law suits), the type and the extent of criminal sanctions, and finally the objectivity of real crime rate according to their nature. Therefore, another question that arises is who makes legal qualification of the crime: the uniformed police officer who has made the initial examination of crime

additional examinations which prove that the crime has not actually happened.

scene or who has been the first to hear the victim, the police inspector from property or violent crime units or the public prosecutor who initiates criminal proceeding?

This question has no unique answer for all cases, but depends on each individual case and its circumstances. In addition, the respondents from different police stations state that they have different police practice related to legal qualification of reported crimes. For example, the legal qualification of property crimes (theft, severe theft, robbery, burglary) is usually given by the uniformed police officers. This practise is because the police inspectors very rarely go out at the crime scene to determine the factual situation of crime, but they trust the obtained crime data ensured by the frontline police officers. In addition, the police officer to whom the crime was reported in the police station by the victim notifies its legal qualification in the official crime records. But, on the contrary, the legal qualification of violent crimes is mostly verified and determined by the inspectors from violent crime unit.

Similar to the classification, there are certain dilemmas with the legal qualification of the crime as well, that may arise due to incompetence and wrong perception of the police officers or may be done purposely for certain organisational aims. In the first case, as some respondents' state: *We have colleagues who are inexperienced, make mistakes in the legal qualification of robbery, severe theft, insolent theft ... kidnapping ... sometimes they find a problem.* Other example indicates that improper qualification can be made for attempted burglary that was not completed but the offender has made criminal damage (on the door, window, and other space). In such cases, usually the police inspectors form property crime unit record the attempted burglary only as criminal damage (damage to objects of others which is prosecuted by private lawsuit) in order to reduce the crimes that are prosecuted ex officio. As they stated: *They record the less serious crime ... to save time, if you have patrols ... any damage to the door, a window, a car is at least an attempted theft ... he (the offender) has damaged them to do something (to steal). Without the intent, he doesn't make damage. But to save time and engagement ... because you have other duties, another intervention awaits you, you are poor with people and that is the way you take records for criminal damage.*

Based on both statements, wrong qualifications sometimes occur as a result of officers misunderstanding of the crime elements, but sometimes the performance culture has a greater effect. The evidence from this research suggested that, although frontline officers perceived performance as an issue, performance pressure was felt most acutely by police inspectors from the property and violent crime units. This leads to a conclusion that the legal qualification of the crime can sometimes be the subject of a calculation: to avoid additional workload, to decrease severe thefts that need to be prosecuted ex officio, to get rid of the performance pressure, etc. This calculation indirectly indicates that official crime statistics are subject to calculation, or perception, and thus to the construction by the police.

CRIME RECORDING

After processes of classification and legal qualification, the police officer needs to record the crime in the police official documents/records as a basis for further processing. In the police practices, there are mainly two models of recording based on the first allegations for the crime. One is the prima facie (allegation) based model of the first impression which means that with the acts of reporting and stating the allegations by the victim, the event is recorded as a crime. This also means that when the information obtained at the first point of contact in the police station satisfies the police officer's expectation for particular crime, it will be recorded without delay. Usually, certain crimes (which do not demand examination of place of occurrence by the police) will be recorded on the same day when

the report is received by the victim in the police station. This is also victim based approach, which believes that victim's allegations are the sufficient basis for recording the reported event as a criminal offense. This principle follows from the assumption that the victim should be trusted. However, any change in the initial classification (or further qualification) requires the additional investigations and evidence to confirm that the crime did not occur or that it was a matter of another crime (Fildes & Myhill, 2011: 18). The recorded crime may be re-classified or removed from the crime data base only if there is clear evidence that the reported event has no elements required by criminal law. According to the second detection and evidence-based model, certain evidence is required in order to prove the elements of certain crime, which means that the reported crime need to be detected. In addition, "evidential" means that the details of any incident will be challenged and validated, in the same manner that might be expected if the case were to be presented in court in order to charge the suspect (Her Majesty's Inspectorate of Constabulary (HMIC) (2000).

In our police practice, although not explicitly regulated, the model based on the first impression is adopted. Thus, according to the Rulebook on the performance of police affairs, *the police officer, immediately upon receipt of the criminal charges ... shall compile notes for getting crime report* (Article 58/2 of the Rulebook on the Manner of Performing Police Offenses, 2014). This norm regulates that the police officer, if there is no basis for an inspection of the crime scene, does not take additional investigations and evidence to establish the accuracy of the victim's allegations about the reported crime.

So, with the act of crime recording in official police records, the crime gets statistical values and became statistical number and part of the official crime statistics on the reported crime. This practice shows that the statistics reflect the police activity to hear the victim as an injured party who reports the crime in the police station (with or without crime scene inspection which depends of the crime type and circumstances). However, there are examples in police practice where, despite the existence of crime elements, the reported event is not recorded and thus does not receive statistical value. The most common reasons are when: the injured party, upon reporting the offense, relinquishes further processing or when the injured party, after the initial oral report, mainly by phone becomes unavailable to the police in order to give an official signed statement in police station. According to some respondents, 5 to 7% of reported crimes are rejected with an official note, usually when there is minor material damage. They also often say that the victims cannot be persuaded to sign a report, so if there is no report, there will be no official record. Consequently, without official record, as if the crime had not occurred. As some respondents say: "it is invisible and you can't count" or "no records, no crime". Thus, the reported crime will be statistically counted if the official record was taken and signed by the victim who reported it to the police.

Despite these legal rules, the majority of respondents agree that 90% of crime statistical data are correct and are the reflection of the real crime situation.

CONCLUSIONS AND RECOMMENDATIONS

The extent and condition of the reported crime relies primarily on the will of the citizens to report the crimes, and secondly on the proactive function of the police. The reported crimes are directly recorded in the police stations without delay, after examination of the place of occurrence by the uniformed police officers or by the inspectors of violent or property crime police units. Namely, the actual situation of the reported event is initially determined by the uniformed police officers who first arrive and examine the place of occurrence and assess whether there are any elements of crime and what crime

has occurred. When there is no need for crime scene investigation by the property or violent crime police units (or by forensics investigators), the assessment of the event depends on the knowledge, cognitive and intellectual abilities of the frontline police officers. This is very problematic because, not every police officer has special knowledge and expertise in criminal law and criminology. Also, there is inconsistent practice in the legal qualification of crimes because it can be subject to calculation by police officers: lower number of recorded crimes means lower number of police liabilities, fewer cases to investigate, higher rate of crime detection, etc. Apart from police manipulations, failure to record or inadequate recording of reported crime is in some cases determined by the will of the injured party. Errors can occur for those offenses that contain elements of both a misdemeanour and a criminal offense that are prosecuted ex officio, but differ according to their severity and the seriousness of the harmful consequences. Classification errors are also made when the injured party does not want to prosecute the offender or, after reporting an event, the victim changes his/her mind and refuses to make an official statement to the police to report the crime. Therefore, the offense is not recorded or is recorded as less serious offense.

Although such a practice is rare, it is present. Claims that 90% of the reported crime data is accurate mean that 10% cannot be guaranteed to be accurate. The fact that the injured party does not want to prosecute the perpetrator does not mean that there is no crime. The absence of further criminal proceedings or releasing because of insufficient evidence against the offender does not mean that the offense did not occur. In this context, the recording of the offense should be the result of the factual situation, not of police calculations, priorities and free discretion in decision-making process. That process must be limited by certain legal rules and crime recording standards that will reduce various interpretations and possible errors by the police.

In order to reduce instances of incorrect recording and classification, the police need to increase officers' knowledge and understanding of the criminal law, criminology and recording principles, as well. Some interviewees were sceptical, however, of the need for frontline officers to be experts in crime classification. One approach would be to, firstly, make sure the officers and the initial call takers are aware of whether and when to record an incident as a crime, in order to reduce the number of incidents that require reclassification. Secondly, the police could encourage greater use of professional judgement in order to reduce the proportion of reclassifications that appear to occur as a result of a process-driven desire for accuracy and compliance. Another task is to develop and adopt unified methodology for counting and measuring crime and to established certain standards and principles so as to prevent legal uncertainty and possible abuse of discretion in decision-making by the police. They also ensure consistency and harmonization of the various police practices in recording crime, which, on the other hand, increases the confidence in the objectivity of police statistical records (Stefanovska, 2019). This will make their greater use and data analysis within policing because making good use of them can be highly beneficial.

REFERENCES

1. Coleman, C. & Moynthan, J. (2002). The Social Construction of Official Statistics. In: Jewkes, Y & Letherby, G (eds., 96 – 104). *Criminology a reader.* SAGE Publications.

2. Criminal Code, Official Gazette of the Republic of Macedonia no. 37/96

3. Eterno A. John, Verma, A. & Silverman B. Eli (2014). Police Manipulation of Crime Reporting: Insiders' Revelations. *Justice Quarterly.* DOI: 10.1080/07418825.2014.980838

4. Fildes, A. & Myhill, A. (2011). Understanding crime recording, research, Analysis and Information, NPIA, National Policing Improvement Agency
5. Ignjatovik, G. (2012). Kriminologija, Pravni fakultet, Univerziteta u Beograd
6. Jupp, V. (1989). *Methods of Criminological Research*. Routledge.
7. Law on misdemeanours against public order and peace, Official Gazette of the Republic of Macedonia no. 66/2007.
8. Law on police, Official Gazette of the Republic of Macedonia no. 114/2006
9. Lomell M. Heidi (2010). The politics of Numbers Crime Statistics as a Source of Knowledge and a Toll of Governance. In: Shoham, G. Shlomo, Knepper, P. & Kett, M., (eds. 117 - 152). *International Handbook of Criminology*, CRS Press.
10. Magir, M. (2002). Podatoci i statistika za kriminalot in Megvaer, Morgan & Rajner (eds.). Oksfordski Priracnik za kriminologija (prev., 2010, Napres, Skopje).
11. Patric, R. (2014). *A Tangled Web: Why you can't believe crime statistics.* Civitas
12. Rulebook for the manner of conducting police powers, Official Gazette of the Republic of Macedonia no. 149/2007, 117/2014.
13. Stefanovska, V. (2019). „Factors related to crime recording by the police: conditions and challenges in Macedonia", Conference Proceedings, 6-7 November, 2019, Belgrade, International scientific conference, „Archibald Reiss Days", University of criminalistics and police studies.
14. Stefanovska, V. (2019). Real or false image of police recorded crime: What crime data show?, Criminology & Social Integration: Journal for criminology, penology and behaviour problems, HRCAK, Zagreb Vol. 27 N. 2, 221 – 234, https://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=337023
15. Stefanovska, V., Gogov, B. & Peovska, N. (2019). Procesot na evidentiranje i statisticko prikazuvanje na klasiciniot criminal od strana na policijata. Fakultet za bezbednost – Skopje.
16. Tierney, J. (2006). *Criminology theory and context* (second edition). Rearson Education.
17. Her Majesty's Inspectorate of Constabulary (HMIC) (2000) On the Record: Thematic Inspection on Police Crime Recording, the Police National Computer and Phoenix Intelligence System Data Quality. London: Home Office.

ORGANIZATIONAL ASPECTS OF THE POLICE SYSTEM IN THE FIGHT AGAINST TERRORISM

Dragomir Jovičić, PhD[1]
Faculty of Security Sciences, University of Banja Luka, Republic of Srpska
Gojko Šetka, PhD[2]
Faculty of Security Sciences, University of Banja Luka, Republic of Srpska

Abstract: Successful combating terrorism as the most current security problem is conditioned by the adequate organization of police system. It is necessary that the entire police system, as well as entire state security system keep one step ahead of modern terrorism as much as possible. It requires security services to use all available agencies in their work in order to notice security threats in time, have all the necessary information serving to efficient prevention and repressive actions against terrorism. As much diligence put in combating it, terrorism is today a global threat and it cannot be ever exterminated. However the role of entire security system is to downscale it to the smallest forms possible. We must realize that there is no efficient combat against terrorism without cooperation and coordination among different police and security services on international level.

Keywords: *police system, organization, police, security system, terrorism, coordination, terrorist threat, security services*.

INTRODUCTION

Besides being the problem of nation states, terrorism represents one of the most explicit (if not the most explicit) jeopardy for the global security. Terrorism can be discussed in different ways and observed from various aspects, but certainly the most significant is that terrorism became a global security threat to the entire world. This stems from the reason that terrorism is one of the most dangerous forms of threatening state security, security of region, and therefore entire international community.

---

1 dragomir.jovicic@fbn.unibl.org
2 gojko.setka@fbn.unibl.org

It is crucial to notice terrorist indications in time and therefore it is a necessity for every state police and security system to be "a step ahead" of modern terrorism, as much as it is possible in counter-terrorist combat. Security services should use all available means in performing their duties with the aim to timely scan security threats and gather necessary information in order to have the most efficient preventive activity. Certainly, if preventive measures do not produce expected results, the gathered information should be incorporated in the repressive activity of the responsible state authorities.

If we analyze the global terrorist activities in the previous 30 years, we can see that the attacks are getting deadlier and the number of terrorist attacks (with large numbers of casualties) increases. However, tactics remained intact: bomb and suicide attacks, armed assaults, assassination attempts and kidnappings are still mostly applied. The suicide terrorism is going through expansion on daily basis with suicide attacks around the world. Upon analyzing the direct casualty by regions, it can be found that Europe, Latin America and Middle East have the highest rate of terrorist threats. Such trending is continued in the first two decades of this century, which resulted in hundreds of terrorist operations in the world (Sikman, 2009:15).

After terrorist attacks in Paris (November 13th, 2015), Brussels (March 22nd, 2016) and Nice (July 14th, 2016), it became clear that terrorism is one of the largest issues of modern day world and that terrorist organizations are the most dangerous adversaries of modern states. Terrorists have no limits or rules and they are gaining many new supporters, i.e. people that see terrorism as the only way to fight for rights they believe are taken away from them. There is an undoubted conscience of the seriousness of this problem, but there is still no international consensus on the questions of terrorism and which organizations should be considered terrorist.

THE IDEA AND HISTORICAL DEVELOPMENT OF TERRORISM

Roman philosopher Seneca said once that "human is every day in danger of another human". In a way it can verify that terrorism as a phenomenon is founded in ancient times and is present throughout history. Robert A. Friedlander claims that individual terrorist acts are motivated by personal and political passions and known since ancient times since murders and violence were methods of radical changes. He also distinguishes group terrorism as a political tool which was originally used by Islamic armed groups. They are widely known as the Ismaili order of Assassins, first armed terrorist groups in history (Gacinovic, 2005:15-16).

It is not easy to determine terrorism itself as it is a complex phenomenon with a multitude of forms which makes hard to define it even for the most persistent and qualified researchers. As we are all aware, it has always been easier to define static than dynamic appearances. The dynamic ones are conditioned by a plethora of different factors and appear in various forms. It is clear that there are numerous deep-rooted yet unclear (not to mention how contradictory and colloquial) ideas of terrorism. For the sake of this essay, let's point out the definition by the US Department of Defense from 2000: "the unlawful use of violence or threat of violence to instill fear and coerce governments or societies. Terrorism is often motivated by religious, political, or other ideological beliefs and committed in the pursuit of goals that are usually political." The US State Department has the following definition of terrorism from 1984: "premeditated, politically motivated violence perpetrated against noncombatant targets by sub-national groups or clandestine agents". This is one of the rare administrative definitions which define participants – subjects of terrorism and exclusively as non-state participants. This

definition is very influential in the world of administrative definitions so in practice it negates almost every other definition that sees the state as the participant in the act of terrorism. The UK Government defines terrorism as "the use or threat or action designed to influence the government or to intimidate the public or a section of the public for the purpose of advancing a political, religious or ideological cause" (Simeunovic, 2009:17-43).

According to professor Milo Boskovic, terrorism entails doctrine, methodology and agency of provoking fear and insecurity among citizens with the systematic use of violence in order to achieve certain, mostly political goals. Motives of terrorism are commonly political, but they can also be purely based on criminal. In political sense, terrorism is systematic organized violence over a passive subject with the aim to keep the subject in the condition of political subjugation, causing public distrust in order and authority, or extracting political concessions. In criminal sense, terrorism is related to gaining profits out of the terrorist activity such as: armed thefts, taking hostages, blackmails, setting explosives, threats to blow up an object, burning down companies, hotels, shopping malls, ruining vehicles etc. (Boskovic, 2015:528).

Another interesting viewpoint comes from professor Vukadinovic who sees terrorism "not a form of guerilla warfare neither political nor ideological movement. On the contrary, certain groups with political, philosophical or religious belief use it as a methodology of destabilization of a certain country or region in order to promote religious, extremist, radical Marxist, racist or fascist belief" (Vukadinovic, 2004:205).

So terrorism appears in the ancient times of human history and endures through different forms up until today. Since its beginning it manifested through assassinations of emperors, kings, military leaders and statesmen of different level, setting explosive devices, kidnapping, etc. Throughout human history, people applied different tactics and methodology of terror.

Even in years BC, assassination attempts on the political leaders of the time were organized and even glorified. Persia and Assyria were ravaged by fear and panic caused by many assassination attempts. During the French Revolution in 18th Century, Robespierre applied terrorist tactics in order to destroy the majority of French aristocracy (around 40.000 people) and most of them ended up under guillotine (Stajic, 2008:32).

During the American Revolution, terrorism was performed against the British army and their supporters among the local population. It is also important to mention terrorist activities from the late 19th century and the first decades of 20th century in the Tsarist Russia. The majority of those terrorist groups were motivated by fight for freedom of colonial slavery, i.e. "struggle for national liberation" (Stajic, 2008:33).

After the WW2, terrorism became important factor of subversive activity in many newly formed states, as a substitute for struggle against the autocratic regimes, and many would say that trend continued till today. Modern terrorism expanded between 1950 and 1970, when the violent acts for political aims or social awakening became popular strategy. In the final decades of the 20th century, terrorism expanded beyond national borders and as such became important expression of political stance and the international problem. Because of all that, terrorism must be confronted simultaneously by military and police tactics, politics, financial, scientific and other aspects of counter-terrorism (Stajic, 2008:36).

Nevertheless, terrorism is increasing since the Cold War ended, so the warning of analysts that a real danger lures and can lead the world into the epoch of terror should not be neglected. Terrorism would be the greatest threat to security of states, region and international community. If we analyze the global terrorist activities in the previous 30 years, we can see that the attacks are getting deadlier and

the number of terrorist attacks (with large numbers of casualties) increases. So threat to the modern world is big but the very same world still does not have adequate answer to it, i.e. adequate system of counter-terrorism and protection.

Although terrorism exists through entire historical development, and studied as such, definitions of terrorism can also be changed in the new era. Today under terrorism we consider large, independent and self-sufficient groups, religious fanatics using violence and violent groups terrorizing everyone who is different. All of them fight for a certain political goal, liberation of some people, territory or country (Galijasevic, 2012:16).

SECURITY THREATS: TERRORIST ACTIVITIES

Terrorism represents a social phenomenon seen as a completely new thing, considering how it appears on the outside. If we disregard what is currently the greatest problem of humankind, i.e. COVID-19 pandemic, terrorism remains security problem no. 1. Basic characteristic of terrorism is its global character, i.e. possibility of jeopardizing in any country, anytime and anywhere on Earth.

Terrorist activities jeopardize individual security faced with concrete terrorist act, but also the security of nation states where the acts occur. National security is a synthesis of society and state security as well as its participation in the international and global security. It is a certain condition of protection of vital values of society and state, which is achieved by functionality of state and inter-state sector of national security system. So the object of national security as a scientific discipline represents the security of state and society, i.e. the achievement, maintenance, development and protection of vital values and interests from various threats, outside or inside. More specifically, the objects of national security are appearances of jeopardizing vital referent values of state and society, then their function, organization and system by which the state and society protect the individual values, state values, social values or international values (Mijalkovic, 2009:21).

Performing a terrorist act in order to kill, kidnap or physically or mentally harm a selected person (assassination attempt on state official, e.g.) is something terrorists use to spread panic and fear and put pressure on the surrounding of the victim, breed insecurity and force the indirect victim to unconditionally submit to their demands for the purpose of their political agenda. The victim that is directly assaulted is usually secondary victim, and the one attacked indirectly (state, government, e.g.) is in fact the primary target of the terrorist act.

Negative effects of terrorism manifest through at least three dimensions of state and social life. Human, economic and security (in narrower sense): human dimension refers to violation of human rights of many direct and indirect victims of terrorism. The problem is larger since many states still do not have strategies established for prevention and combating terrorism, protection of human rights of potential and actual victims which leads to their victimization. Dimension of economy refers to the effects terrorism leaves on the transition in economy which is one of its causes and conditions of its inception. The security dimension refers to the jeopardizing of national security by slowing down the process of democratization of the so-called "transition societies", subverting democratic institutions and rule of law, as well as creating numerous social-economic problems. Weak and corrupt state institutions and inadequate legislation disable successful confrontation to this issue which in the end leads to national security being endangered from within and outside (Milasinovic, Mijalkovic, 2011:8).

It is undeniable that the essence of terrorism is intimidation for the purpose of developing the sense of insecurity and anxiety. It could also be claimed that terrorism is a kind of war, yet unlike classical war, this is unique by the use of weapon force against aims which would not be directed at during the regular war. Also its results are far different from the traditional war necessities. The final goal and product of terrorism always is fear. For Charles W. Kegley, "causing fear" is the main aspect of terrorism; it is like a publicity stunt to get people's attention and gain sympathies for their terrorist goals and the death of great number of people, as we witnessed on September 11.

Thomas Homer-Dixon claims that "Complex terrorism is particularly effective if its goal is not a specific strategic or political end, but simply the creation of widespread fear, panic, and economic disruption. This more general objective grants terrorists much more latitude in their choice of targets" (Homer-Dixon, 2002:52-62).

Other than fear and publicity, innocent victims are the important element of terrorism. The choice of innocent civilians as targets portrays the lack of morality among the protagonists of terror. "Terrorism defies moral norms of war by choosing and accepting to kill innocent rather than finding a way to avoid them being harmed" (Johnson, 2003:224-225).

Brian Jenkins focuses on the desire for maximum publicity and provoking short-term and long-term psychological effects. That goes beyond political gain and innocent civilian victims. "Experts agree that Terrorism is a politically motivated tactic involving the threat or use of force or violence in which the pursuit of publicity plays a significant role. It is merciless and completely is discord with humanitarian norms" (Laqueur, 2003:151).

ELEMENTS OF NATIONAL SECURITY SYSTEM IN COUNTER-TERRORISM

As a concept, security is very controversial and it is almost impossible to find agreement about its meaning. And the greatest disagreements stem from the values these opinions aim to defend (physical and property security, political independence, territorial integrity, international peace, etc.) and the main object of protection (citizen, individual, state, international community, social security, financial system, ecology, etc.).

National security today includes security of the society and security of the state, but also their participation in obligations of international and global security. It involves a certain condition of protection of their vital interests and values which is optimized by the function of military, police and civilian, state and private sector of the national security and legal system, with relying on many aspects of international cooperation in the field of security. For "outside" directions, elements of security are armed forces, that is, army and intelligence services, which also rely on norms of international cooperation as much as they do within the country (Dragisic, 2009:163-164).

Different authors have different approach in defining system of national security, and the one given by professor Ljubomir Stajic seems acceptable: "If we would like to define the security system we could say it is a form of organization and functionality in implementation of acts and plans for prevention and repression and all in order to preserve sovereignty and integrity of the state, in its Constitution order, freedoms and rights of people, as well as all other social and international values from any form of danger" (Stajic, 2005:67).

National security of each country stems from the politics of national security. Being the core function of the state system, security represents its top interest and precondition for normal way of life. Entities at all levels of security - individuals, societies, states, and the international community - participate in the protection of national security. States still have all resources for the protection of all levels of security against most challenges, risks and threats.

For the sake of this essay we will focus on the police as the unavoidable element of security in prevention of all forms of threatening every country's system. Of course it has important role in counter-terrorism, although usually other services have advantage in that sector (intelligence services, e.g.). This may be especially interesting for Bosnia and Herzegovina, having in mind all the problems of organization and functionality of the entire state apparatus, not to mention security and police system of this country.

Assignments and roles of police in modern society are numerous and various. They are directed towards interests of all citizens and entire society as well as on the interests of the state apparatus and political organization of society. Therefore, we conclude that the role of police in modern society is very complex, not just formally but also in variety and multitude of police tasks. The most important segment is intersection of various police tasks. We can then accept the thesis that police role in democratic society is the product of many compromises among the conflicted principles and ideas (Milosavljevic, 1997:125).

Police was highly important for every state since its foundation. Through the historical development of state and society, the role of police was shifting towards stronger position. It led to the special emphasis within the modern society on the protection of citizens' interests. We need to be aware of the fact that contemporary police development brings more assignments and increase in numbers. Our country is an obvious example of that, as well as other countries in the nearest surrounding (Jovicic, Setka, 2018:40).

Police has a significant role in counter-terrorism, especially in present-day Bosnia and Herzegovina. The reason for that is that in comparison to other agencies in Bosnia and Herzegovina, police system is the best organized. Police have local organization units that based on work of their police stations and precincts in municipalities get to be the most visible state authority. Only other security agencies are nowhere near as accepted by citizens as is police. It is another reason to dedicate full attention to the organization of police system and police agencies. Only when well organized can the police system be functional in resolving security issues.

Creation of police system in one country represents complex and responsible work dependent on many factors. Very important aspect is territorial organization of country, political system, inner relations (especially in multinational states) and tradition of police organization. On the other hand, if in a country there are two or more police organizations, each of which is subjected to special centers (controls) which are autonomous - in that case it is a model of a complex police system. The coordinated model of complex police system is more present in Bosnia and Herzegovina and one could say it is a typical structure of modern police organizations. It is of high importance how data is shared among police agencies.

When creating police system all important elements must be analyzed (element that police organization depends on). After this analysis, the most functional police system must be established on a rational level and it will be accepted by citizens in practice. Unfortunately, that is not the case for Bosnia and Herzegovina, and many indicators show low rate of efficiency. This is a real problem because such police system can hardly be successful against terrorism.

How the police system is efficient in their work (fighting crime) can best be illustrated by the indicators of the state of crime in Bosnia and Herzegovina for the period between 2007 and 2013. ''In the

reporting period all prosecutors in Bosnia and Herzegovina received a total of 256,888 applications from all police agencies, out of which 182,430 cases ordered an investigation, which means that 74,458 or 28.98% (almost one third) of applications was dismissed as unfounded and not at all ordered an investigation. Furthermore, although the investigation was ordered in 182,430 cases, it is not a prosecution in 45,830, or 25.12% of cases (more than a quarter). This means that almost a third of cases were not prosecuted. If we look at these indicators, then there is information that the verdict of 51.892 or 28.44% less compared to the ordered an investigation, or the 126,350 or 49.18% less in relation to the applications that have been received prosecution in Bosnia and Herzegovina. Only half of it is processed, which points to two facts. First, that there is something wrong with the quality of police work, and second, that the cooperation between law enforcement agencies and prosecutors' offices is on a sufficiently high level. (Setka, 2016:315).

After conducting the research within the police system in Bosnia and Herzegovina (the survey did not include all levels of the police system, i.e. eight police agencies, a sample was 740 respondents - police officers), we came to a large number of indicators on the current state of the functionality of the police system. On this occasion we would like to mention just an answer to one question, which most strikingly illustrates the efficiency and functionality of the police system. To the question: ''Could police structures in Bosnia and Herzegovina, organized the way they are, respond to the most complex forms of endangering security?", the largest number of respondents, 61.2%, believe that such organized police structure in Bosnia and Herzegovina can only partially respond to most complex forms and types of threats to security. They are 10.5% of respondents who believe that such an organized police structure in Bosnia and Herzegovina is not able to respond to the most complex forms and types of threats to security. These results led to the notion that such an organized police structure in Bosnia and Herzegovina is not able to respond to the most complex shapes and forms compromising security (Setka, 2016a:268). These results point us directly to our claim that current police system in Bosnia and Herzegovina is not able to efficiently combat with terrorist threats. It is obvious that basic organizational aspects of political system are not compatible with the current organization of police system in Bosnia and Herzegovina, which influences its efficiency in fighting crime.

CONCLUSION

The more developed a society is, the more developed are the sources and forms of jeopardizing security. In present-day world troubled with numerous armed conflicts and other tensions among countries, terrorism became the dominant word. As much diligence put in combating it, terrorism is today a global threat and it cannot be ever exterminated. However the role of entire security system is to downscale it to the smallest forms possible.

In order for security services to deal with the problem of terrorism successfully, strong and firm will is required, as well as cooperation and coordination among different police and security services on international level. Organization of security and police agencies of any state is adjusted to the needs and policies of the very state, and the structure of most of security services is similar in almost every country.

Other than police, intelligence and security services, state must invest much more in cooperation between civilians and army. In these modern complex security conditions, its progress would bring us closer to resolving complex problems that cannot be solved by mere use of force. The point of this cooperation would be connecting military and civilian representatives on a certain level. Their cooperation would bring to reaching joint interests and such type of cooperation represents the policy of national security.

The threat of terrorism is enormous problem as much as it has been in the past and according to present-day state of affairs for many countries in the world and the dangers looming, it will be on the biggest security threats in the future. In order to counter terrorism with success, national security services must be highly professional and organized, should not underestimate nor overestimate terrorist organizations. It is constantly necessary to act preventively and repressively and gain knowledge on terrorists and their activities.

One of the significant preconditions for combat terrorist threats is the organization of police system of one country in accordance with all important organization aspects of police system. It is necessary to perceive all key factors influencing the organization so the police system organizes in accordance. If the police system is organized in opposing or confrontation with the constitution, political system or territorial organization of a country, then such police system won't be efficient in fighting crime or terrorism. As an example of police system not organized in the best way we can mention police system of Bosnia and Herzegovina. There are many indicators showing poor efficiency in combating crime which is direct consequence of key organizational aspects, their foundation or development.

REFERENCES

1. Boskovic, M., (2015). Criminal lexicon. Novi Sad.
2. Vukadinovic, R., (2004). International political relations, Zagreb.
3. Galijasevic, Dz., (2012). Terrorism in Austria. Belgrade.
4. Gacinovic, R., (2005). Terrorism. Belgrade.
5. Dragisic, Z., (2009). National security system - an attempt to define the term. Belgrade: Vojno delo, vol 3.
6. Jovicic, D., Setka, G., (2018). The organization and jurisdiction of police. Banja Luka: Grafomark.
7. Johnson, J. T., (2003). Just War Theory Responding Morally To Global Terrorism.
8. Laqueur, W., (2003). Postmodern Terrorism", pp. 151 – 159 in Charles W. Kegley, Jr. (ed.), "The New GlobalAgenda", Upper Saddle River, N.J.: Prentice Hall.
9. Milosavljevic, B., (1997). Police science. Belgrade.
10. Mijalkovic, S., (2009). National security. Belgrade.
11. Milasinovic, R., Mijailovic, S., (2011). Terrorism as a modern security threat. Banja Luka.
12. Simeunovic, D., (2009). Terrorism. Belgrade.
13. Stajic, Lj., (2005). Security basics. Belgrade.
14. Stajic, Lj., (2008). Basics of security system with basics of research of security phenomena. Novi Sad.
15. Homer-Dixon, T., (2002). The Rise of Complex Terrorism, In: Foreign Policy.
16. Sikman, M,, (2009). Terrorism, Banja Luka.
17. Setka, G., (2016). The BiH police system between its functionality and non-functionality. Belgrade: Criminalistic-Police Academy.
18. Setka, G. (2016a). The impact of the organization of the police structure in Bosnia and-Herzegovina on the state of security, Banja Luka: Faculty of Safety and Protection.

THE ESTABLISHMENT AND DEVELOPMENT OF A NATIONAL CRIMINAL INTELLIGENCE SYSTEM IN THE REPUBLIC OF SERBIA

Zoran Đurđević, LLD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Nenad Milić, LLD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Efficient countering contemporary forms of crime, especially terrorism, high-tech and organised crime, requires a multi-agency approach and cooperation, both at the national and international level. One of the basic indicators for assessing the quality of cooperation is the exchange of information. The exchange of information overcomes limited resources, and improves the efficiency and cost-efficiency of the evidentiary procedure. The National Criminal Intelligence System is based on the establishment of a Platform for secure electronic communication, exchange of data and information between government authorities, special organisational units of government authorities and institutions, in order to prevent organised crime and other forms of serious crime. The following institutions are participating in the first phase of the establishment of the National Criminal Intelligence System: the Ministry of Interior; Ministry of Justice; Republic Public Prosecutor's Office; Prosecutor's Office for Organised Crime; Office of the National Security Council and Classified Information Protection; Customs Administration; Anti-Corruption Agency; and Tax Administration. The subject of this paper is the analysis of the legal framework, defining of recommendations, establishing which issues need to be legally regulated and which legal acts should be adopted to create the legal conditions necessary for the establishment and development of the NCIS.

Keywords: National Criminal Intelligence System, information exchange, cooperation of government agencies, countering organised crime.

1 zoran.djurdjevic@kpu.edu.rs

INTRODUCTION

Efficient countering of contemporary forms of crime requires a multi-agency approach – cooperation of all government authorities. Security is not within the exclusive competence of only one government authority; efficient protection of fundamental rights and freedoms of citizens is directly conditioned by the quality of multi-agency cooperation of government authorities within their clearly defined competencies. One of the most important indicators of the quality of cooperation and multi-agency approach is the exchange of information. The exchange of information overcomes limited resources and improves efficiency in combating crime.

Quality cooperation in the information exchange is the basis for threat assessment, detection and proof of crimes, especially the most serious one – organised crime (see more in Đurđević & Radović, 2016). Given the number of exchanged data, it is especially necessary to point out that this fact is clearly visible in the conventions and decisions adopted by the European Union. Among the most important is the 2006 Framework Decision, which simplifies the exchange of information and intelligence between law enforcement authorities (Official Journal of the European Union, L 386/89). In order to regulate the obligations of their government authorities in more detail, individual states have enacted special laws (for example, Croatia: Act on Simplifying the Exchange of Data between Law Enforcement Authorities of the Member States of the European Union, Official Gazette, 56/15). A slightly different law, which, in addition to the exchange of information, regulates the manner of organisation of criminal intelligence activities, which is the topic of this paper, was also passed by Lithuania (Law on State Secrets and Official Secrets, 13/06/2017 – No. XIII-437).

At the international level, the police of the Republic of Serbia exchanges a large amount of data (INTERPOL, EUROPOL, SELEC, but also bilaterally), respecting the standards set by the Swedish Initiative, including the principle of "equivalent approach". A secure communication link via the EUROPOL's Secure Information Exchange Network Application (SIENA) was established in 2012, and an operational agreement with EUROPOL was signed in 2014. From June 1, 2014 until February 22, 2016, a total of 7,210 messages were exchanged via the SIENA application (Action Plan for Chapter 24 – Justice, Freedom, Security, p. 124).

The subject of the authors' analysis is the National Criminal Intelligence System of the Republic of Serbia (hereinafter: NCIS), that is, the exchange of information aimed at improving the efficiency in combating organised crime. In order to ensure the exchange of information relevant for combating crime, it is necessary to define a coherent and methodologically harmonised approach, through improving and strengthening the information exchange capacities, the concretisation of which would involve harmonisation of legal regulations governing standards of information management and exchange between government authorities. The said task is in line with the recommendation of the European Commission and based on it planned activity set out in the Action Plan for Chapter 24, subchapter Organised Crime (Activity 6.2.2).

The National Criminal Intelligence System represents the second phase of the reorganisation of work and change in the philosophy of procedure based on intelligence information in the Ministry of Interior of the Republic of Serbia. The first phase was the implementation of the Intelligence-Led Policing Model in the work of the Ministry of Interior (see more in: MoI, 2016; Đurđević & Leštanin, 2017; Đurđević & Vuković, 2018). The establishment of the NCIS takes place in two interconnected, mutually conditioned directions: the creation of technical conditions for the exchange of data and the adoption of legal acts that will regulate this exchange. The paper will primarily focus on the analysis

of the legal framework necessary for the establishment and development of the NCIS in the Republic of Serbia.

The following institutions are participating in the establishment of the NCIS: the Ministry of Interior; Ministry of Justice; Republic Public Prosecutor's Office; Prosecutor's Office for Organised Crime; Office of the National Security Council and Classified Information Protection; Customs Administration; Anti-Corruption Agency; and Tax Administration.

METHODOLOGICAL FRAMEWORK OF THE ANALYSIS

In order to draw conclusions and define recommendations on how to create the necessary legal conditions for the implementation of the NCIS, the subject of the analysis were:

1. Legal acts governing cooperation, primarily the exchange of data, between government authorities in the fight against crime.
2. Legal acts governing the collection, processing, protection, keeping, exchange and use of data.

Special attention was paid to the legal basis for record keeping and standards for working with data:
- Data systematisation criteria; protected data, classified data;
- Data security threat assessment;
- Protection measures (special zone – a place where the records are kept, construction safeguards, physical safeguards, technical safeguards, measures to protect the information and telecommunication systems, crypto-protection);
- Legal regulation of job positions that can have access to data of different classification levels for each record;
- Person responsible for information management;
- Legally regulated system of data management supervision;
- Internal control plan for handling classified data; and
- Records of decisions on the classification level security clearances (exists/doesn't exist, person responsible for the records)

The aim of the analysis was to define, based on the applicable law regulating the exchange of data between government agencies, the following:
- Recommendations on general legal acts that need to be adopted in order to create legal conditions for the establishment and operation of the NCIS.
- Recommendations on which legal and practical standards in data management must be achieved by each NCIS participant.

To identify organisational factors relevant for the implementation and development of the NCIS, a SWOT analysis was carried out.

APPLICABLE LAW ANALYSIS

The subject of the analysis of the legal framework for the establishment and development of the NCIS was focused on two issues: the analysis of the applicable law governing the exchange of data between government authorities and institutions and the analysis of the necessary legal framework for the exchange of data within the NCIS.

In the applicable law of the Republic of Serbia, there are a large number of general legal acts that in a certain way, in accordance with the purpose of their adoption, regulate cooperation, exchange and management of data that may be relevant for proving organised and serious crime. The legal basis for cooperation between government authorities is defined by the Law on State Administration (Article 64), in accordance with which state administration authorities are obliged to cooperate in all joint issues as well as to provide each other with data and information necessary for their work. State administration authorities may also establish joint bodies and project groups for the purpose of executing tasks whose nature requires the participation of several state administration authorities, which by its nature and essence is the NCIS.

Assistance and cooperation in combating the most serious forms of crime is regulated by the Criminal Procedure Code (Official Gazette of the Republic of Serbia, Nos. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014 and 35/2019) and the Law on Organisation and Jurisdiction of Government Authorities in the Suppression of Organised Crime, Terrorism and Corruption (Nos. 94/2016 and 87/2018).

The duty to provide assistance to participants in criminal proceedings is provided by the Criminal Procedure Code (Article 19), according to which all government authorities are obliged to provide the necessary assistance to the public prosecutor, court or other authority conducting proceedings, as well as to the defendant and his/her defence attorney at their request for the purpose of collecting evidence.

The Law on Organisation and Jurisdiction of Government Authorities in the Suppression of Organised Crime, Terrorism and Corruption raises the cooperation of government authorities to a higher level, by creating the possibility for government authorities to appoint their liaison officer to establish cooperation and more efficiently deliver data received from these authorities and organisations to the Prosecutor's Office for Organised Crime and special departments of higher public prosecutor's offices for the suppression of corruption, for the purpose of criminal prosecution for criminal offenses provided by this Law (Article 20). Task forces may also be formed within the Prosecutor's Office for Organised Crime and special departments of higher public prosecutor's offices for the suppression of corruption, with the aim of detecting and prosecuting crimes they deal with (Article 21).

All legal acts, laws and other general acts important for the cooperation and data management have been systemised into several groups:

- Laws and other general legal acts governing the cooperation of government authorities, especially in combating organised crime.[2]
- Laws and other general legal acts governing the protection of classified data and access to data.[3]

2 The following were analysed: the Criminal Procedure Code; Law on Organisation and Jurisdiction of Government Authorities in the Suppression of Organised Crime, Terrorism and Corruption; and the Law on State Administration.

3 The following were analysed: the Data Secrecy Law; Law on Information Security; Law on Personal Data Protection; Law on the Protection of Trade Secrets; and the Law on Free Access to Information of Public Importance.

- Laws related to data protection during the course of work, undertaking actions within the competence of government authorities and agencies.[4]
- Laws containing penal provisions for actions incriminated as criminal offences and/or misdemeanours for data confidentiality violations.[5]

The first step towards the establishment of the NCIS was made in the Law on Police (Official Gazette of the Republic of Serbia, Nos. 6/2016, 24/2018 and 87/2018). Article 34a provides for the establishment of the Platform for secure electronic communication, exchange of data and information between government authorities, special organisational units of government authorities and institutions, in order to prevent organised crime and other forms of serious crime, within the special information and communication system of the Ministry. The Platform represents a technical instrument with the help of which the data will be exchanged within the NCIS. The second step, which actually also represents the beginning of the materialisation of this idea, is the signing of the Agreement on Cooperation on Establishing and Developing a National Criminal Intelligence System (September 2019). The Agreement defines the subject, goal, forms of cooperation, and authorities responsible for the establishment and development of the NCIS. The signatories agreed to establish and develop the NCIS, in order to build a system of continuous electronic exchange of data and information, as well as coordination to strengthen a proactive approach in combating organised crime and other forms of serious crime (Agreement, Article 3). For the establishment of the NCIS, that is, the realisation of the tasks provided for in the Agreement, a Permanent Working Body and an Interdepartmental Working Group were established. The Permanent Working Body adopted the Rules of Procedure and several conclusions related to the first steps aimed at establishing the NCIS. The Interdepartmental Working Group is an operational body which, in line with the conclusions of the Permanent Working Body, undertakes the necessary activities in order to establish, develop and implement the NCIS.

To objectively understand the purpose and place of the NCIS in the security system, it is necessary to clearly define what the NCIS is and what the difference between the NCIS and the Security Intelligence System is.

The security-intelligence system of the Republic of Serbia is legally regulated by the Law on the Bases Regulating the Security Services Organisations (Official Gazette of the Republic of Serbia, Nos. 116/2007 and 72/2012). Its goal is to direct, harmonise and supervise the security services work. The Ministry of Interior and other participants in the first phase of the NCIS do not belong to the security services and their goal is to improve the efficiency in preventing and fighting organised crime and other forms of serious crime. Analogously to the above stated, *the National Criminal Intelligence System* can be most simply understood as a system of government authorities and institutions whose goal is to improve cooperation and institutional capacity in combating organised and other forms of serious crime through data exchange.

4 The following were analysed: the Criminal Procedure Code; Law on Organisation and Jurisdiction of Government Authorities in the Suppression of Organised Crime, Terrorism and Corruption; Law on the Bases Regulating the Security Services Organisations in the Republic of Serbia; Law on Police; Law on Records and Data Processing in the Field of Internal Affairs; Law on Public Prosecutor's Office; Law on Civil Servants; Law on Tax Procedure and Tax Administration; Law on Customs Service; Customs Law; Law on the Prevention of Money Laundering and Terrorist Financing; Law on the Anti-Corruption Agency; Law on Banks; Law on the Security Information Agency; Law on the Military Security Agency and the Military Intelligence Agency; and the Law on the Serbian Army.

5 The Criminal Code: Unauthorised Disclosure of Secret (Article 140), Disclosure of Business Secret (Article 240), Disclosure of State Secret (Article 316), Disclosure of Official Secret (Article 369), Disclosure of Military Secret (Article 415); Data Secrecy Law (Articles 98, 99 and 100); Law on Personal Data Protection (Article 57); Law on Information Security (Articles 30 and 31); Law on the Protection of Trade Secrets (Corporate Offence, Article 19).

DATA EXCHANGE STANDARDS

For the establishment of the NCIS, it is necessary to adopt common standards for data handling, protection, access and exchange.

The defined standards for access to specific data must be respected by all officials of all government authorities who wish to gain access to the database in which the data are stored. It is certainly necessary to pay special attention to respecting the standards in the exchange of the classified and personal data. The law regulating the system of the classification and protection of classified data of interest for the national security and public safety, defence, internal and foreign affairs of the Republic of Serbia, protection of foreign classified data, access to classified data and their declassification is the Data Secrecy Law (Official Gazette of the Republic of Serbia, No. 104/2009).

A special subject of the analysis were the standards that must be respected in the NCIS's work, which are defined by this law and relate to: ***protection*** of data confidentiality (protection criteria, protection measures: general and special, obligations of the data handlers, storage, transfer and submission of classified data), ***access*** to classified data, procedure for providing security clearance, that is, permits ***for access*** to classified data.

These standards are the basis for defining the conditions that must be met for the exchange of data between the members of the NCIS. In order to exchange data, the party taking over the data must respect the same standards in their work as the data owner. In particular, it should be emphasised that only a person who has the appropriate security clearance in relation to the classification level with which the data (which is the subject of exchange) is marked, can have access to it.

Analogously to the above mentioned related to the establishment of the NCIS, it is necessary that everyone consistently apply the provisions of the Data Secrecy Law, in particular, all participants in the NCIS must have ***an authorised person to classify the data*** (Article 9) and adopt standards for classifying and marking the level of secrecy.

To determine the classification level, it is necessary ***to assess the possible damage*** that the disclosure of information may have to the interests of the Republic of Serbia.

Criteria for assigning the "TOP SECRET" and "SECRET" classification levels are determined by the Government, with previously obtained opinion from the National Security Council, while criteria for determining the "CONFIDENTIAL" and "RESTRICTED" classification levels are determined by the Government, at the proposal of the competent minister or head of a public government authority. The Government of the Republic of Serbia has passed the Decree on Detailed Criteria for Assigning the "TOP SECRET" and "SECRET" Classification Levels (Official Gazette of the Republic of Serbia, No. 46/13).

The authorised person of the public authority, in accordance with the Data Secrecy Law, and on the basis of the criteria referred to in Articles 3 and 4 of the Decree on Detailed Criteria for Assigning the "TOP SECRET" and "SECRET" Classification Levels, makes a decision on determining the data classification level in a public authority, with preliminary assessments of possible damage to the interest of the Republic of Serbia. In accordance with Article 14, paragraph 4 of the Data Secrecy Law, the Government of the Republic of Serbia has passed a series of regulations on detailed criteria for determining the "CONFIDENTIAL" and "RESTRICTED" classification levels in the work of specific government authorities and institutions. These regulations are similar in terms of their structure, with certain adjustments when it comes to the criteria for determining the "CONFIDENTIAL" and "RE-

STRICTED" classification levels. However, it can be said that the criteria for determining the classification level are overly general and difficult to scale. The decision on determining the data classification level, with a preliminary assessment of possible damage to the interest of the Republic of Serbia, that is, possible damage to the work and performance of tasks and duties of public authorities, is made by the person authorised to perform data classification. The Data Secrecy Law, as well as the regulations, do not regulate in detail who shall be the authorised persons of the public authority who shall determine the level of data secrecy. Specifically, in relation to three possible solutions – to be determined by law, by a regulation adopted on the basis of law, or to be authorised in writing by the head of a public authority – the third option is applied in practice: the person authorised to perform the data classification is authorised in writing by a head of a public authority.

Protection Measures

In accordance with the Data Secrecy Law, adequate data protection measures (general and special protection measures) must be applied in the exchange of data, in relation to the classification level, the nature of the document containing the classified data and the threat assessment. Since the data will be exchanged electronically, it is necessary to pay special attention to the provisions of the Law on Information Security (Official Gazette of the Republic of Serbia, Nos. 6/2016 and 94/2017). The law provides for measures to protect against security risks in information and communication systems, the liability of legal persons in the management and use of information and communication systems, competent authorities for the implementation of protection measures, coordination between protection stakeholders and monitoring the proper application of prescribed protection measures.

Access to Data

It still has not been precisely regulated who can have access to specific data of a certain classification level, that is, which employee, in relation to the type of work and place in the hierarchy of an organisation, should have a security clearance to access data.

The circle of persons who can access classified data without a security clearance and security clearance is determined by the Data Secrecy Law. The President of the National Assembly, President of the Republic and the Prime Minister have access to classified data and can use data and documents of any classification level without a security clearance. Likewise, government authorities appointed by the National Assembly, heads of government authorities appointed by the National Assembly, judges of the Constitutional Court and judges, are authorised to access data of any classification level that they need to perform tasks within their competence, without security clearance. However, there are limitations to this rule when it comes to access to data classified as "SECRET" and "TOP SECRET" (Data Secrecy Law, Article 38, paragraph 2).

Any other person, in relation to the security clearance, can access the data for which the security clearance was issued. Keeping records on persons who are allowed access to classified information is regulated by *the Decree on the Content, Form and Manner of Keeping Records of Access to Classified Information* (Official Gazette of the Republic of Serbia, No. 89/2010).

When it comes to the security clearance issuing procedure, the form of the basic and special security questionnaire for individuals and legal persons is prescribed by *the Decree on Forms of Security Ques-*

tionnaires (Official Gazette of the Republic of Serbia, No. 30/2010). The content, form and manner of providing a security clearance for access to classified information is prescribed by *the Decree on the Content, Form and Manner of Providing Security Clearances for Access to Classified Information* (Official Gazette of the Republic of Serbia, No. 54/2010).

Data Exchange

Classified data may be delivered to another public authority under *a written authorisation issued by the authorised person of the public authority* who marked the data as classified, unless otherwise provided by a special law (Data Secrecy Law, Article 45). Classified data received from a public authority may not be delivered to another user without the consent of the authority which designated the data as classified, *unless otherwise provided by a special law*. Persons who perform tasks in a public authority to which classified data have been delivered *are obliged to respect the security classification markings* and to take the protection measure determined for that classification level.

An authorised person may submit classified data to another legal or natural person, who provide services to a public authority on the basis of a contractual relationship, only in specific situations defined in the Data Secrecy Law (Article 42).

Personal Data Protection

The Constitution of the Republic of Serbia (Article 42) guarantees the protection of personal data. In accordance with the Constitution, collecting, keeping, processing and using of personal data are regulated by law. Records containing personal data cannot be regulated by a bylaw.

Personal data may be used and forwarded further only to the extent not contrary to the purpose for which they were collected, except for the purposes of conducting criminal proceedings or protecting the security of the Republic of Serbia, in a manner stipulated by law.

When protecting personal data, the principle of limited purpose and the principle of security, as well as the right of access, must be especially respected. Above all, it is necessary to apply the measures stipulated in Article 51 of the Law on Personal Data Protection (Official Gazette of the Republic of Serbia, No. 87/2018).

Supervisory Measures over the Handling of Classified Information

The Decree on Special Measures for the Supervision of Handling Classified Information (Official Gazette of the Republic of Serbia, No. 90/2011) stipulates the obligation to take special measures of supervision over the handling of classified information in a public authority.

Special supervisory measures include direct inspection, appropriate checks and reviews of submitted reports related to the implementation of all measures for the protection of classified information, or one or certain measures for the protection of classified information, and are carried out through internal control.

CONCLUSIONS ON THE FULFILMENT OF STANDARDS FOR THE NCIS' WORK

Based on the conducted analyses of the applicable law and implemented data management standards for the establishment of the NCIS, the following conclusions can be drawn:

1. In the Republic of Serbia, there is a legal framework that to a certain extent can be used for the establishment and operation of the NCIS. However, for quality work and exchange of information, it is necessary to pass a special law and a set of bylaws for a more specific elaboration of legal provisions of the law which would be passed.
2. The government authorities and institutions that will make up the NCIS are at different levels of implementation of data management standards. It is necessary to define and implement data exchange standards in the NCIS, including records on exchanged data.
3. The data exchanges currently being implemented between the government authorities and institutions that make up the NCIS should be placed within the framework of the NCIS.
4. For the successful implementation of the NCIS, it is necessary to perform an analysis of the professional potential of each government authority and of adequate security clearances for access to data that will be exchanged.

It is extremely important to identify all the factors on which successful establishment of the NCIS may depend. Awareness of the potentially great benefit for the work of each authority – for the efficient detection and proof of organised crime and other serious crimes – is a factor on which the work of the NCIS directly depends. Lack of awareness of the need to improve data exchange directly leads to a lower degree of efficiency.

In order to systematically approach the creation of conditions necessary for the functioning of the NCIS, it is necessary to focus on two groups of activities.

The first group of activities includes measures to improve the work, which are the result of the evaluation of the achieved standards defined in the Data Secrecy Law. The recommendations should be independently considered and implemented by each member of the NCIS.

All members of the NCIS need to meet the data management standards, that is, those members that have not met them yet, and above all to:

- Adopt a legal act, preferably a law that would regulate the keeping of records related to their competence (if the records contain personal data, the law is necessary).
- Designate an authorised person to mark the classification level, procedure and assessment methods. It is necessary to define more detailed criteria for the selection of an authorised person to classify data; the best would be in relation to the person's functional position in the organisation, which should be precisely defined in the regulation on internal organisation and classification of job positions.
- Designate a classified data controller;
- In relation to the type of work and a place in the organisation's hierarchy, define who can access which data, which should be precisely defined in the regulation on internal organisation and classification of job positions.
- Establish records of decisions on the security clearances for "CONFIDENTIAL", "SECRET", "TOP SECRET" classification levels, and records of statements for access to classified information classified as "RESTRICTED" for persons who perform a function or are employed in a public authority, and for persons who perform specific tasks in accordance with the law governing the classified information.

The second group of activities is aimed at creating specific conditions for technical connection to the platform and developing a legal framework for the work of the NCIS. The recommendations on how to achieve these standards should be adopted and implemented by the Permanent Working Body for Monitoring the Implementation of the Agreement on Cooperation on Establishing and Developing a National Criminal Intelligence System.

Given the fact that cooperation and exchange of data by government authorities and institutions is regulated by various legal acts in the hierarchy of legal acts, the exchange of information within the NCIS, as already pointed out, must be regulated by a special law. Adoption of a lower-level legal act than the law would require a long period of time needed for the harmonisation of the legal framework for the establishment of the NCIS by the government authorities that will make it. The only expedient and legally logical solution is the adoption of a special law: the Law on the National Criminal Intelligence System of the Republic of Serbia. In order to concretise the legal provisions and fully regulate the legal framework, it is necessary to adopt regulations, rulebooks and other legal acts that will regulate issues related to: the manner of data exchange; registering access to the NCIS Platform; records of data subject to exchange; security threat assessment and protection measures; supervision and work of persons authorised to supervise the exchange of data within the NCIS.

All provisions of the Law on Information Security must be observed when establishing the NCIS, and among other things, it is necessary to: designate an ICT system operator (MoI – Sector for Analytics, Telecommunication and Information Technologies – SATIT) and each signatory its authorised person for security management; choose a system of work ("non-selective"; "selective"; "multi-level"); form a body for coordination of information security protection measures; define obligations and responsibilities between the operator and other members of the NCIS; define the procedure for notifying the competent authority (operator, National CERT) of an incident, loss, theft, damage, destruction or unauthorised disclosure of classified information and foreign classified information, as well as of violation of the right to personal data protection. What is particularly important is that every access to the information and communication system is recorded. In order for the mentioned activities to be realised, it is necessary to adopt the Rulebook on the Security Threats Assessment and Defining the NCIS Protection Measures.

In order to coordinate the prevention and protection against security risks in the ICT system, it is necessary to keep in mind the cooperation with the National CERT (Regulatory Agency for Electronic Communications and Postal Services) and the Centre for the Prevention of Security Risks in ICT Systems in the republic authorities (CERT of republic authorities).

For the successful development of the NCIS, it is necessary to define a development strategy and implementation plan that will include: involvement of other government authorities and institutions; exchange of classified information and documents (especially orders on taking special evidentiary actions), continuous technical improvement of the platform's work and protection measures; promotion and improvement of professional capacities of law enforcement agencies.

In order to improve the level of efficiency in combating crime, especially organised crime, terrorism and corruption, it is necessary to strengthen joint analytical capacities. Likewise, it is necessary to continuously work on the education of all the NCIS users, with the organisation of special trainings necessary for risk analysis, and data protection and exchange. It is also necessary to envisage ways to exchange experiences and identify possible problems.

The Permanent Working Body is an organisational form necessary for the beginning of the work of the NCIS, which will hardly support the development component. Analogously, it is necessary to form a Data Exchange Centre or an organisational unit of another form with the same function, with perma-

nent employees. The centre as a form of organisation can be the subject of analysis, and thus change, depending on the selected strategic direction of development and current opportunities.

REFERENCES

1. Council Framework Decision 2006/960/JHA, Official Journal of the European Union, L 386/89.
2. Djurdjevic, Z. & Lestanin, B. (2017). Intelligence-Led Policing in the Ministry of Interior of the Republic of Serbia. Thematic conference proceedings of international significance "Archibald Reiss Days", Academy of Criminalistic and Police Studies, Belgrade, Vol. 3, pp. 3–16.
3. Djurdjevic, Z. & Vukovic, S. (2018). Current Situation and Perspectives of Intelligence-Led Policing Model in the Republic Serbia. Conference: Criminal Justice and Security in Central and Eastern Europe – From Common Sense to Evidence-Based Policy-Making, University of Maribor, Faculty of Criminal Justice and Security, pp. 158–167.
4. Министарство унутрашњих послова Републике Србије (2016). Полицијско-обавештајни модел: приручник. Београд: Министарство унутрашњих послова Републике Србије. [Ministry of Interior of the Republic of Serbia (2016). Intelligence-Led Policing: Handbook. Belgrade: Ministry of Interior of the Republic of Serbia]
5. Radovic, N. & Djurdjevic, Z. (2016). European Union's Information Exchange Legal Framework – A Prerequisite for Successful Co-Operation in Fighting Organized Crime. *Journal of Criminalistics and Law*, 3/2016, pp. 95–117.
6. Ratcliffe, J. H. (2016). Intelligence-Led Policing (2nd ed.). New York: Routledge.
7. Влада Републике Србије (2016). Акциони план за поглавље 24 – Правда, слобода, безбедност, Београд: Влада Републике Србије. [Government of the Republic of Serbia (2006). Action Plan for the Chapter 24 – Justice, Freedom, Security, Belgrade: Government of the Republic of Serbia]
8. Law on State Secrets and Official Secrets of the Republic of Lithuania, Official Gazette of the Republic of Lithuania, 13/06/ 2017 – No. XIII-437.
9. Устав Републике Србије, Службени гласник РС, бр. 98/2006. [Constitution of the Republic of Serbia, Official Gazette of the Republic of Serbia, No. 98/2006]
10. Уредба о ближим критеријумима за одређивање степена тајности „ДРЖАВНА ТАЈНА" и „СТРОГО ПОВЕРЉИВО", Службени гласник РС, бр. 46/13. [Decree on Detailed Criteria for Assigning the "TOP SECRET" and "SECRET" Classification Levels, Official Gazette of the Republic of Serbia, No. 46/13]
11. Уредба о садржини, облику и начину вођења евиденција за приступ тајним подацима, Службени гласник РС, бр. 89/2010. [Decree on the Content, Form and Manner of Keeping Records of Access to Classified Information, Official Gazette of the Republic of Serbia, No. 89/2010]
12. Уредба о обрасцима безбедносних упитника, Службени гласник РС, бр. 30/2010. [Decree on Forms of Security Questionnaires, Official Gazette of the Republic of Serbia, No. 30/2010]
13. Уредба о садржини, облику и начину достављања сертификата за приступ тајним подацима, Службени гласник РС, бр. 54/2010. [Decree on the Content, Form and Manner of Providing Security Clearances for Access to Classified Information, Official Gazette of the Republic of Serbia, No. 54/2010]

14. Уредба о посебним мерама надзора над поступањем са тајним подацима, Службени гласник РС, бр. 90/2011. [The Decree on Special Measures for the Supervision of Handling Classified Information, Official Gazette of the Republic of Serbia, No. 90/2011]

15. Zakon o pojednostavljenju razmjene podataka između tijela država članica europske unije nadležnih za provedbu zakona Republike Hrvatske, Narodne novine RH, no. 56/15. [Act on Simplifying the Exchange of Data between Law Enforcement Authorities of the Member States of the European Union, Official Gazette of the Republic of Croatia, No. 56/15]

16. Закон о државној управи, Службени гласник РС, бр. 79/2005, 101/2007, 95/2010, 99/2014, 47/2018 и 30/2018. [Law on State Administration, Official Gazette of the Republic of Serbia, Nos. 79/2005, 101/2007, 95/2010, 99/2014, 47/2018 and 30/2018]

17. Законик о кривичном поступку, Службени гласник РС, бр. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014 и 35/2019. [Criminal Procedure Code, Official Gazette of the Republic of Serbia, Nos. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014 and 35/2019]

18. Закон о организацији и надлежности државних органа у сузбијању организованог криминала, тероризма и корупције, Службени гласник РС, бр. 94/2016 и 87/2018. [Law on Organisation and Jurisdiction of Government Authorities in the Suppression of Organised Crime, Terrorism and Corruption, Official Gazette of the Republic of Serbia, Nos. 94/2016 and 87/2018]

19. Закон о полицији, Службени гласник РС, бр. 6/2016, 24/2018 и 87/2018. [Law on Police, Official Gazette of the Republic of Serbia, Nos. 6/2016, 24/2018 and 87/2018]

20. Закон о основама уређења служби безбедности, Службени гласник РС, бр. 116/2007 и 72/2012. [Law on the Bases Regulating the Security Services Organisations, Official Gazette of the Republic of Serbia, Nos. 116/2007 and 72/2012]

21. Закон о тајности података, Службени гласник РС, бр. 104/2009. [Data Secrecy Law, Official Gazette of the Republic of Serbia, No. 104/2009]

22. Закон о информационој безбедности, Службени гласник РС, бр. 6/2016 и 94/2017. [Law on Information Security, Official Gazette of the Republic of Serbia, Nos. 6/2016 and 94/2017]

23. Закон о заштити података о личности, Службени гласник РС, бр. 87/2018. [Law on Personal Data Protection, Official Gazette of the Republic of Serbia, No. 87/2018]

PREDICTIVE POLICING: ONE STEP FURTHER TO A SAFE COMMUNITY

Danijela Spasić, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Ksenija Butorac, PhD
Police College, Zagreb, Croatia

Abstract: The availability of large datasets and the rapid development of sophisticated tools that allow fast processing of vast quantities of information have been the key drivers behind the increasing use of algorithmic technologies in policing since the early 2000s. "Predictive policing" became an umbrella term for a variety of models, software and applications. All location based predictive policing programs however have the same aim: Sending police officers to the right place at the right time. For decades, police action has been rather reactive than proactive, focused on arrest and failing to see incidents as indicators of continuing underlying problems. Predictive policing has been praised as a turnaround of this approach, a "panacea" for the optimization of resources and the creation of a safer society, where the police can stop breaches of law, before they happen. Although lately more critical voices have been raised from civil society and research, questioning the effectiveness of the tools as well as their compatibility with human rights, there is still a lack of objective research on the issue.

Key words: *predictive policing, safe community, GIS, law enforcement agencies*

INTRODUCTION

When in doubt, predict the present trend will continue.

–"Merkin's Maxim"

The availability of large datasets and the rapid development of sophisticated tools that allow fast processing of vast quantities of information have been the key drivers behind the increasing use of algorithmic technologies in policing since the early 2000s (Pearsall, 2010). It is mainly decision-makers in the US and the UK that have identified big data analytics as a tangible solution for their budget strapped law enforcement agencies. Today, "law enforcement agencies are on the frontier of the data revolution" (Bachner, 2013: 6). Predictive policing became an "umbrella" term for a variety of models,

1 danijela.spasic@kpu.edu.rs

software and applications. All location based predictive policing programs, however, have the same aim: sending police officers to the right place at the right time. For decades, police action has been rather reactive than proactive, focused on arrest and failing to see incidents as indicators of continuing underlying problems (Moore, 1992). Predictive policing has been praised as a turnaround of this approach, a *panacea* for the optimization of resources and the creation of a safer society, where the police can stop breaches of law, before they happen (Jouvenal, 2016). The topic has been widely discussed in the public discourse, often with a positive rhetoric.

Similarly to other technological reform processes in the public sector predictive policing models are often developed by the private sector, many of the underlying techniques were initially designed to predict consumer behavior for private sector clients (Bachner, 2013). The outsourcing of technology however changes the way public sector agencies work and can create new concerns of practical an ethical nature (Cordella & Willcocks, 2010).

Proactive policing refers to all policing strategies that have as one of their goals the prevention or reduction of crime and disorder and that are not reactive in terms of focusing primarily on uncovering ongoing crime or on investigating or responding to crimes once they have occurred.

According to the National Institute of Justice of the U.S. (2010), there are four categories within proactive policing: person-focused, place-based, problem-oriented, and community-based. Person-focused strategy targets specific criminal behavior by a small number of offenders, who are confronted and informed that continued criminal behavior will not be tolerated.

Smart, effective, and proactive policing is clearly preferable to simply reacting to criminal acts. Although there are many methods aimed at preventing crime, predicting where and when a crime is likely to occur, who is likely responsible for prior crimes, and who is most likely to offend or be victimized in the future has recently gained considerable currency.

In this paper, we explore the importance of predictive policing in the development of a safe community.

WHAT IS A SAFE COMMUNITY?

Safe community is a term that has entered the research field of many institutions in recent years. It is presented as a proactive, coordinated activity of state and social bodies and citizens to improve safety in the community (Aldous & Leishman, 1999). The development of this concept in many democracies has directed attention to those state and social bodies, organizations and institutions that are responsible for security, safety, public order and peace and the general quality of life.

A safe community implies a positive result of prevention activities crime that is proving to be a new quality of human life. In such a positive environment, people, as individuals or collectives, are protected from possible dangers or threats arising from violence or crime, and institutions have the answers and capacity to solve security problems. These are crime prevention activities, and security is seen as a public good. A safe community is a process in which the key organizations of a community come together to work in partnership to achieve a safer environment for all. The World Health Organization defines a safe community as the prevention of all human injuries, including intentional such as violence, criminal activity and suicide, and unintentional injuries - traffic and other accidents, fires and natural disasters (Krug, Dahlberg, & Mercy, 2002).

A safe community should also be a healthy, functional community. Taking into consideration the needs of its citizens, it is expected that the local community creates the conditions in which they will

be satisfied with the quality of life, i.e. in which the local community will strive to meet their needs. That, however, does not mean that each local community should strive for an "ideal" model, state and manner of functioning. The "ideal" model of the local community does not exist, nor is it possible to develop it, therefore, the communities in which the quality of life is estimated as good, and in which the conditions for meeting the most of the citizens' needs were created, are called, in theory and in practice, *functional or healthy* communities (Boehm & Cnaan, 2012).

Systems (services, institutions, agencies) for providing services to the citizens in the functional communities base their activities on defined priorities of the local community, they reduce the potential risks for the citizens, put a focus of their work to outcomes (changes with the citizens) and not to the processes themselves, maintain the existing and establish new social networks of assistance and support to the individuals, they include citizens (service users) into the agencies for decision making, etc. (Checkoway, 1995). At that, always when realizing different forms of the activities and social work in the local community, the specificities of the target groups and characteristics of the population in the local community, whose needs and deficiencies have to be meet, have to be taken into consideration (Ife & Fiske, 2006). The police organization within the concept of the local community work bases its activities on these principles, too.

WHAT IS PREDICTIVE POLICING?

The *Predictive Policing* should be a step forward in the development of technological applications in the context of a safe community. *Predictive policing* is the application of analytical techniques – particularly quantitative techniques – to identify likely targets for police intervention and prevent crime or solve past crimes by making statistical predictions. The use of statistical and geospatial analyses to forecast crime levels has been around for decades. In recent years, however, there has been a surge of interest in analytical tools that draw on very large data sets to make predictions in support of crime prevention. These tools greatly increase police departments' reliance on information technology (IT) to collect, maintain, and analyze those data sets, however (Perry, McInnis, Price, Smith, & Hollywood, 2013).

Predictive policing can be defined as: "any policing strategy or tactic that develops and uses information and advanced analysis to inform forward-thinking crime prevention" (Uchida, 2014: 3871). The fundamental principle underlying the theory and practice of predictive policing is that it is possible to make probabilistic inferences about future criminal activity on the basis of existing data (Bachner, 2013).

For example, on the 14th of March 2014 a serial robber was detected and arrested thanks to the "KeyCrime" software program, developed by the police in Milan, Italy. The software had analyzed his criminal behavior using an algorithm able to cross hypothesize about human criminal intentions and predicting he would have perpetrated that specific crime (*Corriere della Sera* online ed., 27 March 2014). According to his criminal background, the thief was responsible for eleven robberies in different pharmacies since December 2013. The algorithm used to catch the criminal could represent something of revolutionary, however, this is nothing new under the sky for experts in criminal risk-assessment (Mendola, 2016). Also research from the Memphis Department of Pre-crime shows how factors leading to crime are multiple and complex and tracking crime rates back to primary causes remains notoriously difficult (Vlahos, 2012). Predictive strategies such as Memphis's Blue Crush system have helped to stem crime. Since 2006, when Blue Crush was instituted, crimes against property and violence decreased significantly about 26% (IBM Source).

With a specific focus on individuals, Richard Berk and his colleagues from the University of Pennsylvania have centered his studies on the individual-related algorithm. His research is able to estimate the probability with which a person on probation could commit homicide based on a statistical review of thousands of cases and account variables such as age, sex, type of crime as well as the date of the first infraction (Berk, Sherman, Barnes, Kurtz & Ahlman, 2009).

As we can see, predictive policing can be applied to different activities. Some scholars have divided them into four broad categories creating one dedicated taxonomy. According to Perry et al. (2013), there are four broad categories of predictive methods. These methods can be focused on predicting: 1) *crimes* (used to forecast places and times with an increased risk of crime); 2) offenders (identifying individuals at risk of offending in the immediate future); 3) victims *of crimes* (used to identify groups or individuals as potential target of criminal offence), and 4) perpetrator identities (creating profiles that match likely offenders with particular past crimes). The innovative aspect of predictive policing is that its most common use focuses on the prevention of *future crimes* rather than on combating *previous crimes*.

GIS (GEOGRAPHIC INFORMATION SYSTEM) APPLICATION IN THE PREDICTIVE POLICING

Catalogue of scientific knowledge in criminology, criminalistics and behavioral geography has enabled development of new police technologies such as GIS, crime mapping and geographic profiling that are used nowadays on operative, tactical and strategic level in crime investigation. The importance of geographic data in finding and analyzing patterns or models of criminal behavior has been recognized by modern police organizations in proactive policing in order to prevent and reduce crime rates, benefiting the citizens.

a) GIS as a partner to police officers on the field

Some police work and corrective actions have distinctly field character that requires the use of GIS technologies. Police officers must be able to access key data in emergencies on the field or during tactical operations. Although almost every service has mobile terminals in their vehicles, geospatial solutions and mobile technologies move the source of the information from vehicles to the street, using only smart phones. Mobile GIS gives police officers the ability to access and share important information about their location, suspicious person or illegal activity. In some countries, it is common to use GPS movement tracking against the persons in house arrest, who can be easily tracked using real-time GIS. A study conducted using GIS in one Ohio district confirmed that as many as 45% of sex offenders lived within 300 m of the school (Grubesic, Mack & Murray, 2007). Since each action provokes a certain reaction, the problems in assessing the effectiveness of crime control are two spatial and external influences. One of them is the spatial shift that occurs when police measures of crime control cause crimes to move further in space even though the overall crime rate has been reduced in the target area. Another spatial and external impact is spatial diffusion, where the benefits of crime reduction are transferred to neighboring areas, which is a desirable phenomenon. Both effects are random and lead to linking crime rates in neighboring areas by spatial correlation. Most perpetrators follow a declining rule with a greater distance from their place of residence or domicile and they are more likely to commit a crime in areas closer to the perpetrator's home. Therefore, in spatial terms, a decrease in the crime rate in one area is associated with an increase in crime in other areas, and vice versa. Often, researchers use data on serious crimes (e.g. murders) more than on other crimes because

there is greater confidence in the accuracy and quality of such data. On the other hand, there is an apparent increase in some types of crime because they are reported more often. This uncertainty in data can significantly affect the validity of scientific research in criminal investigation. For spatially based research and police work, the accuracy of geocoding is very important for collecting crime data. Traditionally, geocoding is address-based. Sources of errors in geocoding by address include typographical errors, abbreviations, duplication of addresses, lack of standardization, etc. The error can also be caused by the lack of concentration of the police officer while writing down the address, which is a very common mistake according to some research (McCarthy & Ratcliffe, 2005). Installing a GPS device on police cars or using a handheld GPS device at a crime scene could eliminate these sources of error.

b) GIS in criminal investigation and prevention

Many murder cases have been resolved by tracking a signal from victims' mobile phones, tracking a suspect using GPS, or using phone call records. In order to perform the analysis, the analyst must have geographical data on the position of the mobile device at the time of the call (either SMS or internet traffic). This data can be used to determine the geographical distribution of calls, the most likely location of mobile device users, other common locations, travel information. GIS can display all this data as maps, which would allow visualization of the locations where most calls were made (either incoming or outgoing calls). Also, a map can be created in order to find out where the mobile device user is most likely to live. However, such data collection may represent a violation of the right to privacy. All of this information displayed geographically can reveal patterns of behaviour, which in turn can reveal the profile of the perpetrator. In order to analyze cell phone records using GIS, the data must contain coordinates that can be translated to a point on the map. Typically, mobile phone records contain the coordinates of base stations that receive/transmit data from mobile devices in their area. After that, the analysis of the type and size of the base station cell is approached, which enables the most probable geographical location of the perpetrator.

Cluster analysis is a more complex method of analyzing communication data in a geographical sense because it starts the analysis based on the geographical location of the scene and without a possible perpetrator. This method is not focused on one phone number, but on several of them (cluster) and their mutual communication. The purpose of this technique is to identify the perpetrator based on a known pattern of criminal activity and to apply it to communication data within the area of interest. The analysis of the criminal pattern examines the nature and extent of current and impending crimes, trends, related crimes, hotspots of activity, and common characteristics of perpetrators and their behavior. The main source of data for this analysis are police reports and crime reporting data.

Geographical profiling has attracted much foreign media attention after it assisted in solving much-reported crimes in the media. This technique predicts the area in which the perpetrator is most likely to live, by analyzing the geographical locations of interrelated cases. The key to geographic profiling is in studying what lies behind the points on the map in order to understand the significance of the places the perpetrator chooses as well as the routes of his journey. The theoretical basis of this technique is to find a pattern of behavior of the perpetrator on the way to the crime scene from the place of residence (i.e. the J2C function, Van Koppen & De Keijser, 1997). In other words, the perpetrators commit most crimes relatively close to their homes, and the proportion of crimes committed decreases with distance from home (O'Leary, 2011) because it makes them feel safer. Based on the function of distance reduction, a probability area is generated for each point in the study area - representing each point as a possible perpetrator base (usually home or workplace). This fact shows the complexity of the perpetrator's behavior and argues that in fact the "mental map of the perpetrator" is his/her perception of the

environment. Geographic profiling is most often used in the analysis of a number of crimes (serial and most often more serious crimes) due to the larger amount of data that are crucial for the success of this technique. In addition to criminal investigation, GIS is also important in predicting crime. By identifying environmental factors in past events, the analyst can predict an area that is statistically similar to previous crime scene locations. Unlike "hotspots" that focus on areas of high crime intensity in the past, this technique anticipates such areas and enables proactive police action and crime prevention.

Event analysis is a technique used to extract meaning from a series of interrelated events, with GIS providing a timeline of events by creating lines between event points in chronological order. It measures distances for consideration of possible modes of transportation as well as the route of the perpetrator. It also approximately determines the speed of the perpetrator, as well as the perpetrator's stationary points using the focal points of the activity. It is also possible to analyze the overlap of data from several different data sources (for example, field information and information from traffic surveillance cameras).

c) **GIS as a tool for planning and action of police forces on the field**

The primary function of police work remains patrolling and touring the terrain. For a long time, the police patrols were placed randomly in the field and activated in the moment they are needed and sent on a mission. There are two common police practices that rely on geospatial data analysis: police actions at "hotspots" and spatial police work (Stoffel, Post, Stewen & Keim, 2018). Police work at the focal points is the deployment of police forces according to geographical variations in crime with the greatest focus on places where the number of offenses is greater than the average number of offenses or causing riots (hotspots). Some focal points can occur quite randomly and a rigorous statistical analysis is required to detect clusters (focal points) which are statistically significant. Free software (CrimeStat, SaTScan, GeoDa) contain tools for recognizing focal points within regular geometric shapes (circles, ellipses) (Anselin, 2004). ArcGIS popular GIS software contains statistical tools which recognize statistically significant focal and cold spots. The main goals in the spatial action of the police include the minimum time of arrival at the scene, cost reduction and harmonization of the workload of police officers. ArcGIS allows testing of different scenarios and assesses the workload of police officers accordingly (Curtin, Qui, Hayslett-McCall & Bray, 2005).

d) GIS as a tool for testing theories in criminology

There is a very extensive literature on the application of GIS in theoretical forensic research. A part of the research uses the so-called factor-based modeling to simulate and test the theory of routine activities. The model deals with perpetrators, targets and crime scenes as individual factors and predicts crimes based on the three said factors. A calibrated model simulation generates crimes similar to real crimes both numerically and spatially. The research combined ArcGIS and ABM's RepastPy software whereby the individuals were modeled in a real environment and based on which different scenarios were observed (Groff, 2007). This fact helped to create a virtual laboratory in which it is possible to investigate the impact of police decisions.

CONCLUSION

Many similar relationships in law enforcement can be explored with predictive policing. Police agencies use computer analysis of information about past crimes, the local environment, and other pertinent intelligence to "predict" and prevent crime. The idea is to improve situational awareness at the

tactical and strategic levels and to develop strategies that foster more efficient and effective policing. With situational awareness and anticipation of human behavior, police can identify and develop strategies to prevent criminal activity by repeat offenders against repeat victims. These methods also allow police departments to work more proactively with limited resources. However, it must be understood at all levels that applying these methods is not equivalent to finding a crystal ball. For a policing strategy to be considered effective, it must produce tangible results. For example, crime rates should be lower, arrest rates for serious offenses should increase, and there should be an observable positive impact on social and justice outcomes.

Predictive methods, themselves, may not expose sufficient probable cause to apprehend a suspected offender. "Predictions" are generated through statistical calculations that produce estimates, at best; like all techniques that extrapolate the future based on the past, they assume that the past is prologue. Consequently, the results are probabilistic, not certain.

The limitation of predictive policing might be that the data quality of the police data limits the predictions, since much information on current acts is not yet available in the system at the time of the prediction and therefore cannot be used. Police organisations must be aware that even high data quality does not always create a true representation of reality, which means that forecasts are always subject to uncertainties. The models of predictive policing might result in possibly skewed depictions of society and criminal behavior as they tend to remove context (Innes, Fielding, & Cope, 2005). The risk here is that predictive policing could result in less effective and maybe even discriminatory police interventions. The aspect of legal limitations must also be kept in mind and always be subject to a strict evaluation.

REFERENCES

1. Aldous, C. & Leishman, F. (1999). Police and Community Safety in Japan: Model or Myth? *Crime Prevention & Community Safety,* 1, 25–39.
2. Anselin, L. (2004). *Review of Cluster Analysis Software*. Springfield (IL): North American Association of Central Cancer Registries. Accessed on June 14, 2020. https://www.naaccr.org/wp-content/uploads/2016/11/Final-Report-Cluster-Software-2004-09-27-rev.pdf
3. Bachner, J. (2013) *Predictive Policing: Preventing Crime with Data and Analytics*, IBM Centre for the Business of Government.
4. Accessed on 30 June, 2020. http://www.businessofgovernment.org/report/predictive-policing-preventing-crime-data-and-analytics.
5. Berk, R., Sherman, L., Barnes, G., Kurtz, E. & Ahlman, L. (2009). Forecasting murder within a population of probationers and parolees: a high stakes application of statistical learning. *Journal of the Royal Statistical Society*, 172(1), 191-211.
6. Boehm, A. & Cnaan, R. A. (2012). Towards a Practice-based Model for Community Practice: Linking Theory and Practice. *Journal of Sociology & Social Welfare*, 39(1), 141-168.
7. Checkoway, B. (1995). Six strategies of community change. *Community Development Journal,* 30(1), 2-20.
8. Cordella, A., Willcocks, L. (2010). Outsourcing, bureaucracy and public value: Reappraising the notion of the "contract state". *Government Information Quarterly*, 27(1), 82-88.

9. Curtin, K.M.,Qui, F., Hayslett-McCall, K. & Bray, T.M. (2005). Integrating GIS and maximal covering models to determine optimal police patrol areas. In: F. Wang, ed. *Geographic information systems and crime analysis*. Hershey, PA: Idea Group Publishing, 214–235.

10. Groff, E.R. (2007). Simulation for theory testing and experimentation: an example using routine activity theory and street robbery. *Journal of Quantitative Criminology*, 23, 75–103.

11. Grubesic, T.H., Mack, E. & Murray, A.T. (2007). Geographic exclusion: spatial analysis for evaluating the implications of Megan's Law. *Social Science Computing Review*, 25, 143–162.

12. BM Source, Memphis PD: *Keeping ahead of criminals by finding the "hot spots"*, Accessed on 30 June, 2020. http://www.ibm.com/smarterplanet/us/en/leadership/memphispd/

13. Ife, J. & Fiske, L. (2006). Human rights and community work: Complementary theories and practices. *International Social Work,* 49(3), 297-308.

14. Innes, M., Fielding, N. & Cope, N. (2005). The appliance of science? The theory and practice of crime intelligence analysis. *The British Journal of Criminology*, 45, 39–57.

15. Jouvenal, J. (2016). The new way police are surveilling you: calculating your threat 'score'. *The Washington Post,* January 10. Accessed on June 26, 2020.

16. https://www.washingtonpost.com/local/public-safety/the-new-waypolice-are-surveilling-you-calculating-your-threatscore/2016/01/10/e42bccac-8e15-11e5-baf4-bdf37355da0c_ story.html

17. Karlović, R., Babić, J., Sučić, I., Šimunić, N. & Bartoš, V. (2019). Prostorna i vremenska distribucija seksualnog nasilja – studija slučaja Grada Zagreba. Zbornik radova Međunarodne znanstveno-stručne konferencije Visoke policijske škole: 6. Istraživački dani Visoke policijske škole u Zagrebu – „Idemo li ukorak s novim sigurnosnim izazovima?" , Zagreb, Hrvatska, 5.04. 2019.

18. Krug, E., Dahlberg, L. & Mercy, J. (2002). *World report on violence and health*. Geneva: World Health Organization.

19. McCarthy, T. & Ratcliffe, J.H. (2005). Garbage in garbage out. In: F. Wang, ed. *Geographic information systems and crime analysis*. Hershey, PA: Idea Group Publishing, 45–59.

20. Mendola, M. (2016). *One Step Further in the 'Surveillance Society': The Case of Predictive Policing.* Milano: Tech and Law Center.

21. Moore, M. H. (1992). Problem-solving and Community Policing. In: M. Tonry & N. Morris (Eds.). *Crime and Justice: A Review of Research,* 15, 99-158. Chicago: University of Chicago Press.

22. National Institute of Justice (2010). *How to Identify Hotspots and Read a Crime Map?* Accessed on June 16, 2020. https://nij.ojp.gov/topics/articles/research-will-shape-future-proactive-policing

23. National Institute of Justice (2014). Predictive Policing, Accessed on June 16, 2020. https://nij.ojp.gov/topics/articles/overview-predictive-policing

24. Pearsall, B. (2010). Predictive Policing: The Future of Law Enforcement? *National Institute of Justice Journal*, No. 266, May 2010.

25. Perry, W., McInnis, B., Price, C., Smith, S. & Hollywood, J. (2013). *Predictive Policing. The Role of Crime Forecasting in Law Enforcement Operations*. Santa Monica: RAND.

26. Ratcliffe, J. H. (2004). The hotspot matrix: A framework for the spatio-temporal targeting of crime reduction. *Police Practice and Research*, 5(1), 5–23.

27. Stoffel, F., Post, H., Stewen, M. & Keim, D. (2018): Polimaps: Supporting Predictive Policing with Visual Analytics. In C. Tominski & T. von Landesberger (Eds.), *EuroVis Workshop on Visual Analytics*. Accessed on June 26, 2020. https://bib.dbvis.de/publications/details/754
28. Uchida, C. D. (2014). Predictive Policing. In G. Bruinsma & D. Weisburd (Eds.), *Encyclopedia of Criminology and Criminal Justice* (pp. 3871-3880). NY: Springer New York.
29. Willems, D., & Doeleman, W. (2014). Predictive Policing. Wens of Werkelijkheid. *Tijdschrift voor de Politie*, 76(4/5), 39-42.
30. Van Koppen, P.J. & De Keijser, J.W. (1997). Desisting distance decay: on the aggregation of individual crime trips. *Criminology,* 35, 505–515.
31. Vlahos, J. (2012). Can Machines Predict Where Crimes Are about to Happen? *American Scientific (January 2012)*, Accessed on June 26, 2020. http://www.scientificamerican.com/article/the-department-of-pre-crime/.

REALIZATION OF SOCIAL SELF-PROTECTION – EXPERIENCES OF IMPORTANCE FOR COMMUNITY POLICING

Svetlana Ristović, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Social self-protection and community policing are two concepts that, although created in different historical, are ideological and socio-political conditions, having the same challenge - reviving the idea that citizens are responsible for the security and quality of life in their community.

The paper compares the concept of social self-protection and community policing through several aspects: theoretical determination, strategic-legal bases and practical realization and the results achieved in the process of their application, in an attempt to answer whether the implementation of community policing can use one's own experiences gained through social self-protection, and also - what is more efficient in its realization: the use of one's own experiences, the adopted foreign solutions or the combination of both.[2]

Keywords: community policing, social self-protection, legal determinations and experiences of practice, problem-oriented policing, cooperation with citizens.

INTRODUCTION

From the experience, it is known that in order to solve the current social challenges, including the security ones, the actors consult and question their own experiences in relation to how similar problems have been solved in the past. At the same time, foreign experiences and knowledge are used, especially certain examples from practice. Both examples serve as an inspiration and an idea, not as a ready-made solution to the current problems. The solution must always be the result of the work and thinking of the subject who is primarily in charge of solving the current problems in the current times.

1 svetlana.ristovic@kpu.edu.rs

2 This paper is the result of carrying out the research project funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia (no. 179045) and implemented by the University of Criminal Investigation and Police Studies in Belgrade (2011-2020), titled Development of institutional capacity, standards and procedures form countering organized crime and terrorism in terms of international integration.

This approach should be distinctive in the implementation of community policing in our country. However, we are witnessing that what is mostly used in its implementation are the experiences from abroad and ready-made solutions of the developed western countries. Experiences gained in the concept of social self-protection of ours are being neglected, and we do not see them in the official strategic and legal documents, although it had undoubtedly advanced legal solutions and good results in practice.

This paper tries to point out the need for critical valorisation of the concept of social self-protection relative to solving the current security problems by applying the model of community policing, with the plea of not returning to the old.

Next to the introduction and conclusion, the paper will briefly present: 1. Theoretical determinations of social self-protection and community policing; 2. Strategic and legal bases of social self-protection and community policing; 3. Practical realization of social self-protection of importance for application of community policing, and 4. Similarities and differences between social self-protection and community policing.

THEORETICAL DETERMINATIONS OF SOCIAL SELF-PROTECTION AND COMMUNITY POLICING

Social self-protection appeared in the 1960s as a new form of (social) consciousness about security not being an issue only the Ministry of Internal Affairs is dealing with, but all subjects of social self-protection (a working man and a citizen - as a base, the organizations of associated labour and local community office, socio-political and other organizations and socio-political communities, judicial bodies, the Ministry of Internal Affairs and other state bodies). It is basically the idea of socializing the security function through a system of social self-protection, which is perceived as “the path of weakening the role of the state and transfer of the functions of the state and its organs to working people and citizens and their organizations and associations” (Petrović, 1986: 104). The intention is to organize the security of the country and the protection of the vital values of society from the position of the individual and society, not only the Ministry of Internal Affairs, with “the goal of preserving social value and goods to avoid ideological, political and material consequences” (Dejanović, 1985: 110). In the very idea of its creation, the way of realization and the goal of social self-protection, its ideological and political colours of that time can be seen.

The application of social self-protection should have led to the broadest social prevention - by delegating the issue of security to the level of working people and citizens, it encompasses much more activities than those undertaken by the Ministry of Internal Affairs. This concept is based on the timely recognition and removal of the causes of crime and other socially harmful behaviours. The task of prevention is recognized as “a comprehensive perception of the problem and the study of phenomena, as well as the methodological elimination of the causes of criminogenic factors” (Petrović, 1986: 119). The ideological and political coloration of social self-protection is also reflected in the perception of the causes of crime, with the claim that the conditions and causes of crime in our country are usually not of social nature and do not have exploitation, misery and poverty as their basis (Petrović, 1986: 107).

Social self-protection has a preventive effect, not only in various criminal acts, but also other socially harmful behaviours, such as: alcoholism, antisocial behaviour of children, intolerance and conflicts of individual citizens, damage of parks and greenery, environmental pollution, etc. In addition to these goals, social self-protection had the final goal of protecting the state and the constitutional order, as

well as meeting the needs of the government structures. The main reason of the collapse of this concept was its great politicization and political manipulation.

A layer of the untouchable directors and political leaders was created, who were "exempted" from the action of social self-protection. This concept did not work in the area of protection of social property from financial manipulations of the then economic leaders, but it was very efficient towards ordinary workers. All of this weakened the foundations of the concept and led to distrust of the broadest strata of citizens (Nikač, 2019: 222).

Community policing, as well as social self-protection, bases its usage on the support and cooperation of citizens. Here lies the basic idea of it - with the participation of citizens in the conduct of security work, the responsibility for security ceases to be only the responsibility of the police and spreads over the wider social community.

Community policing can be considered as one of the "most significant trends in the history of policing" (Rosenthal et al., 2003: 17). This model of policing began to develop in the 1980s, in the developed democratic countries, because of the inefficiency of the traditional way of policing. "Modern western societies and their institutions are organized in relation to fear, risk assessment and providing of security. This is true for most Western European societies and will be true for the next few years for the Eastern European societies, as long as the "free economic market" (i.e. capitalism) suppresses and replaces the planned economy (i.e. socialism) - with the result that close social connections and communication between people disappear. Theft, fraud and other forms of crime will become widespread, and people will again seek a more powerful police and state" (Feltes, 2003: 110).

The beginning of democratic changes in our country in 2000 was a good time to introduce the concept of community policing. This is because the democratization of society was a necessary precondition for a new model of policing, which would be responsible to the public and not to the centre of political power, as the case is in autocratic states. Community policing is a new philosophy, not just a technique of policing, which means a new organization of the police force, a way of acting, a new value system, a different way of thinking and a creative approach to the problem.

Community policing has the intention of gradually transforming the police from a commanding and repressive body into a public service, whose priorities are crime prevention, problem solving, cooperation with the community and a proactive approach. Problem-oriented policing is used for preventive action, which implies moving the police operation to the front field of criminal. The police should focus on the conditions and causes of crime and other forms of socially undesirable behaviour and the implementation of preventive strategies and programs, not to react only when the consequences occur, as the police usually do.

"The goals of community policing are to reduce crime and public disorder, improve the quality of life in communities, reduce the fear of crime and make better the relationship between citizens and the police" (Fridell, 2004: 4).

The focus of community policing is on the citizen who is considered a partner in the fight against crime. This is because legal status of the individual has changed in modern society, and the qualitative improvement of the relationship between the police and citizens became an imperative of legal state long ago based on democratic values. In such a state, the police should serve the citizens, and the attitudes and expectations of the citizens must be taken as a relevant factor that should significantly influence the direction and character of the activities of state authorities, and the police in particular (Ristović, 2013: 114).

STRATEGIC AND LEGAL BASIS OF SOCIAL SELF-PROTECTION AND COMMUNITY POLICING

Social self-protection became a constitutional category in 1971, when the Amendment 29 of the 1971 SFRY Constitution prescribed, for the first time, that people, nationalities, working people and citizens, among other things, realize and provide social self-protection ("Official Gazette of the SFRJ", 29/1971).

According to the SFRY Constitution from the 1974 ("Official Gazette of the SFRJ", 9/1974), social self-protection is no longer just a constitutional category but one of the basic principles of the socio-political system, which also contains the constitutional basis of the participation of the units of Internal Affairs in the system of social self-protection.

In determining the place and role of the Ministry of Internal Affairs in the system of social self-protection, we must start from the regulations in the field of interior affairs, because the law on social self-protection does not regulate this issue. According to these legal norms, the units of Internal Affairs are a part of social self-protection and their tasks are prescribed, but without detailed prescribing of rights, duties and authorities within this system.

Social self-protection as a term is first mentioned in Article 4, paragraph 3, of the Law on Interior Affairs of the SR of Serbia of 1972 ("Official Gazette of the SRS", 53/72), which reads: "the units of Internal Affairs provide professional and other assistance to citizens, organizations of associated labour and other bodies and organizations, in achieving social self-protection".

Not even the amended Law on Interior Affairs of the SR of Serbia of 1977 ("Official Gazette of the SRS", 40 and 44/1977) does not pay special attention to social self-protection, although in its provisions we find the legal basis and obligation of the bodies of Internal Affairs to provide professional assistance to other subjects.

Article 50 of this Law prescribes that the tasks and duties performed by police officers, such as protection of the constitutional order, protection of life and personal safety of people, prevention of criminal offenses and capturing of their perpetrators, as well as tasks of maintaining public order and peace and other jobs within the scope of the public security service, are at the same time jobs of social self-protection.

From the aforementioned legal norms, it can be concluded that the role of the bodies of Internal Affairs in realizing social self-protection is insufficiently regulated; in fact, it is reduced to only providing professional and other assistance to other subjects of social self-protection. The most important thing is that these regulations determine the bodies of Internal Affairs as a part of the system of social self-protection and recognize them as its specialized parts.

More detailed regulation can be found in bylaws. Providing professional assistance by the bodies of Internal Affairs is regulated by the Rulebook of job performing methods of the Public Security Service. In particular, Article 366 prescribes that the Public Security Service is obliged to provide professional assistance to subjects of social self-protection "when they request assistance for the purpose of immediate protection"; then, in cases of "regulating social self-protection, undertaking more important measures and activities of self-protection and training citizens and working people for self-protection"; also, to local communities in taking preventive measures; as well as in the field of public information "in order to develop the awareness of citizens, encourage and engage wider social forces in combating socially dangerous and other harmful phenomena and behaviour"; to inform "about the problems and condition of social self-protection within its scope"; and, finally, to consider the proposals and requests "made for the purpose of achieving social self-protection, and to inform the applicants of their attitude and the measures taken" (1974: 142-143).

Although the Constitution and laws especially emphasize the role of working people and citizens, the legal regulations of that time devote too little space to regulating the legal obligations of citizens in the system of social self-protection.

There are two reasons for this. First of all, it was considered that the entire system and concept of social self-protection is so focused that over time it will necessarily lead to shifting the burden of the fight against socially harmful phenomena to the side of citizens, as well as because it was believed (and emphasized) that it was more of a moral obligation of citizens than a legal one, which is why a broad legal regulation in that sense is not necessary.

Community policing is mentioned for the first time in the Vision document of the Ministry of Interior adopted after the democratic changes in 2000, which indicates the directions of police reform. In it, community policing is recognized as one of five priority areas of reform.

The transformation and development of the police into a modern institution and public service has been approached very seriously and systematically, not in a usual, voluntary way. The adopted Community Policing Strategy speaks in favour of that ("Official Gazette of the RS", 43/2013) which projected and set new and complete conceptual and strategic bases for the development and realization of community policing in the Republic of Serbia. The Strategy recognizes the leading elements that form the basis of Community Policing in the Republic of Serbia: prevention, community-oriented policing, problem-oriented policing and security partnership.

The current Development Strategy of the Ministry of Internal Affairs for the period 2018-2023 (http://www.mup.gov.rs) continues with the tendencies identified in the previous Development Strategy (2011-2016), which aim to create a police whose primary task will be to serve the citizens. Full democratization of policing and its change from "use of force" to "provision of services" conditions the need to create a new philosophy, organization and style of policing which are in the basis of establishment and implementation of modern forms of community policing as a strategic priority of the current Development Strategy of the Ministry of Interior.

As for the legal bases as preconditions for the application of community policing, they were created by the Law on Police in 2005 ("Official Gazette of RS", 101/05, 63/09 – US, 92/11 and 64/15), which contains provisions on cooperation with the bodies of territorial autonomy and local self-government for the safety of people and property. It also stipulates that the police "cooperate with other bodies and institutions, non-governmental and other organizations, minority and other organized groups and self-organized individuals in order to develop partnerships in preventing or detecting delicts and their perpetrators and achieving other security goals" (Article 6).

The current Law on Police ("Official Gazette of the RS", 6/2016, 24/2018, 87/2018) uses the term community policing for the first time, stating that the police is developing a cooperation and partnership with citizens and other community subjects, coordinating common interests and the need to create a favourable security environment in the community, providing support in advisory bodies within local government units for crime prevention, while simultaneously developing the professional capacities, competencies and ethics of police officers (Article 27).

In accordance with the Community Policing Strategy and the Action Plan for its implementation, the Community Policing Manual was adopted (OSCE, MUP RS, 2017). It provides the basic information on community policing, prevention, problem-oriented policing with practical aspects of work and guidelines for doing police job, as well as specific guidelines for community work.

PRACTICAL REALIZATION OF SOCIAL SELF-PROTECTION OF IMPORTANCE FOR APPLICATION OF COMMUNITY POLICING

Actions of bodies of Internal Affairs as subjects of social self-protection can be presented through several types of activities: 1. providing professional assistance; 2. cooperation with other subjects; 3. safety education of working people and citizens, and 4. informing the appropriate subjects.

1. 1. ***Providing professional assistance*** to other subjects of social self-protection is very diverse in terms of type, scope, forms and content. Providing this assistance to *working people and citizens* most often consisted of training for self-protection of personal and property security, pointing out the sources and forms of threats and how to behave in these situations. Professional assistance to the *organizations of associated labour* consisted of assessing the security situation, arranging and organizing social self-protection in the normative and organizational sense, organization of physical and technical security, etc. As for *other self-governing organizations and communities* (banks, insurance companies, working communities, state bodies, associations, etc.), the assistance consisted of security assessment, internal security, transfer of funds, etc. At the level of the *local community*, the militia assisted in security assessment, arranging, organizing, forms of realization and bodies of social self-protection in local communities, house councils, larger residential buildings, and tenant assembly.

2. In the previous activity, the bodies of Internal Affairs appear as professional bodies, in the role of "teachers". They also have another role, and that is the role of an equal and desirable partner who ***cooperates with other subjects of social self-protection***.

Cooperation with working people and citizens took place through daily contacts, mutual assistance, building mutual trust, protection of personal and property security, assistance in achieving rights, specific instructions for acting in certain security situations, etc.

As for cooperation with *organizations of associated labour and other self-governing organizations and communities*, it was achieved by taking a number of joint measures and activities, such as, for example: protection of social property from unlawful appropriation or damage; protection of self-governing and other rights of workers; physical and technical protection of workers and values in the organization of associated labour, etc.

3. ***Safety education of working people and citizens*** is one of the priority tasks of the bodies of Internal Affairs as a subject of social self-protection. These can be: lectures in schools or in public forums; appearances in the media; production and presentation of propaganda brochures, leaflets, films; exhibitions on technical, scientific and professional achievements of security services and social self-protection in general. Particular emphasis is placed on participation in the training and education of the population for protection and defence.

4. ***Informing appropriate subjects*** of social self-protection implies submitting information materials (reports, information, analysis, other written documents dealing with security issues) about knowledge and data that are important for preventing and combating socially harmful and dangerous actions.

There are great similarities in the forms of realization of social self-protection and community policing.[3] Perhaps the enthusiasm or passion for an idea is the biggest difference in realizing social self-protection and community policing.

---

3 About specific activities undertaken within the implementation of community policing in Serbia see: Nikač, Ž., (2012), *Koncept policije u zajednici i početna iskustva u Srbiji,* Beograd, Kriminalističko-policijska akademija, i Nikač, Ž., (2019), *Policija u zajednici,* Beograd, Kriminalističko-policijski univerzitet.

The concept of community policing, which is the basis of police work in most modern countries, is the commitment of our police in the last 20 years as well. A strategic and legal framework has been established, directions for further action have been identified and some specific activities have been undertaken in the process of realizing community policing.

SIMILARITIES AND DIFFERENCES BETWEEN SOCIAL SELF-PROTECTION AND COMMUNITY POLICING

Similarities between social self-protection and community policing:

1. At the centre of the activities of social self-protection and community policing is an individual, i.e. a working man or citizen.
2. In both social self-protection and community policing, the citizen is a partner, an indispensable subject in the realization of security and protection.
3. Both concepts prefer preventive action in combating crime.
4. Both social self-protection and community policing striving to make their operation focus on the conditions and causes of crime, other forms of socially undesirable behaviour and the implementation of prevention programs more, and not react only when the consequences occur, as the police usually do.
5. Practical forms of social self-protection and community policing are similar, and in some cases identical (education of citizens and other subjects on security issues in the community in order to acquire new and improve the existing security knowledge and skills; distribution of brochures, flyers, newsletters, etc.; holding press conferences; appearances in various media, public discussions, round tables; coverage and support of police actions by the media; meetings with citizens in the local community, street, building; visiting schools, etc.).
6. It can be said that the aim of achieving social self-protection, i.e. community policing, is similar, because both concepts have the protection of personal and property security of citizens in their focus, their freedom and rights, with the difference that in social self-protection the protection of vital values of the socialist self-management society is emphasized, where in addition to the stated values the protection of the constitutional order, self-management rights of working people, free social development, social property is especially emphasized, and in community policing, providing better quality services to citizens, converting the police into a public service, improving the relationship between police and community, strategic partnerships, sustainable solutions to community security problems.

DIFFERENCES BETWEEN SOCIAL SELF-PROTECTION AND COMMUNITY POLICING:

1. Social self-protection is a state project, and community policing is a police project that has risen to the level of a state project.
2. Social self-protection is our original concept, and community policing is a foreign, imported concept.

3. The precondition for the emergence of social self-protection is the decision made at the highest state leadership, the precondition of community policing is the development of democracy and human rights.
4. The militia which applies social self-protection is responsible to the political centres of power, the police who apply the new model of community policing is responsible to the public and citizens.
5. Social self-protection originated during the socialist autocratic regime, community policing originated during democratic changes.
6. Social self-protection is a result of our historical and socio-political development, community policing is, in addition to our reasons of socio-historical development and democratic orientation, partly, perhaps predominantly, due to the demands of the international community, a condition for accession to European integration.
7. There are different reasons for the occurrence of them - social self-protection is the socialization of the defence, security system and weakening the state role, community policing is the inefficiency of the classic work of the police.

CONCLUSION

In the establishing of the community policing concept in our country so far, foreign literature and getting to know the practice of the Western countries and, like us, the countries in transition have been used most often. Use of positive experiences of social self-protection which can certainly be useful today was lacking, as well as the analysis and perception of its bad solutions and weaknesses, so that it would not be repeated today. What makes the link between these two systems, regardless of the ideological and political starting points, and the legal and conceptual solutions conditioned by them, are the citizens, who are in the focus of protection and the indispensable subject in achieving that protection.

Although community policing qualifies as a new model of work, it should use some legal solutions and practical experiences from times of social self-protection. This is because the security situation during social self-protection was satisfactory, what cannot be claimed for today's security situation.

REFERENCES

1. Evison, F. Kros, A. Vasilijević, A. Petrović, M. Ljuboja, B. Jovanović, D. (2015). *Priručnik za delovanje saveta za bezbednost u gradovima i opštinama*, Beograd. Misija OEBS-a u Srbiji.
2. Dejanović, R. (1985). *Položaj i uloga radnika milicije u ostvarivanju društvene samozaštite.* Beograd. Naučna knjiga.
3. Feltes, T. (2003). *Teorije o policijskoj delatnosti u lokalnoj zajednici? Ono što nam je potrebno jeste nova filozofija policije*, časopis „Pogledi", 1, 107-114.
4. Fridell, L. (2004). The defining Characteristics of Community Policing. U: Fridell, L., Wycoff,A. (ur.), *Community policing: The Past, Present and Future*. Washington, DC: The Anie E. Casey Foundation and Police Executive Research Forum (3-12).
5. Grupa autora. (2017). *Priručnik za rad policije u zajednici*. Beograd. Misija OEBS-a u Srbiji i Ministarstvo unutrašnjih poslova Republike Srbije.

6. Nikač, Ž. (2012). *Koncept policije u zajednici i početna iskustva u Srbiji.* Beograd. Kriminalističko-policijska akademija.

7. Nikač, Ž. (2019). *Policija u zajednici.* Beograd. Kriminalističko-policijski univerzitet.

8. Petrović, R. (1986). *Milicija operativna jedinica naoružanog naroda u sistemu društvene samozaštite.* Beograd. Časopis „13. maj“.

9. Ristović, S. (2013). *Strateške osnove za razvoj i ostvarivanje policije u zajednici*, Časopis za društvena istraživanja CIVITAS, 5, godina III, 112-131.

10. Rosenthal, A. M., Fridell, L. A., Dantzker, M. L., Fisher-Stewart, G., Saavedra, P. J. Makarvan, T., Bennett, S. (2003). Community policing: Then and now. NIJ Journal, 249, 34-35.

11. Zlatković, V. (1988). *Društvena samozaštita i organi unutrašnjih poslova.* Beograd. Viša škola unutrašnjih poslova.

12. Ustavni amandmani XX do XLII„Službeni list SFRJ“, br. 29/1971.

13. Ustav SFRJ, „Službeni list SFRJ“, br. 9/1974.

14. Strategija razvoja Ministarstva unutrašnjih poslova za period 2018-2023. godine, (2018), dostupno na: http://www.mup.gov.rs/wps/wcm/connect/71fdf00f-7eb3-455f-9421-02ee6a190e17/PDF_Strategija+razvoja+MUP-a+2018-2023.pdf?MOD=AJPERES&CVID=mtlzhL9

15. Strategija policije u zajednici „Službeni glasnik RS“, br. 43/2013.

16. Zakon o unutarašnjim poslovima, „Službeni glasnik SRS“, br. 53/72.

17. Zakon o unutrašnjim poslovima, „Službeni glasnik SRS“, br. 40 i 44/1977.

18. Zakon o policiji, „Službeni glasnik RS”, br. 101/05, 63/09 –US, 92/11 i 64/15.

19. Zakon o policiji „Službeni glasnik RS“, br. 6/2016, 24/2018 i 87/2018.

20. Pravilnik o načinu vršenja poslova Službe javne bezbednosti, (1974), Beograd, RSUP SR Srbije.

TOPIC III

CONTEMPORARY SECURITY CHALLENGES

HISTORICAL RETROSPECTIVE AND PREVENTION FROM MIGRATION FLOWS IN EUROPE

Andrej Iliev, PhD[1]
Military Academy ''General Mihailo Apostolski'',
Goce Delchev University, Skopje, North Macedonia

Ferdinand Odzakov, PhD
Military Academy ''General Mihailo Apostolski'',
Goce Delchev University, Skopje, North Macedonia

Jugoslav Ackoski, PhD
Military Academy ''General Mihailo Apostolski'',
Goce Delchev University, Skopje, North Macedonia

Abstract: Migration is a global phenomenon. One of the major migrations was the Great Atlantic Movement (1820-1980) in which peoples moved from Europe to North America.

Migration in the new era began with the revolutions known as the "Arab Spring" of 2011 and the Middle East wars in Afghanistan, Iraq and Syria. Among the most important migration routes were the Middle East-Asian route transiting through Pakistan, Afghanistan, Iraq, Syria, Turkey, Greece, Macedonia, Serbia, Hungary, Croatia and other European Union countries. The second is the South African migrant route through Nigeria, Kenya, Sudan, Somalia, Libya, Egypt, Tunisia, Mediterranean, Italy, France, Spain and other Western European countries.

In our paper we provide a detailed number of migrants who have transited through Europe (2014-2020). Conducting preventive measures for controlling the migration waves from the European countries will be determined with the main hypothesis: *Did the European countries have taken effective measures for controlling migrant waves which transited through Europe?*

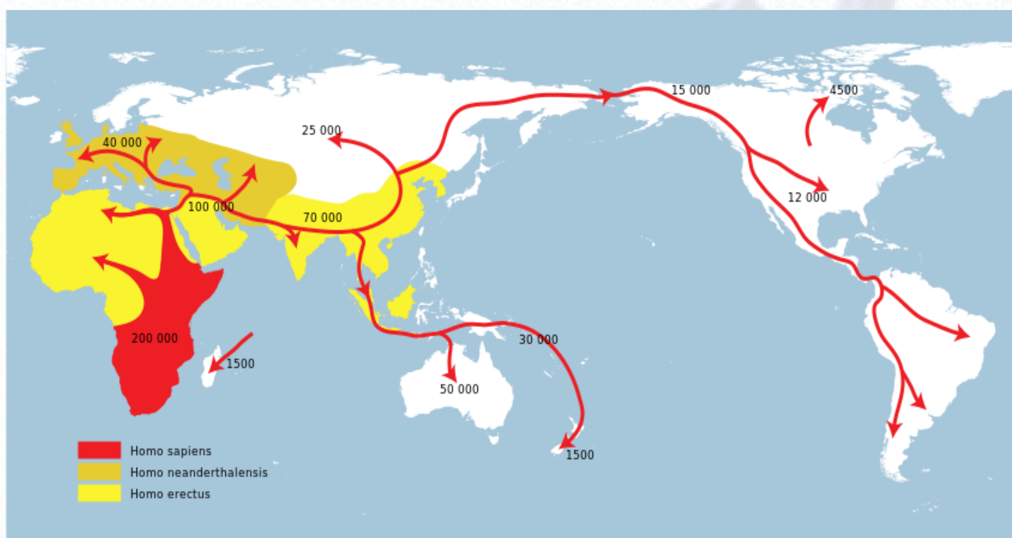
Keywords: history, prevention, migration, security challenges, Europe

1 andrej.iliev@ugd.edu.mk

INTRODUCTION

The migration of people has taken root from the earliest history. Migrations for people began long time ago, after moving from Africa to Asia and Australia, reaching all continents and places. The "Great Movement of Peoples" took place from the 3rd to the 7th century, covering the transition from the Late Antiquity to the Early Middle Ages as: Goths, Vandals, English, Saxons Lombardy, Frieze, Franks and other Germanic tribes, Huns, Avari, Slavs; Bulgarians and others (*Guy, 2008: 10-15).* After the great displacement of the peoples there were other major movements such as the Vikings, Normans, Hungarians, Mongols and Ottomans. All of these movements have given people a new demographic picture of Europe. What could be mentioned as a negative example is that these voluntary migrations are started to force migrations of African population for economic reasons. This movement, combined with the formation of colonial states and political, economic and cultural ties, will have far-reaching consequences which will result in new people moving into more recent history *(Benjamin, 1978: 17-20).*

Like the most of Europe's population which moved to the New World, the Jews and Moors, under pressure from the Inquisition, they left Spain in 1950 and moved to the Ottoman Empire. The Spanish Empire colonized the South Atlantic Island, Mexico and Caribbean from 1519 to 1821. The first Spanish settlements were in Florida, followed by the settlements in other Spanish colonies now known as New Mexico, California, Arizona, Texas and Louisiana. Between 1620 and 1640, a wave of over 50,000 British immigrants arrived in America. This wave later resulted in the formation of the first 13 colonies in Britain.



Picture 1: Map of early human migrations[2]

The largest colonizers of the 19th century are Spain, Portugal, France and the United Kingdom and in the late 19th and early 20th centuries this group became larger with Russia, Belgium, Germany, Italy, the United States and Japan. Apart from colonial empires, great emigration also occurs from other European countries and motives for such emigration are often economic as pursuit for better life, as well as the pursuit of personal security and well-being. One of the greatest migrations in human history is the Great Atlantic Movement from 1820 to 1980, when they moved from Europe to North America or more precisely to the United States, where about 37 million people moved. Initially, they were the residents of Ireland, the Netherlands and Germany. Across the Atlantic, there was also a large migra-

tion which includes the slaves from Africa during the 16th to 19th century, with an estimated 12 million slaves from Africa. *Californian "Gold Fever" is a period from 1848 to 1855 (Witschi, 2002: 20-22).* This period began when James Marshall found gold in California and when the people from nearby areas heard about it, mass arrivals began from Asia, Australia and Europe. One of the biggest migrations in the 20th century came after the British gained India's independence and divided India into two parts, one representing Hindu and Sikhs and one remaining in India, while the other part was in Pakistan represented by the Muslims, this migration is estimated at about 14.5 million people (Roman, 2015: 313-315).

After the colonization, the First and the Second World Wars were singled out as the biggest triggers of large waves of migration. From 1944 to 1948 more than 12 million Germans were expelled from Eastern Europe. In the Far East, the displacement of larger groups of people during this period was initiated by the events such as the Korean War (1950-1953) and the Vietnam War (1954-1975) and on the American continent with the Cuban crisis (Fargues, Fandrich, 2012: 5-9). The Soviet Union's occupation of Afghanistan in 1979 and the intensification of hostilities with Islamist rebel groups created a large number of refugees who fled to Pakistan and Iran. This figure peaked in the mid-1980s and amounts to about six million refugees. It represented 30% of Afghanistan's total population in this period.

Migration	Period	Number	Origin and Destination
African Slave Trade	18th and 19th Century	12 million	From Africa to Americas
The Great Atlantic Migration	1820-1980	37 million	From Europe to the United States
US Great Migration	1910-1930s	6 million	From American South to Northern cities
Post-World War II resettlements	1945	20 million	Movement from German occupied areas
Partition of India	1949	12 to 14 million	Movement between Pakistan and India
Chinese Urbanization	1978-Ongoing	200-500 million	China's rural population moves to cities

Table 1: Migration waves from 18th to the end of 19th century

MIGRATION AFTER THE ARAB SPRING

The migrant crisis is a consequence of many years of transition processes in the Middle East and North Africa within the so-called Arab Spring. These processes in Syria and Libya resulted in a civil war, but also caused instability and a humanitarian crisis in the neighbouring countries, especially in Turkey and Libya, where the largest migrant centres are (Bonine, Amanat, Gasper, 2012: 342). As a result of these conflicts, the number of people who left the region for economic reasons is negligible in terms of the number of people who escaped from war, destruction, repression, persecution, terror and other violations of human rights (Kamrava, 2013: 572). From the many crises and conflicts in the Middle East that have resulted in the emergence of large groups of migrants and internally displaced persons in the last few decades, the crises and wars of the territories of Iraq, Afghanistan and Syria can be singled out as the most critical. During the war in Iraq there are no precise data on the number of migrants, but it is estimated that about 2 million Iraqis fled to the neighbouring countries and about 2.5 million remained in Iraq as internally displaced persons. Of those who fled to the neighbouring countries,

about 1 million people went to Syria and about 500,000 to Jordan. The rest went to Lebanon, Egypt, Iran, Turkey and other Gulf countries. In this refugee crisis, around 137,000 people left for Europe from March 2008. The inflow of 2 million Iraqi migrants created socio-economic pressure in Syria and Jordan resulting in public discontent and demographic changes that could impair the security of these countries over a longer period of time (Wehrey, Kaye, Watkins, Martini, Guffey, 2010: 95-97). Prior to the war in Syria, the migrant crisis in the Middle East characterized the poor socio-economic conditions of parts of the population and the great instability of the region (Blanchard, 2009: 2-6).

Such a complex security situation in the Middle East is getting further complicated during 2011, when a series of anti-government protests, uprisings and armed rebellions emerged and spread not only in the Middle East but also in North Africa. Such events are known as the Arab Spring (Gelvin, 2012: 5-10). The violence in these events caused the occurrence of casualties and the displacement of a larger number of people and they felt in a growing number of countries such as Tunisia, Egypt, Algeria, Yemen, Jordan, Mauritania, Saudi Arabia, Oman, Sudan, Syria, Libya and Morocco (Fargues, Fandrich, 2012: 22).

The overthrow or weakening of the existing, mostly totalitarian regimes on the one hand, and the weak security systems of newly-formed governments, on the other hand, led to the conditions for the expansion of terrorist and radical militant Islamic groups in most of the region (The global refugee crisis, 2015: 20-22).

Syrian President Basher al-Assad made only some formal changes in order to win the favour of the Kurdish population and the moderate Islamists in Syria, but did not accept any essential demands of the protesters and responded with massive operations, torture and murders of those who did not agree with him (Haas, Lesch, 2012: 85-90). This situation made the protesters form groups and start arming with the goal of overthrowing the regime with armed rebellion (Gelvin, 2012: 95-100). In a short time, a full civil war broke out with the participation of thousands of rebel groups with different agendas (Adams, 2015: 20-24).

Since mid-2012, the Syrian refugee crisis has steadily increased, rising 10 times in the next 12 months. According to the UN estimates by October 2012, around 30,000 people were killed; nearly 400,000 Syrians fled to the neighbouring countries and had about 1.2 million internally displaced people (Popp, 2012: 2-4). According to the UNHCR estimates given in early September 2013, about one million refugees left Syria during the first two years of the crisis, and another one million left the country in the last six months (Ferris, Kirisci, Shaikh, 2013: 65-70). Military actions destroyed the economy and ravaged the basic living conditions, so the demand for the basic living and the living conditions became one of the reasons for population displacement (Gucturk, 2015: 25-27). On the road to the EU, the most important route for their movement is the so-called Balkan Route. The large number of people who are moving, fleeing and migrating for any reason poses a threat to the security of the countries in which they transit and the countries that represent their final destination. This type of threat should be understood as a broader framework that can include humanitarian disasters, economic challenges, phenomena of resource and energy shortages, social and cultural misunderstandings and other problems (Collett, Le Coz, 2018: 5-7).

In 2015 and in the first months of 2016, a large number of migrants transited through Europe on the way to the northern and western European countries (Smilevska, 2015: 3-5).

From the viewpoint of national security, it was necessary to establish control over the entry and exit points of migrants (mainly entering and leaving the territory outside the legal international border crossing points) by applying the appropriate registration procedures. The effects of the migrant's crisis

in Europe are statistically processed in the Operational UN portal, where we gave the exact number of **total transit number of migrant trough the territory of Europe from 2014 to February 18, 2020.**

Table 2: Total number of migrants which transited to European countries from 2014 till February 18, 2020[3]

Year	2014	2015	2016	2017	2018	2019	2020
Migration per year	225 455	1032 408	373 652	185 139	141 472	123 663	11 753
Total							2093542

Table 2, shows the total number of migrants who have transited through European countries from 2014 to February 18, 2020. The number of migrants transiting through European countries during 2014 was 225 455 persons, 1032 408 persons in 2015 year, 373 652 persons in 2016 year, 185 139 persons in 2017 year, 123 663 persons in 2019 year and 11753 persons until February 18, 2020. The total number of migrants who have transited through European countries since 2014 year until February 18, 2020 is 2093 542 persons.

Table 3: *Country of origin of the migrants who transited in Europe from 2018 till February 18, 2020*[4]

State	2018	2019	2020	**Total**
Afghanistan	71 868	62 820	5971	140 659
Syria	29 426	25 722	2445	57 593
Congo	8488	7420	705	16 613
Iraq	4952	4328	411	9691
Iran	2829	2473	235	5537
Palestine	4810	4205	400	9415
Others	19 099	16 695	1586	37 380
Total	141 472	123 663	11753	**276 888**

In our paper we have recapitulated the number of migrants who have transited through European countries in the last three years or more detailed from 2018 to February 18, 2020, according to their country of origin. About 50.8% of the total number of migrants was originally from Afghanistan or chronologically by years: in 2018 there were 71 868 persons transiting from Afghanistan, 62 820 persons in 2019 and 5971 persons until February 18, 2020.

In the period from 2018 until February 18, 2020, the total number of migrants from Afghanistan who have transited through European countries is 140 659 persons. In order not to explain in detail Table 3, which provides the similar data, the numbers of migrants transiting through European countries from 2018 to February 18, 2020, by country of origin are from: Syria, Congo, Iraq, Iran, Palestine and other states. From the total number given for 2018 to February 18, 2020 around 20.8% of the migrants' country of origin includes Syria, Congo 6%, Iraq 3.5%, Palestine 3.4%, Iran 2% and other countries over 13%.

The migrant crisis is a threat for many aspects of social life in European countries and already has an impact on economic and social security, as well as internal security in the countries through which migrants transit or remain, including the SEE countries on the Balkan route through which they used to arrive in the Schengen zone, especially in Germany, Sweden and other Western and Nordic states (Bloom, Canning, Fink, 2011: 12-17). All European countries have ratified many international conventions and instruments such as the 1951 Convention on the Status of Refugees (1951) and its Protocol (1967) in January 1994. An important legal document is the Law on the Asylum and Temporary Protection that guarantees the right to social protection of migrants, as well as the conditions and procedures according to which a foreigner in European countries has the right to apply for asylum. Furthermore, before the final decision is made in the procedure for recognition of their legal status, asylum seekers have access to "free legal aid, accommodation, residence, basic health care in accordance with the health insurance regulation, the right to social protection under the Law on Social Protection, the right to education according to national legislation for primary and secondary education".

Also, on a national level the protection of migrants is guaranteed by the Family Law and the Law on Social Protection and other relevant regulations and legal documents. After the large number of refugees who have passed through Europe since 2015, most of the European countries' national governments have brought new legislation in response to the migrant crisis (Kerbage, Haddad, 2014: 12-15). According to the World Health Organization (WHO), a lot of migration had diseases which were spread from Pakistan, one of the three countries in the world where it was endemic. They also warn that Syrian epidemics can become a threat to millions of children in the Middle East (European Parliament, 2016: 5-8).

RESPONSE OF EUROPEAN COUNTRIES TO MIGRANT CRISIS

In coordination with the national bodies, International and national Red Cross, UNHCR and other numerous organizations, the European countries within their capacities provide a humane treatment for migrants. They implemented the amendments to the Law on the Asylum and Temporary Protection, enabling migrants to decide whether to apply for asylum or leave the territory in the period of 72 hours.

Apart from the legal changes, most of the European countries have adopted policy measures provided for by the existing legislation, mainly in the context of the crisis management mechanisms. In accordance with this decision, the Crisis Management Centre activated its headquarters and adopted an Action Plan for Prevention and Management of the Entry and Transit of Migrants across the territory.

Moreover, this decision enabled the European armies to provide adequate assistance to the European police forces in their efforts to secure the borders and control the entry of migrants on the territory. To ensure effective management of migrant crisis from 2015/2016, the European countries have established close cooperation with the so-called Balkan Route (Serbia, Croatia, Slovenia) and the Visegrad Group countries (Hungary, Slovakia, the Czech Republic and Poland) as well as with the EU External Border Management Agency (FRONTEX) (Frontex at Glance, 2015: 10-15).

The most important aspect of this cooperation was the close cooperation between the police forces of these countries, which included not only sharing information regarding the transit of refugees and migrants, but also providing assistance from the police force of most of these countries to the national police. The police assistance included technical assistance (including various donations of necessary equipment) and staff assistance (providing personnel for the establishment of joint patrols). Most of

the European countries have adopted the Strategy for the Integration of Migrants and Foreigners from 2018 to 2028 year.

This strategy also takes into account global migration trends and their impact on possible needs and expectations regarding local integration capacity. The comprehensive policy for integration into the strategy is formulated in a way to act at the entry point, at the very beginning of the asylum procedure, without delay and without wasting valuable time, which can be better invested in the preparation for integration. The initial phase for the development of individual integration plans is already in the reception centre for asylum, where early integration measures should be implemented.

Local integration is one of the three possible "lasting solutions" for migrants envisaged in the new strategy. Other lasting solutions include voluntary return to the country of origin and resettlement in a third country. Local integration is important for people who cannot return to the country of origin in the foreseeable future. It is based on the assumption that refugees will remain in the country of asylum and will find a lasting solution to their situation in that country. It is a way to enable migrants to restore their lives, their staying to become self-sustaining and creating a new life as the members contributing to the host society (UNHCR) (Achiron, 2005: 17-24).

It is important to realize that integration requires a long-term commitment, both by the refugees and by the host society. The strategy is aimed at the integration of persons who, in accordance with the Law on the Asylum and Temporary Protection, have the status of belonging to any of the following groups:

- Persons with the acknowledged refugee status;
- Persons under subsidiary protection;
- Asylum seekers, as beneficiaries of early integration measures, and
- Foreigners with regulated residence in some of the European countries.

The strategy takes into account that the time before the end of the asylum procedure can be used as a productive time when, at this early stage, the asylum seeker can participate in certain educational and professional training programs that will assist him/her in the later stages of the integration process. The new strategy builds on the results achieved by 2016, where important lessons have been learned about providing support to migrants in order to become independent members of society. In order to further improve the integration system and address the remaining strategic shortcomings, the new ten-year strategy focuses on following objectives:

1. Strengthening the integration system through capacity-building measures and partnerships that encourage local participation and interactive communication;
2. Development of sustainable early integration measures;
3. Realizing sustainable and long-term housing solutions that promote integration into society;
4. Achieving educational goals in order to strengthen integration in the society and promote sustainable employment;
5. Providing employment opportunities for the purpose of strengthening the independence of the target group and avoiding its dependence on social protection;
6. Achieving optimum results by linking integration measures and acquiring citizenship;
7. Introduce innovative models for optimizing the results of local integration in all sectors.

In order to develop the measures and steps for the implementation of the strategy for integration of migrants in some of the European countries, the key issues of integration are:

- Early integration,
- Housing and accommodation,
- Education,
- Employment and training on vocational skills,
- Prospects for naturalization and integration (obtaining citizenship, family reunification).

European countries are under way to change the strategy for integration of migrants and foreigners and it is necessary for them to adopt it in the European parliament.

CONCLUSION

In the current migrant crisis, the responsibilities according to UN's 1951 Refugee Convention and the subsequent 1967 Protocol are the principles which guaranteed the safeguard humanitarian assistance to those most in need (Grandi - (UN) High Commissioner for Refugees, 2016: 29-31).

One of the most pressing issues might be how to integrate the newcomers. These are also reflected in the four-pillar European Agenda on Migration from 2015 on which consists of:

- Reducing the number of irregular migrants,

- Border management,

- Common asylum policy,

- Legal migration, including integration and development in the countries of origin.

The aim of this study has not been to present an exhaustive account of every single communication, Green Paper, memo, etc. which the European Union institutions have released relating to migration and asylum policy (Seilonen, 2016: 79-81).

From the beginning of the crisis, the EU and the European countries have not demonstrated a quick, clear and efficient response. On the contrary, they have mainly based on the national activities and the measures of the Member States that run from open door policy (German Chancellor Angela Merkel's approach), to closing of borders and building wire fences for their protection (the approach of Hungary, which is then applied from most of the SEE countries). The listed approaches could not totally eliminate the crisis. In March 2016, the EU presented a concrete and more dimensional response (Iliev, Grizev, Stojkoski, 2016: 695-697).

The effects of wire fences were seen after their installation. So, if we compare the statistical numerical indicators for the number of migrants who transited through the European countries, we get this result:[5] in 2016 the number of migrants which got through Europe was 390 456 persons, in 2017 was 188 372, in 2018 was 147 683, in 2019 it was 128 536 and until now in 2020 year 11 753 persons.[6]

The numerical indicators have given this results: the number of migrants in 2016 in relation with 2017 decreased by **2.07** times, in 2017 compared to 2018 by **1.28** times, in 2016 compared to 2018 by **2.64**

5 Migrants flow monitoring Europe, https://migration.iom.int/europe?type=arrivals, accessed on February 20, 2020.

6 Operational portal refugees situation, https://data2.unhcr.org/en/situations/mediterranean, accessed on February 20, 2020.

times and comparing 2016 with 2019 the number of migrants which have transited through Europe decreased by **3.04** times.

With this we can absolutely confirm the hypothesis of this paper that the wire fences and mutual support of European countries in resolving crises in the Middle East are the key dependent variables and indicators for overcoming the migrant crisis and creating a possibility for the returning of migrants in their countries of origin.

Turkey was the main transit base for the largest number of migrants, whose implementation should ensure the effective resolution of the crisis. The agreement is important from several aspects: the determination of the EU to provide adequate protection in accordance with the international legal norms of refugees; making a distinction between people with refugee status and migrant status; the determination of simultaneous action in the direction of closing migrant routes, the integration of the refugees arriving, the return of those who are not subject to protection in accordance with the refugee and migrant status principles or who pose a security risk; the dislocation of refugees and migrants from Greece to Turkey and the prevention of a new wave of migrants. Parallel to this, in order to eliminate causes of the crisis, the EU and Turkey have committed themselves to a common approach to security stabilization and post-conflict peace-building in Syria. In this way, the EU manifested its determination for seriously responding to the most serious crisis which they faced in almost three decades (Iliev, Glavinov, Iliev, 2019: 329-330).

A few years ago the vulnerability assessment methodology was established from FRONTEX in coordination with the European commission and has four basic principles. This vulnerability assessment methodology is structured around one single overall process resulting in annual baseline assessments. These assessments are complemented with specific assessments stimulated by the identification of upcoming challenges, monitoring of situation along the external borders and assessment of the Member States' contributions to rapid reaction pool.[7]

Migration coordination for the EU countries includes:

- Specialist expertise in response to migration policy (border control/asylum status)

- More effective coordinated early-warning system for rapid needs for action

- Responsibility for overall implementation of the EU initiative and recommendations for migrant crisis challenges

- Better coordination among the International agency for migration and the EU national governments for migrant crisis issues

- Action plans implementation from the EU national governments for improving logistic resources of migrant and transit camps (Collet, Le Coz, 2018: 49-50). *Trade liberalization* between the EU and migrant countries of origin (ECOWAS in Africa) need a closer bilateral cooperation for management of migrant flows (Vision Europe Summit, 2016: 89-91).

REFERENCES

1. Andrej Iliev, Aleksandar Grizev, Goce Stojkoski. Historical reasons for refugee-immigrant crises and its overall social impact on the Southeast European countries, DKU, Croatia, 2016.
2. Andrej Iliev, Aleksandar Glavinov, Jovan Iliev. Republic of Slovenia and the migrant crisis:history and perspectives, Skopje, 2019.
3. Vision Europe Summit. Improving response to migration and refugee crisis in Europe, Lisbon, 2016.
4. *Halsall Guy. Barbarian Migrations and the Roman West, 376–568, Cambridge University Press,2008.*
5. *The Life of Admiral Christopher Columbus by His Son Ferdinand. Translated by* Keen, Benjamin*. Westport, CT: Greenwood Press. 1978.*
6. *Witschi, N.S.* Traces of Gold: California's Natural Resources and the Claim to Realism in Western American Literature. *Tuscaloosa: University of Alabama Press, 2002.*
7. Emanuela Roman. Mediterranean flows into Europe. Refuges or Migrants?, Journal of culture and society, 2015.
8. Migration after the Arab Spring, Philippe Fargues and Christine Fandrich, 2012.
9. Bonine, M. E., Amanat, A., & Gasper, M. E. (Eds.). (2012). *Is There a Middle East? The Evolution of a Geopolitical Concept*. Stanford, CA: Stanford University Press.
10. Kamrava, M. (2013). *The Modern Middle East: A Political History since the First World War* (Berkeley, CA: University of California Press.572-5900)
11. Wehrey, F., Kaye, D. D., Watkins, J., Martini, J., & Guffey, R. A. (2010). *The Iraq Effect: The Middle East after the Iraq War*. Santa Monica, CA: Rand.
12. Christofer M. Blanchard. (January 28, 2009). *Islam: Sunnis and Shiites.CRS Report for Congrees.* Congressional Research Service.
13. Elizabeth Collet, Camille Le Coz. After the storm - Learning from EU response to the migration crisis, Migration policy institute, Europe, 2018.
14. Gelvin, J. L. (2012). *The Arab Uprisings: What Everyone Needs to Know*? New York.
15. Philippe Fargues. Christine Fandrich. (2012). *Migration after the Arab Spring.* European University Institute. Robert Schuman.
16. *The global refugee crisis.* (June 2015). *A conspiracy of neglect.* Amnesty International.
17. Haas, M. L., & Lesch, D. W. (Eds.). (2012). *the Arab Spring: Change and Resistance in the Middle East*. Boulder, Westview Press.
18. Gelvin, J. L. (2012). *The Arab Uprisings: What Everyone Needs to Know*?, Oxford.
19. Dr.Simon Adams. (2015). Failure to Protect: Syria and the UN Security Council. *Occasional Paper Series No.5.*Global Centre for the Responsibility to Protect.
20. Roland Popp.(2012). The Syrian Civil War: Between escalation and intervention. *CSS Analysis in Security Policy.No124.* Center for Security Studies in Zurich.
21. Elizabeth Ferris. Kemal Kirisci. Salman Shaikh. (2013). *Syrian Crisis: Massive Displacement, Dire Needs and Shortage of Solutions.*
22. Gucturk, Y. (2015). War Crimes and Crimes against Humanity in Syria. *Insight Turkey, 17*(1).

23. *Refuge&Hope in Time of ISIS: The Urgent Need for Protection, Humanitarian Support, and Durable Solutions in Turkey, Bulgaria, and Greece.* (2015).

24. Elizabeth Collett, Camille Le Coz. After the storm - Learning from the EU response to the migrant crisis, june 2018, Migration policy institute, Brussels.

25. Martina Smilevska, Emerging Challenges in Response to the Refugee Crisis The state of the Macedonian asylum system, MYLA, February 2015.

26. David E.Bloom, David Canning, and Günther Fink.(J2011).Implications of Population Aging for Economic Growth. PGDA Working Paper No.64.

27. Hala Kerbage, Ramzi Haddad. Lebanon drug situation and policy, Council of Europe, Brussels, 2014.

28. The public health dimension of the European migrant crisis. (2016), European Parliament.

29. *Frontex at Glance.* (2015). FRONTEX, the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the EU

30. Marilyn Achiron. Nationality and Statelessness. A Handbook for Parliamentarians, UNHCR, 2005.

31. Filippo Grandi - (UN) High Commissioner for Refugees. Managing the refugee and migrant crisis (The role of governments, private sector and technology), Global crisis center, 2016.

32. Josi Seilonen. Fortress Europe – a brief history of the European migration and asylum policy, University of Helsinki, 2016.

NATIONAL SECURITY STRATEGY OF THE REPUBLIC OF SERBIA AND ITS IMPLICATIONS FOR HUMAN SECURITY

Saša Mijalković, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia
Marija Popović Mančević, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: National Security Strategy is a document of the highest strategic importance in one state that defines core values, interests, challenges, risks and threats to national security, as well as the organization of the national security system and national security policy in order to secure and achieve national interests. The Republic of Serbia defined its strategic priorities for the first time when it adopted the first National Security Strategy in 2009, and updated them in the new National Security Strategy adopted in 2019. An important part of the first Strategy was the concept of human security, which was indication that the Republic of Serbia formally considered the needs and values of an individual on an equal footing with the values of the state. This Strategy was deemed to be an expression of determination of the Republic of Serbia to create conditions for improving human security in economic, health, political and other aspects and through transparency, rule of law and responsibility. However, the new Strategy does not explicitly mention human security as a specific part of the integral concept of national security. Furthermore, it introduces several novelties that are in contrast with the prevailed human-centric mission of the previous strategy, and these novelties are focused towards territorial integrity, sovereignty and other state-centric issues. Bearing this in mind, the questions arising are: why this strategic turn was made and what are to be the implications of this change for human security. The main hypothesis is that the strategic turn to state-centrism instead of the human-centric approach promoted by the previous National Security Strategy was made because it corresponds to the global trend of revival of nationalism and sovereignty. However, this indisputably leaves room for criticism because people are the most important factor in the equation of integral national security and disregarding them in the national security strategies and policies can be problematized on multiple levels.

Key words: strategy, national security, state-centrism, security threats, human security, human rights.

1 sasa.mijalkovic@kpu.edu.rs

INTRODUCTION

The National Security Strategy of the Republic of Serbia defines strategic priorities and "is the highest strategic document whose implementation is designed to protect national values and interests of the Republic of Serbia from challenges, risks and threats to security in all areas of social life" (National Security Strategy of the Republic of Serbia, 2019). This Strategy determines not only the core values and threats to them, but also the complete organisation of the national security system and allocation of national resources in supporting the national security goals. This means also that all national security policies and sub-strategies must derive from it and support it. For that reason, it is of highest importance for any state to create an overall security strategy that would comprise all the most important dimensions that affect security in one state. It must unavoidably include military, political, economic, environmental and societal dimension on both state and individual level. Humans and their security must be properly addressed by national security strategies and policies. Since there is no human security system, national security system is still the main responsible for protection and well-being of people living in one state, and some international mechanism for human security protection can be, and are included only when individuals require protection from the arbitrary power of the state (Trobbiani, 2013). Human security, a**s an** "approach to national and international security that gives primacy to human beings and their complex social and economic interactions" (Gregoratti, 2007), must be integral part of national security strategy so the national resources can be allocated to the purpose of improvement of human security and human life conditions in one state. Since "national security is used to privilege the military sector and to divert enormous sums of money into armaments, while failing to protect citizens from chronic insecurities of hunger, disease, shelter, crime and environmental hazards" (Thakur, 2004), the need for human security component to be clearly incorporated in strategies of national security is even more prominent. Some of the national security strategies or policies around the world are examples of national political elites' aspirations to promote people-centred national security approach, like 2017-2022 Philippines National Security Policy and National Security Strategy 2018 (aimed to empower and secure the well-being of the Filipino people (Gorospe, 2018), National Security Policy 2013 of Papua New Guinea, The 2008 Liberia National Security Strategy and National Security Strategy of Peru 2013 (DCAF: Geneva Centre for Security Sector Governance, 2020).

The National Security Strategy of the Republic of Serbia 2009 contained some elements of human security approach to national security, which, as a very first national security strategic document, gave hope that national security orientation of the Republic of Serbia might be another human-centric one. It stated that the "implementation of international standards in the area of human security significantly contributes to achieving the goals of national security (National Security Strategy of the Republic of Serbia, 2009: 28), which indicated that human security is considered as a prerequisite for national security. This Strategy gave importance to creating conditions to develop and improve human security through economic, environmental, health, political and any other aspect important for the well-being of individual and the community (Ibid), and it seemed that the national security focus of the Republic of Serbia in the future will be to a greater extent directed towards the security of the people.

However, the National Security Strategy of the Republic of Serbia 2019 shows some inconsistency in representation of human security component comparing to the previous Strategy adopted in 2009, and it opened some debate about the reasons why human security changed its status in the new national security strategic document and what the potential reasons are for that change, despite of the declarative commitment to human security and human development in most democratic states from the 1990s onwards.

NATIONAL SECURITY STRATEGY OF THE REPUBLIC OF SERBIA 2019AND HUMAN SECURITY DIMENSION

Ten years after, in 2019, the Republic of Serbia adopted the new National Security Strategy, but the first thing to be noticed is that there is no explicit mention of human security in it. The Strategy declares commitment to protection of human and minority rights, without specifying any obligations in promoting human security.

Starting from the strategic environment analysis, all of the challenges listed are put in the context of the security of the state, with little or no implications for human security. For example, climate change and the growing deficit of natural resources are mentioned as challenges for international peace because it is estimated that they will result in an increased number of conflicts over energy and other natural resources (National Security Strategy of the Republic of Serbia, 2019). However, there is no mention of what kind of consequences people might face in relation to these potential conflicts and what the state should do to reduce risk for individual safety and security caused by natural resource depletion or climate change. The same can be said about the assessments of the consequences of economic underdevelopment in Southeast Europe, which is perceived in the Strategy not predominantly as a potential threat to human development, conditions of living and welfare, but rather a threat to state stability, since it is "conducive to the strengthening of religious extremism, primarily extreme Islamism, which results in the spread of radical Islamic movements, whose activities can cause destabilization of the region" (Ibid).

In this Strategy, there is a strong discrepancy between the selected and proclaimed values and defined interests, as interests should be the expression of vital values. The interests in this document are more state-centric oriented, opposite to the dominantly human security based list of vital values. The core national values in this document are freedom, independence, peace, security, democracy, rule of law, social justice, human and minority rights and freedoms, equality and equity of the citizens, tolerance, transparency, solidarity, patriotism and a healthy environment. The main national interests are: maintaining the sovereignty, independence and territorial integrity of the Republic of Serbia; keeping internal stability and security; preserving the existence and protecting Serbian people wherever they live, as well as national minorities and their cultural, religious and historical identity; maintenance of world and regional peace and stability, European integration and EU membership; economic development and overall prosperity; environmental protection and the protection of natural resources of the Republic of Serbia (Ibid).

This inevitably leads to the detriment of human security, as values are to be "protected by the achievement of national interests" (Ibid). National interests are of the highest importance since the National Security Policy is to be implemented according to the defined interests. Among them, only two interests are genuinely human security oriented: preserving the existence and protecting Serbian people wherever they live and the identity of national minorities and economic development and overall prosperity. So, the National Security Policy's goals arising from these national interests are the only ones tackling with the issues of human security, but they definitely do not cover all the dimensions of human security. These goals include development of demographic potentials in order to increase the birth rate and decrease the mortality rate and improve social and medical protection of citizens, national unity and development of cultural, religious and historical identity, improving the position of national minorities, improving the position and protection of the rights and interests of the diaspora and the Serbs abroad and the protection of cultural and historical assets important for the Republic of Serbia and its citizens, the improvement of living standards and quality of life, economic progress, the improvement of education, as well as the scientific and technological development. There has been

a word also about the improvement of economic and energy security, but more from the national stability perspective than from the perspective of people's well-being. Finally, the Strategy 2019 does not continue with the commitment expressed in the previous Strategy 2009 to "improve the role and position of women in decision-making processes and strengthen state mechanisms for ensuring gender equality" (National Security Strategy of the Republic of Serbia, 2009), which is, from the human security perspective, a great omission.

Among about twenty key identified security challenges, risks and threats, only problems of demographic development, epidemics and pandemics of infectious diseases and natural disasters and technical-technological accidents (related to the health of citizens) deal with human security. In the context of the current crisis caused by the Covid19 pandemic, it is very important that the National Security Strategy of the Republic of Serbia 2019 recognized epidemics and pandemics of infectious diseases as a security threat, but the big drawback is that it did not anticipate its consequences for the individuals. Namely, the Covid19 implications for human security are at least twofold. In addition to posing threat to physical security of individuals, the Covid19 pandemic also has potential to be misused as a weapon in the hands of world leaders if framed as bioterrorism, which keep populations in fear, so the fight against Covid-19 "has provided the world's leaders with a legitimate reason to further limit civil freedoms in democracies as well as in more authoritarian regimes" (Rullán, 2020).

Other perceived threats and risks are those connected with the consequences they can leave on the political, economic system, economy, stability of the state and territorial integrity. Moreover, some of the identified threats and risks that obviously affect people are securitized and perceived rather as a state and social stability issue than a human security issue, like, for example drug addiction, which is defined as "a growing social problem that is getting a form of a security problem and affects the increase in the number of serious crimes" (National Security Strategy of the Republic of Serbia, 2019). The Strategy 2019 also fails to include some very important aspects of personal security like domestic abuse, which is a decades-long problem in the Republic of Serbia and represents a threat to individual's physical security. Also, it does not tackle excessive air pollution, which according to the *Report on the state of the environment in the Republic of Serbia for 2018*, in 77% was caused by RM10 particles originating from thermal power plants, food, chemical and mineral industries (Report on the state of the environment in the Republic of Serbia, 2019). These particles can cause many health issues like acute mortality, impairment of lung function and in exacerbating airways diseases such as chronic obstructive pulmonary disease and asthma (Gilmour et al, 1996). The Strategy 2019 also does not tackle the issues of privacy and personal data protection and it should, as we are living in the era of mass biometric state surveillance (SHARE Foundation, 2020), which is even more provocative and troublesome if we take into account that even the Strategy recognizes the foreign intelligence organizations illegal and concealed actions as a threat (National Security Strategy of the Republic of Serbia, 2019), also without mentioning the implications of that threat for human, or more precisely, personal security of the citizens of the Republic of Serbia.

Professing of military neutrality also does not benefit human security in any way, because the strategy obviously seeks to compensate for military isolation by strengthening its national capacities. Namely, the concept of total defence is introduced, which only further instrumentalizes all spheres of society, putting them in the function of defending the country. By conceptualizing total defence, it moves away from the concept of human security, all the more so because it mentions the concept of total defence in the context of "increasing the number of citizens trained to defend the country" (National Security Strategy of the Republic of Serbia, 2019).

As for the National Security System, it comprises, according to the Strategy 2019, the defence system, the internal security system, the security intelligence system and other entities important for national security. Internal security system is designed to respond to threats affecting people from human rights violations, including "the protection and rescue of people and goods from the consequences of natural and other disasters, including the measures of recovery from these consequences" (Ibid). The Strategy does not precise any other way how the national security system is supposed to protect people from everyday insecurities stemming from political, economic, societal and other spheres of life. Last, but not least, the absence of principles of impartiality and political neutrality in the functioning of the national security system in the Strategy 2019, which should guarantee no political pressures on the institutions of the national security system, can compromise, among others, human security, especially its personal component.

The purpose of the human dimension in the concept of the national security is to promote human values and well-being, so the interests and security policies can pursue human needs and improve living conditions, equally in terms of physical self-preservation and in terms of increasing the quality of life and human dignity. Human security component in the national security strategy is necessary because national security in its traditional form is not sufficient to ensure, protect and improve individual safety, and putting aside human security can have huge implications for the national security and regional peace.

REVIVAL OF STATE-CENTRISM: WHY IS HUMAN SECURITY STRATEGICALLY SIDE-LINED?

The strategic orientation and choices of the Republic of Serbia have always been deeply interconnected with and dependent on its strategic environment. The Strategy 2009 relies to a greater extent on the European Security Strategy from 2003 and on its conception of security threats. The European Security Strategy 2003 demonstrated EU's commitment to promote human security through mainstreaming human rights issues, including ESDP missions (European Security Strategy, 2003: 22). Mary Kaldor, Mary Martin and Sabine Selchow confirm in their policy analysis from 2008 that human security is a "European strategic narrative" that can help increase EU's coherence, effectiveness and visibility, and thus strengthen the position of the EU in world affairs (Kaldor, Martin, Selchow, 2008). They claimed that human security approach and lexicon could serve as a "symbolic signpost in the development of the EU's strategic culture, reconciling the Union's normative and value-driven tradition with a quest for effectiveness" (Ibid).

The EU Global Security Strategy that replaced the European Security Strategy 2003 also expressed intent to "foster human security through an integrated approach" (Shared Vision, Common Action - A Stronger Europe: A Global Strategy for the European Union's Foreign and Security Policy, 2016). However, in the last decade, there has been some "increase of discourses about national security and nationalism in Europe, especially starting from the financial crisis 2008" (Wodak, Boukala, 2015). The second milestone in Europe's falling to populism was migrant crisis that escalated in 2015. This crisis affected the European Union, but the Republic of Serbia also, as it is a transit state of migration flows, and this crisis definitely put human security in another perspective. Migration policies in response to migrant flows in Europe brought back national security predominance and created in some cases even risk and insecurity for people (Nyberg Sørensen, Kleist & Lucht, 2017: 50).

Connecting migrants and refugees with international terrorism and economic and social problems that could potentially be caused with their arrival, was a main populist narrative of the right-wing parties in the EU (Kaya, 2018; Maguire, 2015:81, Toscano, 2015: 172). This led to the securitization of migration and enlightened the problem of state sovereignty again, bringing into focus the nation-state and national security rather than people and human security (Estevens, 2018). By securitizing migration, immigrants became also a threat for EU's ontological security (Benveniste, Lazaridis & Puurunen, 2017: 64), and a modern nation state in Europe "sacrificed" immigrants in order to "create the illusion of power [...] as the prime source of political power lies in the capacity to reduce people's subjectively-felt uncertainty" (Lochocki, 2018: 19).

Xenophobic populist rhetoric is causing human insecurity because it implies control measures and deterring migration before protecting the human rights of the refugees (Grabbe, Groot, 2014: 43). Instead of being treated as a humanitarian problem of people fleeing war, political instability and in some cases extreme poverty, migrations were reframed as security problem, which called into question the European's declarative human-centred foreign policy and once more confirmed that the issues of national security were are still given priority over human security.

Migrations are one of the most important, but not the only reason for the rise of populism and prevail of national over human security. Kelly M. Greenhill finds that nationalism in Europe is deeply rooted and that migration crisis has "provided more fuel for fire that had already been stoked back to life by the Great Recession, the Eurozone crisis and myriad other stresses and strains on the common European project" (Greenhill, 2016: 332). Territorial disputes that brought back territorial and sovereignty issues at the table are unlawfully and unilaterally proclaimed independence of Kosovo and the annexation of Crimea, and these are very important events for understanding the national security shift. In addition to that, Zsolt Enyedi points out to five reasons and factors of populism rise that are distinctive for Central and Eastern Europe: combination of victim mentality, self-confidence and resentment against the West, the transformation of neighbour-hating nationalisms into a civilizationist anti-immigrant platform, the delegitimization of the civil society and the return to the belief in a strong state, the resurrection of the Christian political identity, and the transformation of populist discourse into a language and organizational strategy that is compatible with governmental roles (Enyedi, 2020). As for the Visegrad countries, migration crisis "contributed to the mainstreaming of nationalism and xenophobia of the right parties previously focused mainly on the Roma issue, anti-Semitism, anti-communism, anti-establishment" (Stojarová, 2018: 41).

Opposite to expectations, the growth of populism is on the rise even in the United States after the election of Donald Trump as the President, which has the strongest implications for human security of the immigrants. Trump's words towards immigrants have been perceived as dehumanizing, since he, on many occasions, accused the immigrants from Mexico of being criminals and "encouraged police to be more violent in their handling of those suspected of crime" (Scott, 2019). His executive orders on border policy are found to be "offensive for the dignity and threaten the rights of immigrants and refugees both in the United States and globally" (Centre for Migration Studies, 2017), with several controversial decisions that undermine human rights, including the expanded use of detention, limits on access to asylum, enhanced enforcement along the US-Mexico border, and the construction of a 2,000 mile border wall (Ibid).

The revival of state-centrism caused by populist growth is happening in both Europe and the United States. When the European Union and the USA, as champions of democracy and human rights that are expected to be human security role models, send a message that the national values are above human values and needs, it does not seem surprising that the rest of the world, especially those parts that

had been under autocratic rule for a long time, or that are in some transitional period, now turn back to state-centrism, aggressive nationalism and military and border issues, things that were supposed to be outdated in the 21st century.

CONCLUSION

The National Security Strategy of the Republic of Serbia 2019 is less human-centric oriented than it should be, and definitely less human-centric oriented than its predecessor. Downgrading human security, however, can have negative effects not only for national security, but for international and regional security and peace. Moreover, some very important human security issues that cannot be perceived as purely national question, like migration and refugees, are being securitized in Europe, and given lower priority in comparison to some state-centric issues. Securitization of humanitarian issues, as a consequence of a populist rise across the Europe and the USA, especially in the last decade, moved focus from human security and human development to the national issues like border control, protectionism, cultural and religious isolationism. This has already been causing ethnic and religious clashes in multicultural Europe, which can, in perspective, create insecurity for all the people living there. There is less human security in public discourse, as well as in practice, and the absence of human security in the foreign policy interests of the great powers is evident.

This might be the interpretation of the human security "fatigue" of small states, including Serbia, especially bearing in mind that they tend to follow the path of the great or at least regional powers. Human security discourse is replaced with some particular discourses integrated in the concept of the national security like human rights, quality of life, social standards, etc. One of the common conclusions is that "it will become increasingly difficult to sustain an enduring, reliable national security framework without a strong response to that conditions that create human insecurity" (Vietti, Scribner, 2013). So, instead of securitizing humanitarian issues and prioritizing territorial disputes, armed rebellion and less probable military aggression, the focus should be on human-centric national strategies and foreign policies (of the great powers above all) aimed at improving human development in all parts of the world, so the people can be the strength of the state, not a security issue.

REFERENCES

1. Ayhan Kaya (2018). Right-wing populism and Islamophobism in Europe and their impact on Turkey–EU relations, *Turkish Studies*, pp. 1–28, online. doi: 10.1080/14683849.2018.1499431
2. Benveniste, A., Lazaridis, G., & Puurunen, H. (2017). Populist othering and Islamophobia. In: G. Lazaridis and G. Campani (eds.). *Understanding the Populist Shift: Othering in a Europe in crisis* (pp. 50–69), London and New York: Rourledge.
3. Centre for Migration Studies (2017). President Trump's Executive Orders on Immigration and Refugees. Accesssed August 1 2020. https://cmsny.org/trumps-executive-orders-immigration-refugees/.
4. Enyedi, Z. (2020). Right-wing authoritarian innovations in Central and Eastern Europe, *East European Politics*, DOI: 10.1080/21599165.2020.1787162.
5. Estevens J. (2018). Migration crisis in the EU: developing a framework for analysis of national security and defence strategies, *Comparative Migration Studies* 6(28), doi: 10.1186/s40878-018-0093-3.

6. European Security Strategy: A Secure Europe in a Better World (2003). Council of the European Union. Doi. 10.2860/1402.
7. Gilmour S. P, Brown M. D., Lindsay T. G., Beswick H. P, MacNee W, Donaldson K. (1996). Adverse health effects of PM10 particles: involvement of iron in generation of hydroxyl radical. *Occupational and Environmental Medicine,* 53, 817–822. doi. 10.1136/oem.53.12.817.
8. Gorospe, P. (2018). Human Security as the Philippines' National Security Strategy, *The Asia Dialogue*. Nottingham: University of Nottingham, Asia Research Institute, accessed July 10, 2020. https://theasiadialogue.com/2018/03/28/a-grand-strategy-for-the-philippines-human-security-as-the-national-security-strategy/.
9. Grabbe, H., Groot, N. (2014). Populism in the European Parliament: What Implications for the Open Society?, *The International Spectator: Italian Journal of International Affairs*, 49(4), 33–46, DOI: 10.1080/03932729.2014.961768
10. Greenhill, K. (2016). Open Arms Behind Barred Doors: Fear, Hypocrisy and Policy Schizophrenia in the European Migration Crisis. *European Law Journal,* 22 (3), 317–332.
11. Gregoratti C. (2007). Human Security. In: M. Bevir (ed), *Encyclopedia of Governance* (1st ed., pp. 428–432), London: SAGE.
12. Kaldor, M, Martin M. & Selchow S. (2008). Human Security: A European Strategic Narrative**.** *International Policy Analysis. Bonn*: Friedrich-Ebert-Stiftung.
13. Lochocki, T. (2018). *The Rise of Populism in Western Europe: A Media Analysis on Failed Political Messaging*. Cham, Switzerland: Springer. DOI 10.1007/978-3-319-62855-4
14. Maguire, M. (2015). Migrants in the Realm of Experts: The Migration-Crime-Terrorist Nexus after 9/11. In: G. Lazaridis and K. Wadia (eds.), *The Securitisation of Migration in the EU: Debates since 9/11* (pp. 62–87), Basingstoke, Hampshire: Palgrave Macmillan.
15. *National Security Strategies: Towards a New Generation,* DCAF: Geneva Centre for Security Sector Governance, accessed June 20, 2020. https://issat.dcaf.ch/ser/Learn/SSR-in-Practice/Thematics-in-Practice/National-Security-Strategies.
16. National Security Strategy of the Republic of Serbia (2009). Official Gazette of the Republic of Serbia, No. 88.
17. National Security Strategy of the Republic of Serbia (2019). Official Gazette Official Gazette of the Republic of Serbia, No. 94.
18. Nyberg Sørensen N, Kleist N, Lucht H (2017). Europe and the refugee situation: Human Security Implications, *DIIS REPORT 03*, Copenhagen: Danish Institute for International Studies.
19. *Report on the state of the environment in the Republic of Serbia* (2019). Belgrade: Ministry of Environmental Protection - Environmental Protection Agency.
20. Rullán, M. (2020). Covid-19 pandemic: surveillance and human security, *EFE*. Accessed September 16, 2020. https://www.efe.com/efe/english/destacada/covid-19-pandemic-surveillance-and-human-security/50000261-4255849-
21. Scott, E. (2019). Trump's most insulting — and violent — language is often reserved for immigrants, *The Washington Post*. Accessed July 30 2020. https://www.washingtonpost.com/politics/2019/10/02/trumps-most-insulting-violent-language-is-often-reserved-immigrants/.

22. SHARE Foundation, "Thousands of Cameras" - a citizen response to mass biometric surveillance, accessed July 23 2020. https://privacyinternational.org/case-study/3967/thousands-cameras-citizen-response-mass-biometric-surveillance.

23. Shared Vision, Common Action - A Stronger Europe: A Global Strategy for the European Union's Foreign and Security Policy (2016). Accessed July 22 2020. https://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf.

24. Stojarová, V. (2018). Populist, Radical and Extremist Political Parties in Visegrad countries vis à vis the migration crisis. In the name of the people and the nation in Central Europe, Open Political Science, 1, 32–45.

25. Thakur, R. (2004). A Political Worldview. *Security Dialogue,* 35(3), 347–348. Doi: 10.1177/0967010604035003007.

26. Toscano, E. (2015). The Rise of Italian Populism and 'Fascism of the Third Millennium' in the Age of Migration and Security. In: G. Lazaridis and K. Wadia (eds.). *The Securitisation of Migration in the EU: Debates since 9/11* (pp. 167–183), Basingstoke, Hampshire: Palgrave Macmillan.

27. Trobbiani, R. (2013). How Should National Security and Human Security Relate to Each Other?, *E-International Relations,* accessed on June 28, 2020. https://www.e-ir.info/2013/04/26/how-should-national-security-and-human-security-relate-to-each-other/.

28. Vietti, F., Scribner, T. (2013). Human Insecurity: Understanding International Migration from a Human Security Perspective. *Journal on Migration and Human Security*, 1(1), 17–31.

29. Wodak R., Boukala S. (2015). European identities and the revival of nationalism in the European Union: A discourse historical approach, *Journal of Language and Politics,* 14(1), 87–109. Doi: 10.1075/jlp.14.1.05wod.

SECURITY CHALLENGES AND POSSIBLE RESPONSES TO THEM IN THE 21ST CENTURY

Györgyi Major, PhD[1]
Institute for Strategic Research, Budapest, Hungary

Aleksandar Čudan, PhD[2]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: The crises of recent years have brought such threats and problems to the surface which can be managed by means of complex and system-level responses. Due to the tight interrelation of risks, which are often latent in their nature, the security policy system of our age is becoming increasingly vulnerable. The study identifies the resistance of the system as a prerequisite in the security context. It highlights the perception challenges that result from the soft nature of risk factors, and argues that the means of risk identification should be redefined.

Studying the challenges of the 21st century in the so-called Globalisation 4.0 context, the authors come to the conclusion that a new security narrative must be created which aims at identifying the fundamental aspects of the operation of the security net in the broadest possible interpretation of causal relationships, i.e. on a multidisciplinary platform.

Besides the conventional military aspect, the political, economic, environmental and social contexts tend to play an increasingly important role in the interpretation of security – while cyber and human security are expected to be manageable as segments in their own right.

Keywords: security narrative, human risk, Globalisation 4.0, globlocal defense, new conflicts

INTRODUCTION

"A discourse maintains a degree of regularity in social relations, it produces preconditions for action. It constrains how the stuff that the world consists of is ordered, and so how people categorize and think about the world. It constrains what is thought of at all, what is thought of as possible, and what is thought

1 major.gyongyi@gmail.com
2 aleksandar.cudan@kpu.edu.rs

of as the 'natural thing' to do in a given situation. But discourse cannot determine action completely. There will always be more than one possible outcome. Discourse analysis aims at specifying the bandwidth of possible outcomes." (Neumann, 2008: 62)

Security policy theories increasingly emphasise that the term "security" should be given a broad interpretation, i.e. besides former, military type risks, social, ecological and economic factors must also be taken into consideration. Based on their characteristics, risks can further be distinguished and grouped, but – primarily due to their peculiar and mostly paradoxical interactions – their successful management is possible only if they are managed as elements of one single system.

The new risk management modules and the development activities targeted at a given factor are based on the assumption that the interrelations between social, economic and security policy processes are understood. The aim of this study is to present those new challenges which the relevant actors of security policy are facing in the context of this broad interpretation in specific security strategies.

"Advances in military capabilities, such as unmanned, automated weapon systems and high-speed, long-range strike systems, which reduce response times, are likely to create new, but uncertain, escalation dynamics in times of crisis. Furthermore, the rapid pace of technology developments - in areas such as cyber, genetics, information systems, computer processing, nanotechnologies, directed energy, and autonomous, robotic systems - increases the potential for surprise in future conflicts" (GT, 2017: 221).

The traditional, rationalist theory of security policy - due partly to its narrow interpretation of the term "security" and partly to its ontological, epistemological and methodological limitations - has no other choice than to create a new definition of "security" as it becomes inevitable to examine new elements, which, by broadening the horizon of analyses, require the inclusion of additional explanatory factors (culture, religion, language). At the end of the day, this means that the exploration of the context in itself generates a deeper and more complex interpretation of security. The increasingly controversial nature of globalisation par excellence is what makes it necessary to give preference to the security policy aspect in debates about the future of society.[3]

In our study, we would like to support the understanding of internationally relevant risks by presenting the interrelations that can be identified using constructivist methodological tools (workflow analysis and discourse analysis), thus pointing out the added values potentially offered by a constructivist approach.[4] The results of our examination are planned to be not only supportive of the efforts made

3 We use the works of the representatives of the constructivist school as the foundation of our approach. In its interpretation of "security", this study prefers normative, conceptual structures to materialistic ones. Interests and acts are construed as the construction of the identity and the process of risk management is discussed in the interaction between structures and players. The responses given to the current challenges of globalisation give a higher priority to the importance of non-materialistic structures - i.e. the idea offered by constructivists is accepted that institutionalised norms and ideas have a fundamental influence on the concepts of actors about possibilities and necessities. In general, the normative and conceptual structures that have their impact through communication are handled as key factors.

4 The strengthening of regional cooperation and the decentralisation of governance reshapes the roles of multilateral institutions and central governments. Besides applying traditional multilateral diplomatic practices, governments trying to resolve shared problems are experimenting with organising ad hoc coalitions, in which business organisations and civil society groups can also participate (Matus, 2019). "Since the beginning of the 1990s, there are a growing number of publications related to water as causal factors for armed conflicts in water scarce regions. After several publications criticizing this "water wars" literature, articles have focused on different intensity of water conflicts and on water cooperation with a very large number of articles published in the last few years. Academics and research centres [...] use and develop these concepts but also international organizations and NGOs that try to implement water cooperation mechanisms in such conflicts" (Water

to prepare for expected challenges and identifying the possibilities for the successful management of risks, but also motivating further researches to explore how a particular risk management methodology can be modified to replace confrontation with cooperation as its core.[5]

In this sense, we would like to encourage the establishment of a scientific field in its own right which focuses on security policy and national security analyses that are capable of processing and assessing a broad spectrum of risks. In other words, we wish to inspire the launching of special courses in the region[6] which can be used for relevant strategic planning and guidance purposes - both comprehensively, as a part of governmental policies, and specifically, in foreign and security policies (for example, by assessing the security environment).

All these require a space of discourse in which the criterion of the sustainable operation of society and the economy is interpreted together with the aspects of security. This study uses the deductive method, i.e. relying on an overview of professional literature; a discourse analysis is made on the literature studies, thus reconstructing the socio-economic and political (geo-economic) context of the security discourses of recent years. Our research is based on the secondary analysis of the existing databases, political documents and declarations and international treaties - from these, conclusions are drawn, applying a multidisciplinary approach.

THE PARADOXICAL NATURE OF GLOBALISATION AS A SECURITY POLICY CHALLENGE

Security policy analyses from recent years have used the adjective "paradoxical" to describe the processes taking place in the global international system.[7] The reason is that it is becoming ever more obvious that technological development and the fast economic growth achieved as a result of the global playing field have radically changed global economic and power relations, which has led to the recurrence of the traditional competition between great powers and uncertainty at a global level. Consequently, as geopolitical (geo-economic) risks have become more apparent, the interest in the international security status quo is gradually getting ever keener.[8]

According to forecasts, the near future will bring more serious threats and, at the same time, greater opportunities than we have ever seen.[9]

Conflict and Cooperation, 2015: 2).

5 Communicating the need for a strategy of cooperation is especially important in efforts made to manage resources and climate change. The competition for accessing resources intensifies tension - however, globally, without the special communication act of securitisation, problems of this kind will remain unmanageable (See: Elhance, 1999).

6 Using the term "region" as an entity to be secured, a "reference object" (Buzan et al. 1998: 36).

7 See: (GT, 2017)

8 It was in 2016 that the World Economic Forum first analysed the impact of global risks on international security. The term "international security" was then defined as follows: "'International security' refers to the measures taken by state or non-state actors, individually or collectively, to ensure their survival and integrity against trans-boundary threats" (The Global Risk Report, 2016: 24).

9 It is becoming vital for countries to find out how they can make the advantages of globalisation available to society, while minimising its detrimental effects. "Another question is whether countries' different rates of growth will further increase the vulnerability of the global system, which will ultimately lead to the system's collapse, or, on the contrary, the formation of multipolar growth centres will strengthen the resistance of the global economic system against crises" (Matus, 2019). In summary: opportunities can be realised primarily through the elimination of contradictions - which, however, primarily depends on the outcome of the appropriate securitisation act.

“We are living a paradox: The achievements of the industrial and information ages are shaping a world to come that is both more dangerous and richer with opportunity than ever before. Whether promise or peril prevails will turn on the choices of humankind” (Global Trends, 2017: ix).

The prognoses for the megatrends predicted[10] for the period until 2030 will remain valid,[11] though a few additional elements are being added. The refining of these megatrend predictions have become necessary because, in contrast to former assumptions, the growth of the global economy has started to slow down and, as a result of the diffusion of power capabilities, an increasing number of actors are entering the game of geopolitical rivalry. As debates between states on values and interests are getting ever livelier, the topic of fundamentally reforming the international order, raised by new emerging powers, is becoming ever more legitimate (Matus, 2018).

It is becoming more and more obvious that commitment to the rules behind the international order in place since the Second World War is gradually weakening,[12] and according to Matus (2018), the situation is further complicated by the fact that creating a new international regulation would be very difficult in the light of arguments about the impacts of technology: these arguments increase, rather than decrease, the distance between the values and interests preferred by different countries.[13] It is beyond dispute, however, that the so-called Globalisation 4.0[14] can only be construed as a new reality[15] and consequently, it is inevitable to create a fundamentally new regulatory system. We wish to emphasise that what is needed is not the fine-tuning of the existing system bur the creation of a new system of norms, which is compatible with the reality of Globalisation 4.0. This, however, becomes problematic in the light of our paradoxical reality, in which differences between the countries of an increasingly interconnected world have not decreased but increased (Matus, 2019). It thus stands to reason that the efforts made to define the rules of the game at an international level will face increasingly severe obstacles.[16] As the interaction between technology and culture strengthens, mutually exclusive identities will appear and, consequently – in contrast to many theoretical propositions and integration theories related to international relations –, norms and worldviews will move further and further away from each other. Hence, the impacts of the current technical revolution raise an increasing number of ques-

10 See: GT 2025: A Transformed World, 2008; Mapping the Global Future, 2004

11 See: GT2030: Alternative World, 2012

12 “The strengthening of the multipolar nature of the global economy, together with the weakening of the West’s influencing ability, may worsen the difficulties of governing the international system, provided that emerging powers like India and China show a diminishing interest in international cooperation and focus primarily on their internal affairs” (Matus, 2019).

13 Moreover, the new non-state actors that appear on the scene may be capable of preventing the establishment of a hegemonic power in the international system.

14 “Transformation best describes the geopolitical, economic and environmental outlook globally. We are shifting from a world order based on common values to a “multiconceptual” world shaped by competing narratives seeking to create a new global architecture. We live in a world with new planetary boundaries for its development. We are entering the Fourth Industrial Revolution shaped by advanced technologies from the physical, digital and biological worlds that combine to create innovations at a speed and scale unparalleled in human history. Collectively, these transformations are changing how individuals, governments and companies relate to each other and the world at large. In short, we are fast approaching a new phase of global cooperation: Globalization 4.0.” (WEF, 2019: 1).

15 Analyses put the strongest emphasis on the impact of technology on the fate of individuals. It is dubious how the revolution of information technology will affect individuals’ privacy and right to human dignity. Meanwhile, the practical application of genetic modification may even give rise to existential risks and cover fundamental ethical norms (Matus, 2019).

16 “Some governments may feel tempted to establish order in an era characterised by lively debates about governance and the role of governments both in countries’ internal policies and on the international scene. However, the likelihood of the success of the attempts made to create order based on material assets and resources is lower than that of the success of policies that build on relations, networks and information capabilities”(Matus, 2018).

tions in the contexts of both the economy and society, while international security is becoming more and more dependent upon the impact mechanism of technological innovations.

One of the core topics of the 2020 Munich Security Conference was China's technological advancement. The report about the Conference emphasises that China's supremacy in new technologies - artificial intelligence, quantum computers, communication technologies - has astonished the west and the 5G technology gives rise to increasing security concerns (MSR, 2020: 21). Experts were mostly worried about the possible technology-based cleavage of the world in the future and the possible segregation of countries that use either the Chinese or the western technology from one another. Attention ought to be paid to the fact, however, that the report issued before the Forum was given the title "Westlessness"[17] (MSR, 2020), which may carry a far deeper geostrategic context than merely hallmarking the main theme of the conference.

THE GEO-ECONOMIC AND SECURITY CHALLENGES OF ARTIFICIAL INTELLIGENCE

In 2017, the New Generation Artificial Intelligence Plan was officially presented, in which China set the aim of becoming world leader in the field by 2030. Recognising that modern warfare is increasingly dependent on technology - artificial intelligence (AI), China is continuously investing the growing amounts in AI. Their global companies, Huawei, Hikvision and ZTE, tightly cooperate with other state-owned companies in order to develop the most advanced artificial intelligence interfaces (PAGEO, 2020). China's competitive advantage over the USA and Russia is in the control of the state over domestic development projects.[18] In recent times, they have exported unmanned aerial vehicles (Wing Loong 2 and CH-4) to the United Arab Emirates, Saudi Arabia, Egypt and Pakistan (PAGEO, 2020).

In regard to China's tradable systems, we must point out, however, that "they include functions like mass monitoring and face recognition, as well as common operating platforms which use big data and artificial intelligence for predictive policing" (PAGEO, 2020).

The export of artificial intelligence enables China's leaders to perform mass monitoring in the countries participating in the New Silk Road Programme. An increasing number of countries are using only Chinese monitoring technologies - because of their easy access and fairly low prices. Further-

---

17 Regarding westlessness, it should be mentioned that there is no consensus among Euro-Atlantic countries even about the nature of the issue of westlessness itself. This means not only the differences of opinion between the USA and the EU but there are different opinions about the role of China even within the EU. "Paradoxically, the strongest consensus is shown between China and Russia: these two countries were the two strongest supporters of multilateralism and global cooperation - which, not so long ago, were the priorities of western powers" (Borosnyay-Zoltai, 2020). Today, westlessness means the Present, our reality, far more than a space of discourse about the future.

18 The USA also used to follow a government-controlled strategy in AI research. However, the 2018 Export Control Reform Act (ECRA) curtailed the export of emerging technologies for national security considerations. By contrast, China lays the emphasis on the export of its domestically developed technologies, thus also creating an opportunity to potentially access foreign security systems. The One Belt, One Road initiative supports this aim and creates an opportunity to increase influence (PAGEO, 2020). In this regard, it may be noteworthy that the first Sci-Fi Academy will be established in China, with the participation of Sichuan University, where the focus will be on the research of science-fiction works. After the publication of Cixin Liu's bestseller book *The Three-Body Problem* – the first international sci-fi work from China – in 2017, the Communist Party declared that it would expressly support science-fiction (Növekedés Elemzés, 2020).

more, it is beyond doubt that foreign investments made owing to the BRI also support this trend in a fairly large number of African, Middle Eastern, South American and Asian countries.

New technologies offer the opportunity to eliminate infrastructural backwardness and the resulting disadvantages - yet, the new threat sources appear from a geopolitical point of view. Spheres of influence, both at the micro and macro level, get reshaped. New power centres appear not only within particular countries, as companies possessing large amounts of data and information and representing state-of-the-art information technology have the opportunity, owing to their information monopoly, to clearly understand and, thus, even shape social reality and the factors influencing human behaviour. Their power is built upon their ability for manipulation and, in this area, they cannot only become competitors of state actors but may even achieve dominance (GT 2030, 2012: 16-20).

As regards the transformation of power relations - especially if we look at the analyses presenting its dynamics - never in history have we ever seen so fast and such a transformation of the international power structure. In the light of new challenges and the ever more threatening complex risks, the need to reconsider global capitalism seems more urging than ever before.

The original assumption of the West, namely that globalisation will make the fundamental values of the western worldview - for example, scientific reasoning, individualism, secular governance, the rule of law and, in summary, democracy - accepted worldwide not only failed to occur but an expressly different type of "hybrid" worldview and system of values are evolving, which will become a risk factor exactly because of their incoherent nature (i.e. in the existing system of relations, norms and laws). The developing part of the world insists on their traditional social, political, cultural and religious norms - while modernising their economy with the above-mentioned technological innovations in an amazingly dynamic way. It is logical that conflicts are getting stronger, and countries are becoming polarised internally at an astonishing rate - because of the technological revolution itself, along economic, religious, ethnic, cultural and ideological aspects. The situation is further complicated by the fact that the nature of work – and, in general, lifestyle - is changing, and one must also take into account the consequences of demographic changes[19] and the impacts of much-talked-about climate change.

The process that started at the beginning of the 21st century, the so-called Industry 4.0, will bring about changes of a nature and dynamism which will impact all areas of existence.[20] Changes are characterised by the fusion of different technologies, which blurs the distinction between physical, digital and biological spheres (Schwab, 2016) – and this not only leads to the transformation of different scientific fields, the economy and the industry but also ultimately raises the question of what the true nature of the human being is. The "new world" is characterised by inventions and research trends like artificial intelligence, robotics, the Internet of Things (i.e. the internet-based connection of different assets and objects), autonomous cars, 3D printing, nanotechnology, biotechnology, materials science, energy storage research or quantum calculation (Schwab, 2016).

19 "In connection with demographic changes, we must highlight the fact that while China is expected to become the strongest economic power by 2030, outpacing the United States, according to demographic forecasts, the decrease of the working population will have begun in China by the same year, which will lead to a slowdown in economic growth. During the same period, India's demographic structure will contribute to the acceleration of its economic growth. The difference between the demographic trends of these two Asian major powers, which is to India's advantage, will diminish the currently existing differences between them in economic potential. As regards the other side of the shift indicated by the aggregate indices of power, the slow relative economic downturn of Europe, Japan and Russia will continue" (GT 2030, 2012: 78-80).

20 Consequently, we could start discussing existence itself, in the broadest sense, as a security issue. We can now rightfully raise the question of what impacts 4.0 has on the person and personality itself, and the sustainability of the concepts like rights and responsibility is also becoming questionable.

"If we succeed in creating a quantum computer, it will resolve problems which classic computers cannot manage, owing to parallelism… Through size reduction and quantum confinement, continuous states will be replaced with broken, discrete energy states, which offer new opportunities. The most recent scientific results have made it possible to implement logical gates with quantum points. With the help of drop epitaxy, these structures can even be created in a self-organising manner." (Innotéka, 2019)

QUANTUM IDENTITY?

Today, we live a difficult-to-understand and tense social, economic and technological model. Global issues and transformations raise the value of space and complexity in an unusual manner.[21] Development concepts that evolved in the classic, mechanic worldview almost entirely cease to be valid, and not only become a limitation to real dynamics but, along and due to their decreasingly relevant perception of reality, they become a threat themselves.

Using a term introduced by Khanna, the context of the contemporary security narrative could be connectography. Consequently, construing mutuality - the competition for the intertwining of elements - could be interpreted as a fundamental challenge, which, in essence, makes the notion of security *construable in the special ontology of coexistence.*

"Connectivity is one of the key moving forces of a transition to a far more complex global system. Economies are getting increasingly integrated, the mobility of the population is growing, the cyberspace is merging with physical reality, and climate change is shaking the foundations of our lives. The significant - and often suddenly occurring – feedback loops of this phenomenon remain almost entirely inextricable. And even if connectivity makes the world more complex and unpredictable, it carries fundamental opportunities which strengthen collective flexibility" (Khanna, 2017: 16).

It is in this context that we suggest that a new narrative for security be necessary, a key element of which is anthropology. In essence, the security concept of the new era can be defined in the context of a new concept of the human being. From a security perspective, it must be emphasised that this interpretation of man should not only provide the condition of maintaining the new balance between technology and existence but should consider it its top priority to ensure that man remains the subject of this relationship.

In general, the security policy challenge of the era is connected to the new model of balances.[22]

CONCLUSION

This study can be considered the starting point of a larger research process, which can open the door to several new research fields that can contribute to the optimisation of the responses to the new balance-related challenges in a number of ways. The impact mechanism of each of the trends examined can be significant: any of them alone can reshape the international system in the next decades. It is practical not only to search for further factors but also to understand the interrelations between the presented trends as deeply as possible, through the identification of the roles of interactions.

One of the most significant challenges at the dawn of a new technology era is to understand and accept that knowing parts of the problem no longer serves as a solid foundation for the management of contemporary challenges. A new, systemic approach is required. "It seems that nature also tries

to achieve error tolerance through multiple interconnections. Wherever we look, we see the same network sector" (Barabási, 2003: 154).

A new, multipolar world is evolving, with actors that follow a cooperative-competitive strategy, with new playing fields and new myths. To ensure the stability of the international system, to manage global challenges and to prevent crises, it will be more and more important to apply a broad, more complex development policy, which is more than the ad hoc amalgamation of different development policy trends (with often biased preferences): it should be a security concept that is based on risk management which applies both quantitative and qualitative methodologies,[23] is security-aware, is made for the long term and stands on three pillars (sustainability, connectivity and complexity). What we would like to motivate is not the making of rhetorical promises but communication-dependent security awareness. This requires security research and education capable of supporting a multi-level interpretation of security.

REFERENCES

1. Barabási, A. L. (2003): Behálózva. A hálózatok új tudománya. Magyar Könyvklub. (Linked: The New Scince of Networks)
2. Borosnyay-Miklós, K. – Zoltai, A. (2020): Müncheni Biztonságpolitikai Konferencia 2020. http://www.geopolitika.hu/hu/2020/02/24/muncheni-biztonsagpolitikai-konferencia-2020/ (07.07.2020.)
3. Buzan, B. – Wæver, O. – de Wilde, J. (1998): Security: A New Framework for Analysis. Lynne Rienner Publishers, London.
4. Elhance, A. P. (1999): Hydropolitics in the Third World: Conflict and Cooperation in International River Basins. United States Institute of Peace, Washington D. C.
5. Khanna, P. (2017): Konnektográfia. A globális civilizáció jövőjének feltérképezése. HVG
6. Könyvek. (Connectography: Mapping the Future of Global Civilization)
7. Matus, J. (2018): Globális trendek és kockázatok a 21. században – az első évtized. Nemzet és biztonság. 2018/4
8. http://www.nemzetesbiztonsag.hu/cikkek/nemzet_es_biztonsag_2018_04_02_matus.pdf (07.07.2020.)
9. Matus, J. (2019): Globális trendek és kockázatok a 21. században – a második évtized. Nemzet és biztonság. 2019/1

23 Risks can usually be analysed and assessed both qualitatively and quantitatively - the point is to rank them based on the severity of the threat they can potentially pose. We wish to emphasise that, paradoxically, the management of the challenges appearing with the "quantum reality" created by the 4.0 revolution will have to increasingly apply the qualitative method. The use of this method is also justified by the fact that it is in this aspect that man/the person can retain his/her identity which can be differentiated from the machine. However, we must also point out that, in this context, "the contrast is not between the problem of quantitative neutrality and qualitative normativity; the question is what norms come into action: those that face ever changing reality or those that protect the reality we are familiar with" (O'Hara, 1995). The main security challenge brought about by the appearance of blockchain technology is how man should be interpreted if his responsibility can be definitively transferred to technology. "Victory is not that of quantum computers over classic ones but ours over ourselves as a brand new asset will soon be available to us to resolve problems we have so far not been able to settle" (Yang quoted by Szepesi, 2019).

10. http://www.nemzetesbiztonsag.hu/cikkek/nemzet_es_biztonsag_2019_01_3_matus.pdf
11. (07.07.2020.)
12. Neumann, I. B. (2008): Discourse Analysis. In: Qualitative Methods in International Relations: A Pluralist Guide. Szerk.: Klotz, Audie – Prakash, Deepa. Palgrave Macmillan, Basingstoke. 61-77.
13. O'Hara, S. U. (1995): Valuing Socio-diversity. International Journal of Social Economics. 22
14. (5) 533–554
15. Schwab, K. (2016): The Fourth Industrial Revolution: what it means, how to respond. World Economic Forum, 2016.01.14.
16. https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/ (07.07.2020.)
17. Szepesi, A. (2019): Holnaptól borul a fél világ? Mit jelent a kvantumfölény? HVG. 28.10.2019.
18. https://hvg.hu/tudomany/20191028_google_sycamore_kvantumfoleny_jelentese_hogyan_mukodik_kvantumszamitogep_mukodese_egyszeruen_qubit_kubit_ibm_summit_szuperszamitogep (07.07.2020.)
19. Simai, M. (2014): A térszerkezet és a geoökonómia. Tér és Társadalom. 2014, 28 (1) pp 25-39
20. Ugrin, E. (2018): Vízalapú Társadalombiztonság. SKI Elemzés
21. Global Trends: Paradox of Progress, (2017). National Intelligence Council. https://www.dni.gov/files/documents/nic/GT-Full-Report.pdf (07.07.2020.)
22. Global Trends 2025: A Transformed World, 2008. National Intelligence Council, Washington DC. https://www.files.ethz.ch/isn/94769/2008_11_global_trends_2025.pdf (07.07.2020.)
23. Global Trends 2030: Alternative Worlds, 2012. National Intelligence Council,
24. https://globaltrends2030.files.wordpress.com/2012/11/global-trends-2030-november2012.pdf (07.07.2020.)
25. Innotéka (2019): Kvantumszámítógép – a jövő szupermasinája? https://www.innoteka.hu/cikk/kvantumszamitogep_a_jovo_szupermasinaja.1868.html (07.07.2020.)
26. Mapping the Global Future. Report of the National Intelligence Council's 2020 Project 2004, Washington DC. Government Printing Office.
27. https://www.dni.gov/files/documents/Global%20Trends_Mapping%20the%20Global%20Future%202020%20Project.pdf (07.07.2020.)
28. Munich Security Report 2020: Westlessness.
29. https://securityconference.org/assets/user_upload/MunichSecurityReport2020.pdf (07.07.2020.)
30. Növekedés Elemzés (2020): Sci-fi művekkel inspirálnák a jövő tudósait Kínában. https://novekedes.hu/elemzesek/sci-fi-muvekkel-inspiralnak-a-jovo-tudosait-kinaban (07.07.2020.)
31. PAGEO Elemzés, 2020.
32. https://novekedes.hu/elemzesek/a-kinai-megfigyelo-technologia-rajta-tartja-szemet-a-vilagon (07.07.2020.)
33. Water Conflict and Cooperation (2015). Geneva Water HUB- Université de Genevé file:///C:/D_drive/arch2020/2015.03.14_biblio_waterconflictcooperation_en_0.pdf (07.07.2020.)

34. WEF (2019): World Economic Forum Annual Meeting 2019, Global Agenda. Overwiev. http://www3.weforum.org/docs/WEF_AM19_Meeting_Overview.pdf (07.07.2020.)
35. The Global Risks Report 2016, World Economic Forum. http://www3.weforum.org/docs/GRR/WEF_GRR16.pdf (07.07.2020)

THE INTERNATIONAL LEGAL FRAMEWORK OF MIGRATION

Duško Dimitrijević, PhD[1]
Institute of International Politics and Economics, Belgrade, Serbia

Abstract: Efforts to develop and codify uniform rules for different categories of migrants run into obstacles due to different approaches of states on all major status issues. In order to solve this problem, international community is increasingly working on the adoption of global migration policies in line with the international legal framework. The mentioned approach aims to avoid the existing inconsistency of legislative solutions and particularity of practice at the internal legal level. Given the mentioned circumstances, the author of this study will try to point out the importance of positive legal rules and principles from the corpus of international refugee law and human rights law for harmonizing the legal status of different categories of migrants.

Keywords: Migration, international law, emigrants, immigrants, refugees, asylum seekers.

INTRODUCTION

Legal rules and principles on migration are contained in various international legal sources of different legal force, which should be interpreted and applied fully and functionally. This is all the more so because in modern international relations there is a tendency to harmonize the status of various categories of migrants under the auspices of the United Nations (within ECOSOC, UNHCR, IOM, IRO and GFMD), or through certain regional organizations (EU, CE, OAU and OAS). It is clear from this that there is a prevailing opinion in the world that the migrant population should be institutionally assisted in enjoying fundamental human rights and freedoms. Given the differences between countries in the adoption and implementation of international rules on migrants, the United Nations and its competent bodies and organizations dealing with this issue often resort to various palliative measures, expanding the scope of their competences, without neglecting the existing rules in the field of legal protection. This situation contributes to the increased concern of the international community for the problem of migration, which is manifested in its efforts to find unique solutions for equal application

1 dimitrijevicd@diplomacy.bg.ac.rs

of international rules and for effective participation of the existing institutional system in humanitarian protection of various categories of migrant population (Chimni, 2001: 158; Lambert, 2009: 350; Goodwin Gill, 2016: 679). In that sense, the next part of the study will provide an overview and analysis of the basic legal acts of international law that regulate the field of migration.

LEGAL STATUS OF DIFFERENT CATEGORIES OF MIGRANTS

The term "emigration" is covered in international law by the broader concept of "migration". From the aspect of the home country, the people who leave it represent emigrants. The reasons for leaving the home country can be various. They are mainly reduced to economic reasons and reasons that include internal and international conflicts when people leaving their home country are transformed into refugees. At the international level, states have undertaken appropriate obligations regarding emigrants. Thus, for example, in the *Universal Declaration of Human Rights* of 1948, the provision of Article 13, paragraph 2, guarantees that: "Everyone has the right to leave any country, including his own, and to return to his country". The provision of Article 12, paragraph 2 of the *International Covenant on Civil and Political Rights* of 1966 guarantees the similar right along with certain clarification contained in paragraph 3 of the same Article where it states that: "The above-mentioned rights shall not be subject to any restrictions except those which are provided by law, are necessary to protect national security, public order, public health or morals or the rights and freedoms of others, and are consistent with the other rights recognized in the present Covenant". The *Convention on the Elimination of all forms of Racial Discrimination* of 1965 confirms in Article 5, the prohibition and elimination of racial discrimination in all its forms and guarantees equality before the law for everyone without distinction of race, national or ethnic origin. Special emphasis in the Convention in this regard is placed on the provision of point d) ii) where equality includes "the right to leave any country, including one's own, and to return to one's own country". At the regional level there are several international legal instruments governing the subject matter. Thus, on 13 December 1955 the Council of Europe (CE) adopted the *European Convention on Establishment*. According to this Convention, the citizens of the Contracting Parties are guaranteed an extended or permanent stay in their territories with a ban on their expulsion. It then provides equal treatment in terms of possession and exercise of private rights, legal and judicial protection and the right to pursue certain occupations. On 16 September 1963 the CE adopted the *Protocol 4 to the European Convention on Human Rights* of 1950, which, like the previous international legal instruments of universal character, provides that: "1) Everyone lawfully within the territory of a state shall, within that territory, have the right to liberty of movement and freedom to choose his residence; 2) Everyone shall be free to leave any country, including his own; 3) No restrictions shall be placed on the exercise of these rights other than such as are in accordance with law and are necessary in a democratic society in the interests of national security or public safety for the maintenance of *'ordre public'*, for the prevention of crime, for the protection of rights and freedoms of others; 4) The rights set forth in paragraph 1 may also be subject, in particular areas, to restrictions imposes in accordance with law and justified by the public interest in a democratic society". On 24 November 1977, the CE adopted the *European Convention on the Legal Status of Migrant Workers*. The Convention regulates the legal status of migrant workers, in particular the problems of employment, travel, residence and work permits, family reunification, working conditions, social security and social and medical assistance. On 3 May 1996, the CE adopted a revised version of the *European Social Charter*. This international legal instrument guarantees basic social and economic rights classified into four groups: 1) Rights to employment, training and equal opportunities; 2) Rights to health and social security and social protection; 3) Labour rights and, 4) Children's and family rights, the rights of migrant workers and their

families. Finally, the CE, together with UNESCO, adopted the *Convention on the Recognition of Qualifications concerning Higher Education in the European Region* on 11 April 1997 in Lisbon. It reaffirms international cooperation on a wide range of issues related to increasing academic and professional mobility and promoting best practices in assessing and recognizing academic credentials that include the academic rights of migrants. Under the auspices of the Organization of American States (OAS), in 1969 the member states adopted the *American Convention on Human Rights* (known as the Pact of San José). In Africa, the Organization of African Unity (OAU) adopted in 1981 the *African Charter on Human and Peoples' Rights* (known as the Banjul Charter). These instruments guarantee freedom of movement and the right to emigration. Based on the presented examples of universal and regional legal acts, it is clear that the international community has established certain standards and rules that apply *erga omnes* (Higgins, 1973: 341; Weis & Zimmermann, 1995: 74).

Unlike the term "emigration", the term "immigration" is another aspect of the concept of "migration". In international law, immigration is the process of voluntary entry into a country other than the country of origin for the purpose of permanent settlement. Persons who leave their home country for permanent residence in another country are immigrants for that other country. In international practice, "voluntary entry" and "permanent settlement" of immigrants are not fully specified, so immigration is considered "voluntary" when migrants enter another country regardless of the specific reason, while for "permanent settlement", what applies are the recipient countries' internal laws that have the discretion to exclude certain categories of foreigners from all or part of their territory (for example, diplomatic representatives, foreign students, traders and tourists). At the international level, however, there are definitions of principles and rules built into conventions and international treaties that are the relevant legal basis for states' behaviour regarding immigrants. The UN, through its specialized organizations and bodies, regulates the issue of protection of immigrants, and through their control mechanisms performs supervision over implementation of common standards. Existing international legal instruments generally guarantee the right to move or leave one's own country. However, there is no clear duty to establish the obligation of the receiving states to allow entry into the country. Protection of immigrants however, stems from the international protection of human rights. Thus, immigrants have, *inter alia*, the rights deriving from the right to life such as the right to work and the right to citizenship, etc. With regard to the protection of the lives of immigrants and their families, as well as their right to work and other human rights and freedoms, in 1990 the UN adopted the *International Convention on the Protection of the Rights of all Migrant Workers and Members of their Families*. This Convention is the only international legal instrument that deals exclusively with the problems of migrants. The Convention applies to all migrant workers and members of their families, regardless of their legal status. States Parties are required to respect fundamental human rights during the entire migratory process, including preparation, departure, transit, and the eventual stay, residency, and employment in another country (Truong &. Gasper, 2011; Hune & Niessen, 1991: 133). Taking into account the present solutions in international legal practice, it is clear that states are not entirely free to ignore the freedoms and rights of immigrants, which are guaranteed by international law. In this regard, the states are trying to incorporate in their internal legislation provisions on respect of the rights of immigrants also predicting the special procedural rules on crossing state borders, entering the national territory and the acquisition of their citizenship. In international practice, there are some cases that cannot be subsumed under the term "immigrants". These cases, although reminiscent of immigration, does not take place within the framework of international legal standards. On the contrary, these cases are examples of violations of international law. It is about the so-called "illegal immigration" which includes all categories of illegal migratory movements (for example, crossing state borders with forged travel documents or without valid personal documents, etc.). Illegal immigration is often linked to the commission of serious crimes, such as coercion and torture, human trafficking and the

creation of the illegal labour market. The legislation of many countries prescribes restrictive measures regarding illegal immigration, including detention and deportation (Briggs, 2009: 177). This category of migrants is subject to the rules contained in human rights instruments. These rules can help first to ensure the fundamental rights of illegal immigrants in the process of applying restrictive measures by the receiving state, and second, in the process of legalizing their status if they meet all the necessary conditions.

REFUGEES AND OTHER SIMILAR CATEGORIES OF VULNERABLE PERSONS

The international refugee legal protection system does not have a single definition of the term "refugee". Particularization stems from different national legislations (Goodwin Gill, 1996: 4). After the Second World War, the International Refugee Organization (IRO) Constitution defined "refugees" as a special group of pre-war and war refugees. The Constitution includes a general clause according to which all persons outside their home country who could not or for valid reasons did not want to be placed under the protection of their country of origin (due to persecution on various grounds or fear based on reasonable grounds). The mentioned clause later refers to the basic elements of the term "refugee" contained in the Statute of the UNHCR which is a successor of the IRO. In the UNHCR Statute, "refugees" are persons who acquired that status before January 1, 1951. The Statute also includes other persons who are outside the country of their citizenship or persons who do not have the citizenship of the country of their previous residence, due to a well-founded fear of persecution for racial, religious, political and other reasons. It also includes persons who are not able to use the protection of the state whose citizenship they possess, i.e. if they do not have citizenship, they do not want to return to the country of their previous habitual residence for fear of persecution. Given the increased number of refugees after the Second World War, as well as the number of people whose status was legally undefined, the mandate of the UNHCR was interpreted flexibly in accordance with humanitarian needs and political guidelines of the UN General Assembly and the ECOSOC. The *Convention Relating to the Status of Refugees* is the most comprehensive international instrument governing refugee status. This instrument is based on Article 14 of the 1948 Universal Declaration of Human Rights, which guarantees the right to asylum. The Convention defines the notion "refugee" as a person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it. The main disadvantage of this Convention was the fact that it applied only to refugees due to events that occurred prior to 1 January 1951. This time limitation of the Convention was the result of the efforts of the state, at the time of the adoption of the Convention to limit their obligations to refugee situations that existed at the time, or to situations that could subsequently occur as a result of already existing situation. In addition to restriction *ratione temporis*, the Convention stipulated possibility of introducing *ratione loci* restriction (application of the Convention only to events occurred only in Europe or in Europe or elsewhere). Relatively few states appear to have availed themselves of this option. The passage of time and the emergence of new refugees from other geographical areas, led to the amendment of the provisions of the Convention, and the adoption of the *Protocol Relating to the Status of Refugees*. The Protocol made no changes to the substance of the Convention. It did remove the time limitation to events occurring before 1 January 1951 and any *ratione loci* limitation, except for those states that had opted for a re-

striction to events occurred only in Europe. Since parties to the Protocol have agree to be bound by the substantive provision of the Convention and the definition of refugee in that Convention as amended by the Protocol, it is possible for a state to accept obligations of the Convention by only ratifying the Protocol (Nygh & Blay, 2005: 287). In comparison with the Convention, the Protocol formulates the following criteria according to which "refugees" are determined, as follows: a) persons who are outside their country of origin or habitual residence; b) persons who are, owing to well-founded fear of being persecuted for reasons of race, religion, nationality of political opinion, unable or unwilling to avail themselves of the protection of that country, or to return there. The Convention excludes certain categories of persons from the term of "refugee" even though they qualify under the above quoted definition. They include categories of persons who have committed a crime against peace, a war crime, or a crime against humanity, as defined in the international instruments drawn up to make provision in respect of such crimes, then the persons who have committed a serious non-political crime outside the country of refuge prior to their admission to that country as a refugee, and finally, the persons who have been guilty of acts contrary to the purposes and principles of the UN. In addition to these categories of persons which are excluded from the categories of "refugees", the Convention stipulates even the exclusion of the categories who are already receiving protection or assistance from an agencies or bodies of the UN (for example, from the UN Relief and Works Agency for Palestinian Refugees in the Near East – UNRWA, or the UN Office for the Coordination of Humanitarian Affairs – OCHA which is different in comparison with protection and assistance of the UNHCR), as well as the categories who do not need international protection but may need international assistance (so-called *national refugees* in the host country that have equal status as its nationals). The Convention also included the provisions that define the legal status of refugees and their rights and obligations in the receiving state (where they have simple or lawful presence, lawful or habitual residence). Thus, in setting out the fundamental rights of refugees, the amended Convention stipulates a variety of treatments ranging from a "treatment as favourable as possible and, in any event, not less favourable than that accorded to aliens generally", self-employment and the practice of liberal professions, housing and public education, to "the most favourable treatment stipulates to nationals of a foreign country" and to "the same treatment as is accorded to nationals" (in the matter of elementary education, public relief, employment, labour and social security). The Convention confirms in favour of refugees the principles of non-discrimination and of freedom of religion. It exempts refugees from the requirement of reciprocity and from exceptional measures taken against nationals of the state of origin in time of war or other exceptional circumstances and from *cautio judicatum solvi.* It provides that the personal status of the refugee shall in principle be governed by the law of the state of his domicile or residence. Also, it sets rules in respect of administrative assistance, identity paper and travel documents. Certainly, one of the most important provisions of the Convention is the principle of *non-refoulment* which provides protection against expulsion or forced return of refugees to countries where their life or liberty would be endangered due to racial, religious, national or social affiliation or political opinion. The only exception to this general principle of international law would be cases where certain categories of persons represent security threat to the host country. Taking into account all the mentioned characteristics of the term "refugees", it is clear that the amended Convention represents the main international legal instrument when considering standards of treatment of these categories of migrant peoples. The Convention imposes on states a duty to cooperate with the UNHCR, in the exercise of its competences and, in particular, to facilitate its duty of supervising the application of the provisions of the Convention. Essentially, the amended Convention eliminated prior restrictions and that provided universal effect in international law. At the regional level, there are also relevant legal acts which create international obligations to the contracting parties to respect international standards in the area of refugee law. These instruments include *inter alia,* the OAU *Convention Governing the Specific Aspects of Refugee Problems in Africa* of 1969, which contains redaction of the

conventional term "refugee" which includes: "Any person compelled to leave his/her country owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality" (Rwelamira, 1989: 557). In the American continent, under the framework of the OAS, two legal instruments were adopted on the same day (28 March 1954). First was the *Convention on Diplomatic Asylum* and the second was the *Convention on Territorial Asylum* (Caracas Convention). The notion of refugee is very similar to the concept laid down in the Convention Relating to the Status of Refugees. In Latin America, in 1984, the *Cartagena Declaration* was adopted, which is very important and well accepted in international practice and which has confirmed the principle of *non-refoulement,* the obligation to integrate refugees and undertake efforts to eradicate the causes of the refugee problem (Kugelmann, 2010: 2). At the European level, the CE has adopted important legal instruments governing refugee status, such as the *European Convention on Extradition* of 1957, *the European Agreement on the Abolition of Visas for Refugees* of 1959, the *European Convention on Social Security* of 1972, the *European Agreement relating to the Transfer of Responsibility for Refugees* of 1980, etc. The CE has also adopted certain acts that serve as guidelines for member states' treatment of different categories of migrants. On the other side, the EU itself has incorporated significant legal instruments on refugees into its legal system. It is well known that in the last decade of the 20th century, the EU adopted the *Maastricht Treaty,* which harmonized the rules on asylum and refugees. In the same period, the EU adopted two important documents: the *Dublin Convention Determining the State Responsibility for Examining Applications for Asylum lodged in one of the Member States of the European Communities* and the *Convention implementing the Schengen Agreement*. Perhaps the best examples of the EU working to harmonize refugee rules are the provision of Article 18 of the *Charter of Fundamental Rights* and the corresponding provisions of Articles 67-79 *Treaty on the Functioning of the EU* (TFEU). Also, the EU has adopted a number of Directives of secondary legal nature *(Soft Law),* in order to harmonize domestic law with international legal standards concerning the protection of the rights of refugees (Dimitrijević, 2017). A special group of vulnerable people similar to refugees are the so-called *de facto* refugees. Under the 1951 Convention with its 1967 Additional Protocol, *de facto* refugees are persons who are unable or unwilling to return to their countries of origin for political, racial, religious or other valid reasons. In international practice, a large number of asylum seekers who do not qualify as refugees fall into this category of subsidiary or complementary protection (Bacaian, 2011: 18).

In international law, asylum seekers are a special category of vulnerable persons similar to refugees. International law however, does not explicitly articulate the right to asylum, nor does it impose an obligation on states to grant asylum. States therefore have the possibility in their territory (including the area under their control) to provide asylum to aliens at risk of persecution or some serious danger (so-called territorial and extraterritorial or diplomatic asylum). Granting asylum is a sovereign right of each state and each state determines the conditions under which a foreign national can obtain such protection. Other countries are obliged to adhere to it. This is logical because the right to asylum is a human right guaranteed by the 1951 Convention and the *Declaration on Territorial Asylum* from 1967 which guarantee the right to seek asylum but leave it to the discretion of states to grant that request. Given that the UNHCR High Commissioner has a mandate to monitor the implementation of international obligations regarding the exercise of this right, in his opinion, the status of asylum seeker can be compared with the status of individuals who have sought international protection and whose refugee claims have not yet been resolved. As the resolution of refugee status can take a long time, this category of persons enjoys subsidiary or complementary protection that is fully equated with asylum. This status should be sufficient guarantee that individuals will not be deported to another country where their lives could be in danger or where they would be subjected to severe torture (Dimitrijević, Popović, Papić & Petrović, 2007: 181-184).

A particularly vulnerable category for which there is no special legal regime in international law is internally displaced persons. At the international level, there are *Guiding Principles on Internal Displacement* from 1998 that resulted from the work of the Commission on Human Rights, the General Assembly and representatives of the Secretary-General of the UN. Thus, internally displaced persons include: "Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border". As internally displaced persons do not have refugee status under the Refugee Convention, they should receive primary assistance from their state. This obligation stems from sovereignty and the principle of non-intervention. The responsibility of the state for its citizens exists even if the state authorities do not want or cannot protect a person who belongs to this category (Goodwin Gill, 1996: 264).

CONCLUSION

This paper focuses on the existing international legal framework for different categories of migrants (emigrants, immigrants, refugees, asylum seekers, internally displaced persons). The analysis indicates certain legal inconsistencies at the regional and national levels. These inconsistencies arise from different national interests of the states, which in international practice are manifested through the mass acceptance of international obligations from international instruments (as is the case with the Convention and Protocol Relating to the Status of Refugees), or through their sporadic takeover (for example in the case of the UN Convention on the Protection of All Migrant Workers and Members of Their Families). In order to overcome this inconsistent approach, states need to adopt regulations that harmonize domestic legislation with international legal rules and principles. Also, in order to harmonize different national interests, states need to harmonize their internal policies with regional and global migration policies. In that sense, it is understood that states retain a certain scope of discretionary powers related to the protection of their vital national interests (in relation to national security, public order, public health, the proper administration of justice, economy, etc.). The author believes that in this way it would be possible to establish a set of guidelines that would contribute to the correct interpretation of the international legal framework on migrants, as well as its more efficient implementation in state practice. Finally, in an effort to reconcile their national interests, states should develop additional forms of institutional cooperation and mutual consultation under the auspices of the United Nations and its specialized bodies and agencies (UNHCR, IOM, IRO) or within certain regional organizations (EU, CE, OAU and OAS). According to the authors, this would enable the consistent application of international legal standards, which is one of the key preconditions for achieving greater efficiency and effectiveness of protection mechanisms for different categories of the migrant population.

REFERENCES

1. Bacaian, L.E. (2011). *The Protection of Refugees and their Right to Seek Asylum in the European Union*, Genève: Institut Eurpéen de'l Université de Genève.
2. Briggs, V.M. (2009). "The State of U.S. Immigration Policy: The Quandary of Economic Methodology and the Relevance of Economic Research to Know", *Journal of Law, Economics and Policy,* 5, (1), 177-193.

3. Chimni, B.S. (2001). "Reforming the international refugee regime: a dialogic model", Journal of Refugee Studies, 14 (2), 151-168.
4. Dimitrijević, D. (2017). "Migrant crisis – safety challenge for the Republic of Serbia", in: Slobodan Janković, Zoran Pavlović, Dragana Dabić (eds.*), Migration as security challenge: West Balkans route,* Belgrade: Institute of International Politics and Economics.
5. Dimitrijević, V. et al. (2007), *Međunarodno pravo ljudskih prava,* Beograd: Službeni glasnik.
6. Goodwin Gill, G. (1996). *The Refugee in International Law*, Oxford.
7. Goodwin Gill, G. (2016). "The Movements of People between States in the 21st Century: An Agenda for Urgent Institutional Change", *International Journal of Refugee Law*, 28(4), 679.
8. Higgins, R. (1973). "The Right in International Law of an Individual to Enter, Stay and Leave a Country", *International Affairs,* 1973, 49, 341-357.
9. Hune, S., Niessen, J. (1991), "The First UN Convention on Migrant Workers", *Netherlands Quarterly of Human Rights,* 9, 133.
10. Jenny, R.K. (1984). "Current Trends and Developments: The Changing Character of Contemporary Migration", International Migration, 22 (4) 388.
11. Kugelmann, D. (2010). "Refugees", in: Max Planck Encyclopedia of Public International Law, Oxford: University Press.
12. Lambert, H. (2009). "International refugee law: dominant and emerging approaches", in: David Armstrong (ed.), Routledge Handbook of International Law. New York: Rutledge.
13. Nygh, P., Blay, S. (2005), "Refugees", in: Sam Blay, Ryszard Piotrowicz, Martin Tsamenyi (eds.), *Public International Law, an Australian Perspective,* Oxford: University Press, 2005.
14. Rwelamira, M.R. (1989). "Two Decades of the 1969 OAU Convention Governing the Specific Aspects of the Refugee Problem in Africa", *International Refugee Law,* 1(4), 577-561.
15. Truong, T.D., Gasper, D. (2011), *Transnational Migration and Human Security: The Migration-Development-Security Nexus*, Springer, Berlin.
16. Weis, P., Zimmermann, A. (1995). "Emigration", in. R. Bernhardt (ed.), *Encyclopedia of Public International Law,* Amsterdam: Elsevier, 1995, 2, 74-78.

CHALLENGES FACING INFORMATION ENVIRONMENT IN CONTEMPORARY CONFLICTS

Milan Miljković, PhD[1]
University of Defense, Belgrade, Serbia

Vangel Milkovski
University of Defense, Belgrade, Serbia

Abstract: The increased number of factors and participants in a conflict has additionally complicated the information environment where these conflicts occur, due to the mass application of information and communication technology (ITC), as well as to global networking that substantially affected the strategic environment where modern conflicts are actually taking place.

Numerous features characterize the complex information environment where contemporary conflicts take place, including: a) *the lack of information* – regarded as an obvious source of omissions and failures in conflict management in the classical theory; b) *too much information* – viewed by some theorists as a major problem in relation to the lack of information; and c) *the deception* – considered by the third group of security theorists to be a bigger problem than the one of separating the relevant signals coming from the *"sea of noise"*.

The complexity of the field of information makes taking the right decisions in conducting the conflict even more difficult and confirms the legitimacy of Clausewitz's thesis, put long time ago, that "much of the information obtained in the war is contradictory, even more false, and by far the most suspicious." In reducing the uncertainty of the conflict, the experience of the people who are engaged in leading the conflict, who assess, analyze and decide on the engagement of forces in the war, plays a crucial role.

Keywords: information, information environment, information warfare, fog of war.

1 milanmiljkovic04011@gmail.com

INTRODUCTION

There is an eternal and urgent need in conflicts to have as much information as possible about the opposite side. A clearer picture of the opponent contributes to better defense preparation, a more adequate distribution of forces and resources, and a better predicted course of events (Harshberger & Ochmanek, 1999).

History, on the other hand, teaches us that the nature of conflict and war is such that knowledge of the adversary is almost always imperfect. Clausewitz thus states that: "Most of the information obtained during the war is contradictory, an even more is false, and by far the largest part of it is of a dubious character." The image obtained of an opponent commander, Clausewitz compared to looking through "fog" or "twilight". He concludes that "the difficulty of perceiving things correctly" is one of the greatest challenges of the war.

Currently, the increased number of factors and participants in a conflict has additionally complicated the modern information environment where these conflicts occur, due to the mass application of information and communication technology (ICT), as well as global networking that substantially affected the strategic environment where modern conflicts are actually taking place.

Having in mind the above, the question can be asked whether in the modern information age and modern conflicts, the information environment enables faster and better decision making.

CHARACTERISTICS OF MODERN CONFLICTS

As a permanently present companion of the humanity it inspired numerous theorists who have classified it, defined it, determined its content and presented their views on the best ways how to defeat the enemy. In that context the Chinese general and military strategist Sun Tzu wrote about "breaking the resistance of the enemy without a fight" (Sun Tzu, 2009). The German military theorist Carl von Clausewitz stated that "war is not over until the will of the enemy is broken" (Klauzevic, 1951). The English journalist and military historian Liddell Hart warned that "generals should think about paralyzing, not killing the enemy" (Lidl, 1985).

Another military strategist, John Boyd, defines war as ''the physical exhaustion, mental-level maneuver, and moral with a level of morality, which seek to penetrate an opponent's moral-mental-physical being, to destroy his inner harmony, produce paralysis, and broken his will to resist" (Lind & Gregory, 2015).

The importance of information and technology for conducting modern conflicts in the modern information society has obviously increased. The imperative of the information society is the domination of information in vital areas. If we transfer this observation to the sphere of war and the sphere of waging the war, we can say that the conflict of information is one of the basic characteristics of "the conflict" in the information society.

The principles of "the new generation of conflicts", like the transfer 1) from direct destruction to the direct influence as a goal; 2) from the direct annihilation of the opponent to their inner decline; 3) from the war waged by arms and technology to the war against culture; 4) from the war in the physical environment to the war in human mind and cyber space; 5) from the symmetric to asymmetric war by

combining political, economic, information, technology and military campaigns; all of these indicate the increased importance of information as means for managing conflicts (Berzins, 2015).

Theorists therefore conclude that information conflicts will play a key role in the contemporary and future conflicts. The goal of future wars will not be achieved unless information superiority over the opposing side is already gained. In essence, the framework for asymmetric and hybrid warfare and nonlinear conflicts, as presented by Russian military experts Chekinov and Bogdanov, relies on the successful implementation of information actions at the beginning of the conflict in order to create favorable conditions for conducting military operations. One of their arguments is the following: the new generations of warfare are predominantly informational and psychological in nature, achieving in that way the information superiority and control over units and armed systems of the enemy, as well as the depressed mental state and decline of the enemy morale. Applying these operations reduces the need for more significant involvement of military forces in offensive operations (Chekinov & Bogdanov, 2013).

The listed features of new conflicts indicate the actuality of conflicts through information, i.e. the importance of the area of information where modern conflicts are conducted. The massive application of modern information technology and the phenomenon of information abundance have led to the intensification of competition through information, which is why the control of the information environment is becoming increasingly important for national security, because the modern information area opens wide opportunities for hybrid conflicts.

Due to all the above, it can be said that the mass nature of the conflict through information further complicates the information environment, and thus its proper perception, which is important for making the right decisions during the conflict.

TYPES AND CHARACTERISTICS OF | INFORMATION RELEVANT TO CONFLICT MANAGEMENT

Information as a term has been known since ancient times. Proponents of mathematical information theory, Claude Shannon and Norbert Weaver, define information as any stimulus that has reached a receiver through some kind of communication channel and is capable of eliciting its selective reaction (Shanon & Weaver, 1968).

The combat rules of the US Armed Forces, FM-105 and FM-106, define information as a medium that enables functioning of the decision-making and execution cycle at the command level. It states that the information manages the actions of the forces, ensures the flow of activities on the protection of forces, and helps them to carry out their operational mission. It quotes that the goal of the conflict has always been, among other things, to influence the enemy's information system (US Department of the Army, 1993, 1996).

Participants in the exchange and interaction with information tend to influence changes in the intentions, goals, decisions and actions, not only of their own, but also of other actors with whom they communicate in a conflict. In this regard, there is a violation of the integrity of information, i.e. changes in information that manifest as technical, semantic and social errors, i.e. that lead to the appearance of erroneous information that becomes a legitimate subject of research in the scientific discipline that some authors call information science (Tuđman, 2003). They argue negative forms of information, i.e. misinformation and its synonyms: "Lie, propaganda, misrepresentation, gossip, deception, trick, er-

ror, concealment, distorted view, allusions, and deceit." The English word *misinformation* is used here with meaning: the distorted information or announcement, or the information that is misleading.

When considering theoretical views on the characteristics of information related to conflict management, it should be emphasized that the information gains in value if it contributes to the improvement of conflict decisions. Thus, the role of information in armed conflicts is to positively influence the quality of strategic or tactical decisions. It could be said that this role of information is as old as warfare and conflict management (Libicki & Shapiro, 1999, 437-461).

In that manner, the theorist Shannon, within the mathematical theory of information, speaks about the influence of information on the reduction of uncertainty, i.e. the entropy in conflicts (Shannon & Weaver, 1968). In relation to its contribution to the elimination of uncertainty, there is a discussion about how much the information is "worth". It is concluded that information that abolishes higher entropy has, in principle, higher value and vice versa.

Also, it is important to say that the instructions of the US Armed Forces FM-105 and FM-106, quoted that only when the data is processed, i.e. placed in a situational context, it gains meaning and becomes, by definition, information. The difference is that information has meaning, while data lack that characteristic. Data represent an isolated fact, and as such make no sense. Information represents data plus meaning, and being that it can trigger an action, a maneuver in a conflict. The ability of information to initiate action also indicates that information, in itself, has the ability to influence a man as a participant in the war, and through him the surrounding people and his combat environment. Influence on the combat environment is achieved through the communication process, the line of command or other channels (US Department of the Army, 1993, 1996).

Observing the stated definitions and attitudes, it could be concluded that the information, by removing the uncertainty, influences a person's thoughts and attitudes about the environment in which conflicts take place, as well as future decisions and actions of the person in relation to a specific conflict. In view of the above, it follows that "the elimination of uncertainty about the conflict" and the "possibility of initiating action" are some of the important features of information relevant to the conduct of the conflict.

Given that information is crucial for reducing uncertainty and decision-making regarding the direction of conflict forces, the complex information environment and the existence of misinformation and deception make decision-making difficult in contemporary conflicts.

OBJECTIVES OF USING INFORMATION IN CONTEMPORARY CONFLICTS

Information is used in war to react to hostile information and information systems, while at the same time protecting one's own information and information systems (Joint Chiefs of Staff, 1998). The goal of this action is to use the information and information system to influence the behavior of the management structure, primarily the decision makers of the opponents, but also the opponent's public opinion. Also, through information, one's own decision-makers and one's own public opinion are protected and defended from the excessive influence of the target information and information systems of the opposing party.

The primary target is the opponent's leadership, as well as the decision-making process of the opponent's leadership. Influence on the decision-making cycle of the opposing leadership is a process called "loop, observe, orient, decide and act" ("OODA-loop") established by the US military strategist John Boyd (Osinga, 2005, 2). Reducing the opponent's ability to make a timely and effective decision will diminish his response or initiative to military action taken by the opposing side.

In this regard, and starting from the fact that information is a strategic tool in war, three types of warfare can be distinguished: *the struggle* for information, *protection* of information and *war* through information, which would mean: *find out, prevent* other side from learning and *lead* them to come to false knowledge. This third aspect is about misinformation and influencing opinions and attitudes (Moliner, 1998).

The war for information is based on the exploitation of available information, regardless of whether it comes from open or confidential sources. This means that data from all available sources can be used - from the media, printed and electronic, from the Internet, information collected by eavesdropping on electronic shows, communication channels, intrusions into the opponent's information system, but also obtained by classic intelligence procedures. At the same time, it is very important that the flow of information be constant, which includes significant human and technical resources, for their successful processing.

Information protection, in its essence, represents specific measures and procedures by which unauthorized persons are prevented from accessing the information, which is of exceptional importance for the army, defense, or the state in general. This type of warfare relies on the security of information systems, i.e. on the functioning of special offensive and defensive devices. It also implies informative countermeasures - the application of techniques intended for one's own protection against possible manipulation of information.

The war by information is based on successful knowledge of media struggle, psychological actions and disinformation systems. In order to make this form of war effective, it is necessary that those carrying out these activities be predominantly inventive and imaginative people, endowed with great analytical ability. Western military analysts have noticed numerous advantages of information warfare, which by their characteristics can be compared to the guerrilla style of combat. Namely, when goals are clearly defined, with little initial resources, disproportionately larger effects are often achieved. Their media effect is also significant, as a rule it is enhanced by the flywheel effect.

When advocates of the use of information as a weapon state that its goal is to diminish the will and ability of the opponent to fight, they are in fact establishing a direct connection with one of the important views of Carl von Clausewitz. Basically, after Clausewitz explained the concepts and characteristics of war, he claimed in his book "On War" that objectives of war include three general opposing goals, namely: the armed forces, the country and the will of the enemy (Klauzevic, 1951, 54). *First,* he argues that the armed forces must be destroyed: that is, they must be brought to such a state that they can no longer fight. *Second*, he claims that the opposing country must be occupied; otherwise the enemy could raise fresh military forces. Nevertheless, both of these goals can be realized, but the war can neither be considered over until the enemy's will is broken: in other words, until the enemy government and its allies are forced to seek peace, nor until the population bows to the attacker.

Types and goals of conflicts through information, indicate that these conflicts are significantly directed towards the information environment of the opponent, and that their primary goal is the decision-making process of the opponent's leadership.

ELEMENTS AND CHARACTERISTICS OF INFORMATION ENVIRONMENTIN CONTEMPORARY CONFLICTS

Activities related to information in contemporary conflicts are carried out within a context called *the information sphere - environment*. The information sphere consists of three elements: 1) information infrastructure (systems and devices for collecting, transmitting, processing and delivering information), 2) information and its flows, and 3) personnel performing various activities.

The information environment was the result of the emergence of a new socio-economic formation of the society - the information society (Синковски, 2005). The information sphere permeates and transcends the boundaries on land, sea, air and space and cyberspace. There are three conceptual dimensions within the information sphere: physical, informational and cognitive. The information sphere is defined as a set of individuals, organizations, or systems for collecting, processing, or distributing information (US Department of the Army, 1996). The modern information sphere is manifested through the information infrastructure. There are global, national and military information infrastructures.

Modern information area opens wide asymmetric possibilities for reducing the combat potential of a stronger and richer enemy. The following characteristics of the information area favor the use of information weapons in asymmetric attacks: 1) the ability to access from a distance; 2) difficulties in identifying attackers and attributing responsibility for the attack; and 3) low cost of high-tech products freely available on the market (Миљковић & Путник, 2016).

One of the tasks of states during conflicts and wars is to ensure their own *information independence*, i.e. the independence of the state officials from foreign information resources. In that sense, *the information dependence* is the necessity for a state and non-state officials to satisfy their information needs by "importing", because that is not possible from their national information resources. This is a serious problem, especially in war when *an information crisis* often occurs, i.e. the inability to meet basic information needs, even from abroad or due to a lot of contradictory information coming from foreign sources (Мијалковић, 2010).

The information environment in modern conflicts is characterized by numerous features, among others are:

a) *Lack of information* - classical theory estimates that the lack of information is an obvious source of omissions and failures in decision-making. On the other hand, this is one of the theses refuted by some American intelligence theorists when they studied the US intelligence failures regarding the Japanese attack on Pearl Harbor, claiming that the USA had enough information about the upcoming Japanese attack. The current view of experts is that lack of information is rarely the primary source of failure to make decisions in war (Wohlstetter, 1962)

On the other hand, Western military theory and practice significantly emphasizes the importance to the activity called Operations Security (OPSEC), whose role is to deprive the opposing side of critical information about friendly potentials and intentions necessary for efficient and timely decision-making. Operations Security (or concealment) is the process of identifying one's own critical information and analyzing one's own operations, in order to determine: what one's own information is needed to the opponent to have accurate information about the real intentions of friendly forces, deprivation of opposing command structures with critical information from information about intentions of their allies and leading the opposing leadership to misjudge the real intentions, ensuring the secrecy and security of such information (US Army Joint Chiefs of Staff, 1997).

b) *Too much information* - theorists believe that this phenomenon is, in relation to the lack of information, a bigger problem. Theorist Albert Wohlstetter points out, in relation to the case of Pearl Harbor, that it is difficult to extract relevant "signals" from the excess of confusing information and noise (Wohlstetter, 1962, 426). Theorist Ephraim Kam claims "the greater the amount of information ... the more confusing and contradictory the data ..., which are then more difficult to process" (Kam, 1989, 222). Contemporary decision-makers face too much information and the main problem is not a lack of information, but "the flooding of information" which leads to "intelligence blindness." The increase in raw intelligence is the cause of growing problems with creating accurate intelligence warnings and frequent intelligence omissions.

c) *Deception* - warfare at all levels is a two-way game. That is, even if someone tries to create a clearer picture of the enemy, their own forces and the environment, or attempts to control their own forces, the enemy is at the same time working to oppose those efforts. This fact makes even the simplest tasks of gathering information about an opponent difficult to execute. A competent commander will always actively try to keep the opponent in doubt about the intentions and abilities of his military force. This is especially pronounced in maneuver warfare, where the aim is to deny the enemy the opportunity to gain an accurate picture of the battlefield.

The modern information environment is complex and multi-layered, it permeates and transcends the boundaries of land, sea, air and cyberspace. Such an information sphere is an extremely complex information environment, which is difficult to control, monitor and analyze during conflicts. Characteristics of the information environment, such as an abundance of unnecessary information and too little relevant information, make the decision-making process and directing forces in conflicts more difficult.

INFORMATION ENVIRONMENT AND NATURE OF CONFLICT

Relative information uncertainty is the main characteristic of engaging in conflict in all epochs, even in the modern one, despite the technological progress.

It is impossible to achieve an absolute information certainty, both temporally and spatially, since it is above all restricted, apart from technology, by limited capabilities of a man to receive and process the information.

In this regard, the nonlinearity is expressed in the domain of unpredictability of the outcome of the war, which is caused by the impossibility of predicting events and their sequence, as well as the impossibility of knowing the initial conditions precisely.

This unpredictability cannot be overcome. Consequently, in considering the nonlinear aspects of a war, Karen Wilhelm reached the conclusion that war is fundamentally uncertain and that the increased accumulation of information and interaction of many complex systems involved in a modern conflict, generate even more uncertainty, due to the rules on which nonlinear dynamics are based, and the sensitivity of these systems to initial conditions (Karen, 1999).

On the other hand, this does not mean that some military estimates and plans are obsolete - they just need to be more flexible and adaptable. Nor does it mean that money has been wasted on information technology - it has proven to be a significant support to war efforts and it is necessary just to be aware of all the limitations imposed in modern conflicts. The stated features of the information environment indicate that modern conflicts occur in a complex and unclear information environment, which raises

the question of whether modern information technology has helped to reduce this complexity and uncertainty.

Similar views on the complexity of contemporary conflicts and the complexity of the environments in which they are conducted were expressed by the American military historian Antulio Echevarria, who, when analyzing contemporary conflicts, advocates an inter-dimensional approach. In particular, he states that modern conflicts are fought in the military, political, social, technological, logistics and information dimensions. All these dimensions exhibit nonlinearity and complex interactivity and, depending on the specific context, they express different levels of influence on the totality of contemporary conflicts as phenomena (Echevarria, 1997).

Chaos is also one of the enduring features of war that contributes to its uncertain nature. Conflict, due to the fact that it represents human action, is always uncertain and chaotic (Nicholls &Tagarev 1994).

When considering the information dimension of a conflict, it has long been known that its complexity and unpredictability are influenced by many factors, including the lack and unreliability of information. It happens that certain information or knowledge is not available at the time when an important decision is made or some action taken. This can result in unpredictable consequences that are impossible to control and that can have great destructive potential and cause unforeseeable consequences. Incomplete, inaccurate or contradictory information leads to the creation of the so-called *"fog of modern conflicts and wars"*, which limits perception and creates confusion in their understanding (Klauzevic, 1951).

In addition to "fog and friction", due to unclear information, which in this context has a negative impact, the literature cites other, not less important sources of nonlinearity, such as psychological aspects of interpreting the actions of opponents. In a conflict, each side tries, by using deception, to deliberately prevent the adversary from seeing its intentions in terms of taking future actions, thus increasing the state of chaos in the combat and information space of the conflict (Nicholls & Tagarev, 1994). A necessary precondition for preventing such a state of uncertainty and gaining a decisive advantage is that the command staff knows their opponent well, the way they think, react and perform actions, which will greatly overcome the complexity and uncertainty of the conflict information environment. But since armed conflict is fundamentally unpredictable and chaotic, its outcome is always uncertain, except in some trivial cases, and therefore, coincidence can also play a certain role.

Military defense analyst Barry Watts studied Clausewitz's concept of general friction in detail. He points out that war has been shown to be a nonlinear activity both on an intuitive level and in simple mathematical models. He concluded that "the interaction of repeated feedback can, in this way, increase even the smallest differences, including those that are the product of human decisions, as well as make combat results structurally unpredictable" - meaning that there is no such detail or information that can to make the results of a conflict and war completely predictable. As a consequence, the effects of friction cannot be eliminated or significantly reduced (Watts, 2004).

Therefore, despite the opinion that we have enough information about the situation, the effects of friction in war cannot be eliminated. However, there is still a normal obligation and demand for better, more perfect knowledge of the situation, intelligence activities and information, in order to satisfy the need to reduce fog and friction to a minimum.

Despite the presence of numerous modern information systems that help to perceive the information environment and make decisions, theorists point out that the uncertainty of modern war is not reduced, so that modern conflicts retain features such as nonlinearity, chaos, unpredictability, which is

why they are permanent features of war. Regarding the information environment, it can be said that the war is still informationally uncertain.

CONCLUSION

In the age of information, the information revolution transforms warfare, i.e. it causes changes in how societies engage in conflicts and how their armed forces wage armed conflicts. Information has always been a means of making an impact, and therefore of gaining the power. In modern society, modern information technology spreads information much wider and faster than ever before in history, that is the reason why the importance of information as an element of power has increased. In the age of information, the information is becoming increasingly important for national security as well. Although only military conflicts are still registered, when viewed through an outdated prism, as armed conflicts, the information, intelligence and other conflicts are conducted on a daily basis at various levels. This shifts the focus of the conflict from the war to other spheres and activities such as information (Миљковић, 2016 b, 1).

The application of modern technology in engaging in a conflict has brought a network-centric concept of warfare, which involves connecting numerous sources of information and databases, as well as rapid exchange of information, ensuring that an informational advantage over the enemy is achieved in a short time.

All of this mentioned above indicates the increased importance of the information environment in which modern conflicts are conducted. Complex and multi-layered information environment and the existence of numerous conflict through information, misinformation and deception, make decision-making additionally difficult. The modern information environment is difficult to monitor and analyze, which make the decision-making process and directing forces in conflicts more difficult.

Due to the application of modern technology in a way, modern conflicts becomes even more complex and unclear. In addition, the modern war for those who take part in them and command has failed to become more predictable or clearer. It could be concluded that there is no such amount of detail or information that can make the results of the conflict and the war completely predictable. As a consequence, the complexity of contemporary conflicts can neither be eliminated nor significantly reduced. Regarding the information environment, it can be said that the contemporary conflicts are still informationally uncertain. Also, it cannot be said that the modern information environment significantly contributes to faster and better decision-making in conflicts.

However, there is still a commitment and demand for better, more sophisticated knowledge of the situation, intelligence and information, in order to meet the need to minimize the fog and friction of the conflict and make the complex information environment clearer. The main role in that should be played by a person, the one who manages the conflicts, who evaluates them, analyzes them and decides on the engagement of forces in the war. Experience from modern conflicts indicates that more information is available and better visualization of the battlefield cannot compensate for the experience of commanders, which is crucial for a quick understanding of the situation and making quality decisions. Experience shortens the time of information processing, it causes rejecting unnecessary information, focuses only on important facts and puts quickly obtained information in a certain context, gives them real meaning, quickly understands the strategic situation of conflicts, which contributes to correct and fast decision-making and reacting in conflicts.

REFERENCES

1. Berzins, J. (2015). A New Generation of Warfare, *Per Concordiam* 6, no. 3. Accessed on March 13, 2018,
2. http://www.marshallcenter.org/mcpublicweb/MCDocs/files/College/F_Publications/perConcordiam/pC_V6N3_en.pdf.
3. Echevarria, A. (1997). Dynamic Inter-Dimensionality: A Revolution in Military.
4. *Joint Force Quarterly*, Accessed on July 5, 2020. https://ndupress.ndu.edu/portals/68/Documents/jfq/jfq-15.pdf
5. *Field Manual 100-6.* (1996). *Information operations,* Department of the Army, Washington, DC.
6. *Field Manual FM -105.* (1993). Department of the Army, Washington, DC.
7. *Field Manual FM-106.* (1996). Department of the Army, Washington, DC.
8. Harshberger E. & Ochmanek D. (1999), Information and Warfare: New Opportunities for U.S. military forces". *Strategic Appraisal: The Changing Role of Information in Warfare*. RAND, Accessed on April 11, 2020. https://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1016/MR1016.chap6.pdf
9. Lidl, H. (1985). Mač i pero, Beograd, Vojnoizdavački Zavod.
10. Moliner, J L. (1998). Guerre de l'information: le concept de tout. *L'Armement*, 60, XII/1997– I/1998, Paris.
11. Joint Pub 3-13 (1998). *Joint Doctrine for Information Operations*, US Army Joint Chiefs of Staff..
12. Joint Pub 3-54 (1997). *Joint Doctrine for Operations Security*, US Army Joint Chiefs of Staff.
13. Kam, E. (1989). *Surprise Attack*, Boston, MA: Harvard University Press.
14. Libicki, M. & Shapiro, J. (1999). The Changing Role of Information in Warfare, RAND, Accessed on July 15, 2020.
15. https://www.rand.org/pubs/monograph_reports/MR1016.html
16. Nicholls, D. & Tagarev, T. (1994) What Does Chaos Theory Mean for Warfare?. *Aerospace Power, Journal.*
17. Osinga, F. (2005). Science, Strategy and War The Strategic Theory of John Boyd. Accessed on May 13, 2020. http://www.projectwhitehorse.com/pdfs/ScienceStrategyWar_Osinga.pdf
18. Chekinov, S. & , Bogdanov S. (2013). The Nature and Content of a New-Generation War, *Voyenna mysl,* No. 4.,
19. Shanon C.E. & Weaver W. (1964), The Mathematics Theory of Communication, The University of Illinois Press Urbana.
20. Watts, B. D. (2004). Clausewitzian Friction and Future War. Revised Edition. *Institute for National Strategic Studies, National Defense University*, Washington DC. Accessed on May 13. https://apps.dtic.mil/dtic/tr/fulltext/u2/a427577.pdf
21. Karen, S. W. (1999), Toward a Nonlinear Theory of War:, Changing the Root, Metaphor. *National War College*. Accessed on Jun 13. https://apps.dtic.mil/sti/pdfs/ADA443509.pdf

22. Lind, W. & Gregory T. (2015) 4th Generation Warfare Handbook, Castalia House, Kouvola, Finland.
23. Wohlstetter, R. (1962). Pearl Harbor: Warning and Decision, Stanford University Press.
24. Klauzevic, K. (1951). O ratu, *Vojno delo*, Beograd.
25. Мијалковић, С. (2010). Корелација информационе и националне безбедности", Zbornik *Ziteh 2010*, Београд. Accessed on July 15, 2020. https://www.itvestak.org.rs/Zbornik_ZITEH_10/Mijalkovic%20S%20i%20dr,%20Korelacija%20informacione%20i%20nacionalne%20bezbednosti.pdf
26. Миљковић, М. & Путник, Н. (2016). Активности савремених обавештајних служби у сајбер простору", *Војно дело 7/2016,* Београд.
27. Миљковић, М. (2016). Посебност информационих операција у раду савремених обавештајних служби, докторска дисертација, Факултет безбедности, Београд.
28. Tuđman, M. (2003). Informacijska znanost: Znanost o obavijestima, pogrešnim obavijestima i protuobavijestima. Zavod za informacijske studije, Filozofski fakultet, Zagreb.
29. Синковски, С. (2005). Информациона безбедност – компонента националне безбедности", *Војно дело, 2/2005*. Београд,
30. Sun Tzu (2009), Umeće ratovanja, Beograd: Babun.

HYBRID WAR – THEORY AND PRACTICE

Hatidža Beriša, PhD[1]
School of Engineering Management, Belgrade, Serbia

Katarina Jonev Ćiraković, MSc[2]
Anti-Human Trafficking IBSSA, Belgrade, Serbia

Aleksandar Ćiraković[3]

Abstract: Academic and military circles of the most powerful countries in the world have considered certain concepts of modern warfare, primarily taking into account their own goals and available capabilities. In that way, a theoretical basis was set for the coordination of all available military and non-military capacities, improvement of existing and development of missing capacities and elaboration of optimal methods of their application depending on defined goals, environmental conditions and opponents.

The aim of this paper is to present the concept, principles and forms of application of hybrid warfare and, at the same time, to emphasize the importance of coordinated use of all available capacities, military and non-military, in order to achieve or protect one's own interests. The modern strategic and security environment is very complex and requires the elaboration of concepts, methods and capacities that are applicable in the present and the near future. The traditional approach, which was characterized exclusively by the use of military means, today has limited use value.

Keywords: military forces, concept, warfare, hybrid, hybrid warfare

INTRODUCTION

Numerous conflicts have marked the history of human civilization. Conflicts were waged for various reasons, but with the same general goal of realizing one's own interests, imposing one's own will on the enemy, and preventing the enemy from achieving their own goals. According to the traditional understanding, "war is a conflict of states, military-political alliances, classes, nations or other social groups, in which violence is massive and organized and armed struggle is waged in all areas of social life, in order to achieve certain political, economic and other goals (Vojni leksikon, 1981:508).

1 berisa.hatidza@gmail.com
2 jonev.katarina@gmail.com
3 acocirakovic@gmail.com

Contrary to this traditional understanding of warfare, states have historically used other forms of warfare to achieve their own goals. In that respect, it is primarily understood as economic, psychological-propaganda, political, and with the transition to the new millennium, information and cyber warfare became more important. Such development makes it difficult, and perhaps impossible, to make a clear distinction between the period of war and peace, and at the same time makes it difficult to recognize the threat in a timely manner and to take appropriate preventive or defensive measures.

Given that hybrid action is most often manifested by non-military forms of security threats, which are difficult to detect in time and prevent surprise, the question arises of ways and possibilities in counteracting such destructive action. How to effectively oppose something that is covert, adaptable, comprehensive, has a synergistic effect, and there is still no approximate harmonization, which complicates the normative regulation of the threat and the legal prescribing of countermeasures.

Domestic authors relied on the views and conclusions of both authors from the West and authors from the Russian Federation when considering the subject terms. At the same time, they based their conclusions on their own experiences and events in the former SFRY, which were largely marked by the active engagement of various global and regional powers and the capacities and activities available to them.

According to domestic authors, at the core of the interpretation of hybrid war is the conflict of classical war theory with emerging theories that seek to describe and explain current conflicts. The results of the process of globalization and the general development of human civilization led to the development of postmodernist theories of warfare, which tried to explain a phenomenon that classical theories of warfare could not. Thus, modern theories have significantly changed the logic in understanding war as a social phenomenon, especially since the end of the Cold War. The basic understanding of modern theories of warfare implies that the goal is "to defeat the enemy without a battle" and that war exists even without armed struggle (Mitrović, Nikolić, 2020: 130).

THE CONCEPT OF HYBRID WARFARE

There is no single and generally accepted definition of hybrid threat or hybrid warfare in the world. The definition should determine the content of the term, concretize the content of the hybrid threat as a phenomenon, i.e. its properties, distinguish it from other phenomena. The question is how to effectively counter a threat that is not clearly and unambiguously defined. A similar problem in terms of conceptual definition exists with terrorism, where the definition of terrorism has been influenced by the historical context of terrorism, because by changing the context of this violent activity, the definition has also changed.

The concept of hybrid warfare is relatively new; it appeared at the beginning of the new millennium in the works of military theorists from the USA. At the time of the concept's development, hybrid warfare was just another in a series of concepts that advocated the thesis that modern warfare deviates significantly from the traditional understanding of war. Frank Hoffman, as one of the greatest proponents of this concept, states that "hybrid wars include various forms of warfare, including conventional capabilities, irregular tactics and formations, terrorist acts including random violence and coercion, and crime-induced disorder." (Hoffman, 2007: 14)

Like the notion of hybrid warfare, the notion of hybrid threat is considered from a different point of view. There is no generally accepted definition of a hybrid threat, and it remains a challenge for various

researchers and theorists. One of the appropriate definitions is: “hybrid threats are potential, complex and multidimensional dangers created by the simultaneous action of state and / or non-state entities that adaptively combine conventional means to achieve common goals.” (Saković, Stojković, 2019: 307-308).

According to the Hoffman, hybrid wars can be waged by states, but also by various non-state actors. The introduction and consideration of the new concept were based on assessments of the future environment, which was presented as complex, and posed new challenges to the armed forces. It was thought that future conflicts would be waged in the urban areas of developing countries, with opponents using different asymmetric capabilities in order to prolong the duration of the conflict and waste resources and undermine the will to fight. (Hoffman, 2007: 15)

It should be borne in mind that the basic assumptions of the concept of hybrid warfare are based on the experiences of the armed forces of the United States and the State of Israel during the war in Iraq, starting in 2003, and the war in Lebanon in 2006. That is why it was pointed out that potential enemies will try to overcome the supremacy of the USA in firepower and intelligence capabilities by applying irregular methods. Potential enemies will not abide by any rules, they will learn from the regular armed forces and will apply modern technology in unique and unexpected ways (Hoffman, 2007: 16) At the same time, it was assumed that potential enemies would largely apply various forms of criminal activities, but also actively engage in the information dimension through social networks for the purpose of psychological propaganda.

In accordance with the stated assessments and conclusions, the notion of a hybrid threat has been defined in the USA. A hybrid threat is a diverse and dynamic combination of regular forces, irregular forces and / or criminal elements united in achieving mutually beneficial effects (TC 7-100, 2010: 2). They are innovative, adaptive, globally connected, networked and hidden in the mass of the local population.

According to the doctrinal documents of the US Armed Forces, the intention of the hybrid threats is to saturate the entire operational environment with effects that support the achievement of its own goals. By acting simultaneously, it is possible to achieve economic instability, undermine trust in local authorities, attack information networks, send propaganda messages, cause technical-technological accidents and physically endanger opponents. Synchronized and synergistic activities of hybrid threats can be manifested in the informational, social, political, infrastructural, economic and military dimensions of the operational environment. (TC 7-100, 2010: 1, 2)

An integral element of hybrid threats are criminal groups that are used in cooperation with regular and irregular forces. Criminal groups have the ability to provide the necessary sources of funding for certain actions and activities, as well as the procurement of weapons and military equipment illegally. In that way, hybrid threats are enabled to master modern technologies, which increases the space in which they can pursue their actions and activities.

For success in hybrid warfare, it is not necessary to achieve any tactical success or victory, but it is necessary not to lose the war (TC 7-100, 2010: 1-2). It is necessary to achieve a stalemate in the political and military sense, and thus disrupt the support of the electorate in order to change the behavior or policy of the United States. Examples of US actions during the occupations of Iraq and Afghanistan are adequate indicators of such doctrinal commitments.

From all of the above, it is obvious that the experiences of the United States, and mainly the experiences gained during the use of their armed forces in the late 1990s and during the first decade of the new millennium, significantly shaped these attitudes. Operation ‘Iraqi Freedom’ and the war in Lebanon in 2006 largely demonstrated the inefficiency of conventional armed forces in a conflict with an adapt-

able (hybrid) adversary capable of independently combining and synchronizing the use of available capabilities in different dimensions.

One of the definitions in its study on combating hybrid warfare was given by the international organization "Multinational Capability Development Campaign (MCDC)", which defines it as the synchronized use of several different instruments of power that are directed (tailored - designed) to specific - specific vulnerabilities. spectrum of social life and achieve a synergistic effect. Hybrid threats are designed to address the weaknesses (MCDC Countering Hybrid Warfare, 2017) of states in the political, military, economic, social, infrastructural, and information domains.

Panarin also gives a new approach, according to which hybrid war is a set of methods of military, political-diplomatic, financial-economic, information-psychological and information-technical pressure, as well as technology of colored revolutions, terrorism and extremism, activities of special services, formation of special forces, a force for special operations and a structure of public diplomacy, which, according to a single plan, is implemented by state bodies, the military - political bloc or transnational corporations. (Panarin, 2019: 57)

The evolution of the concept (example of Ukraine)

The crucial geopolitical event that drew the attention of the professional public to the concept of hybrid warfare was the crisis in Ukraine in 2014 and the active engagement of the Russian Federation. This event also contributed to the evolution of the concept of hybrid warfare, and it is necessary to consider to some extent the conditions that led to it.

After the violent removal of the legitimately elected president of Ukraine, which was crucially contributed by the United States and the European Union, the Russian Federation used its own armed forces to occupy all important facilities on the Crimean peninsula, after which a referendum was organized on unification of Crimea with the Russian Federation. Based on the results of the referendum, Crimea was annexed to the Russian Federation. This development was a complete strategic surprise, primarily for the United States, because the Russian Federation showed an unexpected level of determination in protecting its own vital interests in the immediate neighborhood. Not only was the action of the Russian Federation characterized by determination, but also a high level of synchronization of the application of available instruments of power was demonstrated in order to achieve the set goals.

As already stated, the traditional interpretation implies that war is characterized by armed struggle, i.e. that there is a clear distinction between the period of peace and war. However, experiences in the USSR during and after the Cold War, events in the SFRY and experiences from the Middle East and North Africa in the conditions of the "Arab Spring" showed that modern war, in its forms and contents, significantly deviates from traditional interpretation. With this in mind, General Gerasimov states that "a perfectly stable state can, within a few months, or even days, become the scene of a fierce armed conflict, a victim of foreign intervention and sink into a net of chaos, humanitarian catastrophe and civil war" (Vasilyevich, 2013 : 2-3).

At the same time, he states that "the role of non-military means in achieving political and strategic goals has increased, which, in many cases, exceed the strength of weapons in terms of their effectiveness." (Vasilyevich, 2013: 2-3). Considering experiences from different regions of the world, examples of unilateral and reckless behavior of the United States in the form of "humanitarian" interventions and preventive attacks on other countries without the consent of the United Nations Security Council,

as well as numerous "colored" revolutions in space of the former USSR, General Gerasimov concluded that success in modern wars could no longer be based solely on the use of armed forces. In order to achieve the desired goals, it is necessary to apply various non-military measures in coordination with the military forces.

Taking into account the events in Ukraine during the first half of 2014, but also the views of General Gerasimov presented in the mentioned article, academic and military circles in the West concluded that the Russian Federation is waging a hybrid war against Ukraine. Based on such conclusions, there was an evolution of the initial concept of hybrid warfare, but also the appearance of numerous papers that discussed current topics. The report from the Munich Security Conference in 2015 states a model that comprehensively presents a new interpretation of the concept of hybrid warfare, i.e. that hybrid warfare includes a combination of different conventional and unconventional means of warfare, such as diplomacy, economic warfare, information warfare and propaganda, cyber attacks, regular military forces, special forces, irregular forces and support for local unrest.

Taking into account the new interpretation of the term, the Western expert public tried to define certain principles or characteristics of hybrid warfare. Based on the study of events, primarily in Ukraine, the following characteristics of hybrid warfare have been defined (Hybrid Conflicts as an Emerging Security Challenge, 2015):

- Coordinated application of means - within hybrid warfare, various actions and activities are performed simultaneously, which implies the necessity of their coordination in order to achieve the desired effect. The actions and activities performed can be of different levels, from strategic to tactical, and the party that implements them tends to use conventional and unconventional means to achieve its goals.

- Ambiguity - hybrid warfare is usually amorphous and ambiguous, i.e. it includes state and non-state actors and the use of irregular and unconventional forces. Deception and propaganda are characterized by hybrid warfare, which makes it difficult to distinguish peace and war.

- Continuous adaptation - the actors of hybrid warfare constantly adjust their own actions in order to achieve the desired effects. There are no specific rules, patterns or boundaries that can lead to a long-lasting conflict whose intensity and content change over time. The ideal goal is to achieve victory without a fight.

- Lack of rules as a principle - actions and activities are not carried out in accordance with the rules of use of force or the principles of international humanitarian law. Extreme violence can be used for propaganda purposes with the aim of intimidating the opponent or leading the opponent to reckless action.

- Constant technological change - the development of new technologies, such as social networks and the ability to gather intelligence from open sources has led to the evolution of hybrid warfare. It can be expected that future technological advances will also lead to changes in certain characteristics of hybrid warfare.

APPLICATION OF HYBRID WARFARE (EXAMPLES OF SYRIA AND UKRAINE)

A clear recognition of security challenges and threats cannot be expected in the future. Traditional conflicts will continue to be the most dangerous form of social conflict in the future, but future oppo-

nents will most likely combine different ways and forms of warfare. The most significant change in the character of modern warfare is reflected in the unclear nature of the struggle of the opposing sides.

Hybrid warfare combines the lethality of interstate conflicts with the fanaticism and longevity of "irregular warfare"[4] In such conflicts, non-state actors use access to modern military capabilities, such as encrypted communication systems, portable anti-aircraft missile systems, etc., and use ambushes, improvised explosive devices and liquidations with the long-term use of insurgent actions. Technologically advanced state actors could combine the use of anti-satellite weapons with terrorism and cyber attacks aimed at financial institutions.

The successful implementation of hybrid warfare requires the existence of certain conditions, such as: long-term intolerance, existing or perceived social inequality, general social distrust, weak state institutions or ethnic tensions. If a state wants to use hybrid warfare, it will usually encourage local unrest in the initial phase in order to provoke a reaction from state or local authorities. (Rančić, Beriša, 2018) He will then strive for the internationalization of the problem and the application of various forms of diplomatic and economic pressure. It will most often strive to achieve goals without armed conflict, but armed conflict is the ultimate means of achieving a goal.

For the purposes of this paper, general examples of the application of the content of hybrid warfare will be considered, focusing on the examples of Syria and Ukraine. The contents of hybrid warfare will be grouped according to the connection of their application.

Diplomacy and economic warfare

Economy is one of the basic pillars of every country, i.e. developed economy is the main prerequisite for the development of other national interests, such as: good living standards, meeting the living needs of the population, building and maintaining credible military power, technological development, improving the education and health system, political and economic influence in the region or in the international community and the like.

Diplomacy and forms of economic warfare (economic sanctions, customs, embargoes, fiscal and monetary policy, etc.) belong to the traditional forms of international political and economic relations. Since their inception, states have, depending on their capabilities, applied various forms of diplomatic pressure to achieve political goals. At the same time, various forms of economic warfare sought to develop their own and weaken the opponent's economy. As such, they cannot be independently considered as a special content of hybrid warfare, because in that way it could be concluded that numerous actors in international relations are constantly in some kind of hybrid warfare. The basic goal of the economic war is to realize the interests of the state that started that war, but without the use of armed struggle. The intensity and duration of the use of such economic instruments can crucially affect the ability of the attacked state to resist potential armed aggression. Diplomatic pressures and economic warfare are primarily applied in order to support other contents of hybrid warfare in order to achieve a synergistic effect. Given that these are traditional forms of international relations, in this paper they will not be discussed in more detail.

4 Irregular warfare is defined in US doctrinal documents as "a violent struggle between state and non-state actors for legitimacy and influence over a certain population."

Support for local unrest

Support for local unrest is an important content of the hybrid war, because it enables easy identification of threats, but also identification of actors interested in a possible escalation of the crisis. Most often, Western countries, led by the United States, provide support for local riots. The United States provided the necessary organizational, financial and media support to numerous "colored" revolutions in the former USSR and the former SFRY, riots in the countries affected by the "Arab Spring", and in recent years riots in South America, Venezuela and Bolivia. Organizational assistance was reflected in the formation and organization of various democratic movements and non-governmental organizations in countries that were subject to local unrest. Some members of these organizations and movements have been trained in Western countries to express forms of civil disobedience, to organize protests, but also to escalate unrest in case of need. Financial assistance was reflected in the allocation of significant financial resources from various funds intended for the spread of democracy. In this way, primarily the United States, but also some other Western countries, in a number of cases, managed to achieve their own goals and lead to a change of government. At the time of writing, the same method is used in Hong Kong.

On the other hand, the Russian Federation has been passive in this segment for a long time. With the escalation of the crisis in Ukraine, the Russian Federation has also started providing support for local riots in the Donbas area. In the political dimension, the demands of the Russian population on the territory of Donbas were supported, in the media dimension, propaganda activities were carried out with the aim of damaging the reputation and legitimacy of the Ukrainian state authorities. At the same time, the departure of the citizens of the Russian Federation to the area of Donbas to participate in the conflict was not prevented.

Information warfare and propaganda and cyber attacks

Information warfare and propaganda are interrelated and have been used for a long time with the aim of discrediting and damaging the reputation of the opponent, or his authorities, violating the will to fight or resist the opponent, deceiving and influencing the opponent to make wrong or inappropriate decisions and the like. Information is distributed through television, websites and social networks, and sometimes with the use of leaflets. Quantity, not quality, is crucial to the success of information warfare. If the same information from several different sources is distributed to the target groups within the information environment, it is expected that the target groups will accept such information as credible. Based on that, it can be concluded that the synchronization of information warfare and propaganda actions is very important. The necessary level of synchronization can be achieved primarily by state actors, because they have control over various media houses such as CNN, BBC, Fox News, Russia Today and the like. Special topics and messages are formed that are constantly repeated with the aim of their acceptance by the target groups. One of such topics is the notion of "Novorossiysk", i.e. the area of eastern and southeastern Ukraine, which was pointed out by the President of the Russian Federation in his presentation in 2014. This topic was used to unite different local groups in the Donbass area within one common political goal. (Kofman, 2017: 52).

An example of information and propaganda activities is the issue of weapons of mass destruction in Iraq and Syria. In the context of Iraq, the mentioned topic was used as an occasion for aggression and occupation of Iraq by the USA and the "coalition of the willing", but in the absence of evidence after the US aggression, their international credibility was damaged. Also, information on the use of chem-

ical weapons by regular Syrian forces against the rebels has been presented on several occasions, all in the context of creating a favorable international environment for potential military intervention by the United States and NATO in Syria. (https://news.un.org/en/story/2020/04/1061402)

Information and propaganda activities, since they represent a non-contact form of conflict, are applied continuously. To a large extent, information and propaganda activities are carried out with the aim of supporting the achievement of political goals and interests, and if necessary, the provision of wider international support for military intervention. Although the concept of hybrid warfare and hybrid threats was not discussed in 1999, the "Racak" case, with exceptional media support and information activities, was used by the United States as an occasion for military intervention in the territory of FR Yugoslavia.

Cyber attacks are a relatively modern means of warfare, enabling effective action on certain parts or objects of critical infrastructure or financial institutions. It is very difficult to prove the source of cyber attacks, and certain state actors are usually accused of certain cyber attacks based on assumptions. There is a well-known case of the application of the computer "worm" Stuxnet, which caused mechanical damage to over 1000 centrifuges used in the Iranian uranium enrichment program, and which is presumed to be a product of the USA and Israel. On the other hand, the Russian Federation was accused of several weeks of cyber attacks on Estonia in 2007, in response to the relocation of the monument to Soviet soldiers from the center of Tallinn to a nearby military cemetery (Ottis, 2018: 1). Within the crisis in Ukraine, cyber attacks were recorded in several cases on government websites using the so-called DDoS (Distributed Denial of Service) attacks. In October 2014, the electronic system for recording the election results of the Ukrainian Parliament was disabled, for which a hacker group called CyberBerkut took responsibility (Ottis, 2018: 1).

Regular military forces, special forces and irregular forces

These contents are closely connected, which is why their joint consideration is necessary. In the context of hybrid warfare, irregular (paramilitary, insurgent or terrorist forces) are particularly significant. In most cases, they are primarily used to achieve the desired goals. Depending on the state actors who support them, they can be engaged against the security forces or in cooperation with the security forces. They usually consist of the local population, but in certain cases they can also be composed of foreign nationals. These are usually easily equipped forces, and in a smaller number of cases they have armored and artillery means. They usually carry out insurgent actions or use guerrilla forms of warfare and are not able to perform complex operations with joint tactical formations. With regular material support from abroad, they exhaust regular military and security forces through long-term warfare, constantly inflicting losses on them and undermining the will to fight.

Special forces are usually applied in parallel with irregular forces. They are engaged in the tasks of: gathering intelligence; artillery-missile, air and ship fire; training of local military and irregular forces, and in certain cases being directly involved in combat operations. They are very suitable for performing tasks in low-intensity conflicts, and are therefore most often engaged. Since they are essentially light forces and do not have heavy means of war equipment at their disposal, it is also difficult to identify them on the battlefield.

Regular military forces are very rarely engaged in hybrid warfare. They can be engaged in cases of providing limited military support to local security forces or irregular forces, but also in cases where other contents of hybrid warfare have not led to the achievement of the goal and it is necessary to engage the

armed forces in the conventional sense. Experience to date has shown that regular military forces were used in a conventional sense to a limited extent, i.e. to the extent necessary to achieve the set goals.

Taking into account all the above, the conflicts in Syria and Ukraine are taken as examples of the use of all these forces. It is also important that the examples of the current conflicts in Libya, Yemen and Afghanistan, as well as the crisis in Venezuela and Bolivia, can also look at the ways in which all these forces are used by various actors.

All these forces are represented in Syria. Within the irregular forces on the side of the security forces there are various local militias, Shiite militias from Iraq, Iran and Afghanistan supported by Iran, as well as Hezbollah. On the rebel side there are various rebel, extremist and terrorist forces backed by the US, Turkey and certain Sunni monarchies from the Persian Gulf, as well as Kurdish forces openly backed by the US and the EU. Also, for several years, the forces of the so-called Islamic states, which as a terrorist group had no official support, although in economic terms (crude oil trade) cooperated with Turkey and part of the Sunni monarchies in the Persian Gulf. The special forces were engaged by the United States, the Russian Federation, France and Turkey within the tasks already mentioned, and in cooperation with the forces and movements they supported. Regular military forces were engaged by the United States, the Russian Federation and Turkey, but to a limited extent and heavily in order to support the actions of local forces of operational and strategic importance.

In Ukraine, the mentioned forces were used in a somewhat different form in relation to Syria. On the Ukrainian side, numerous paramilitary forces were used, formed by extremist and right-wing organizations, which were financially supported by certain Ukrainian tycoons. Paramilitary forces were heavily used in combat operations because the morale of the regular armed forces was very low (Cvetković, Kovač, Joksimović: 2019: 329). On the other hand, the rebel forces in Donbas were formed by the local population, but also by a certain number of volunteers from the Russian Federation and other Orthodox countries. The Ukrainian armed forces as a whole have been used in a conventional sense, but rather unsuccessfully as a result of years of neglect, high levels of corruption and very low morale. Several Ukrainian and Western sources have stated that members of the Russian armed forces, and even entire units, are taking part in the fighting on the side of the rebels, but there is no evidence to confirm such allegations. Taking into account the course of combat operations, it can be assumed that certain members of the Russian armed forces were engaged in advisory or command roles, but also in gathering intelligence. The conflict in Ukraine can primarily be characterized as a civil war, because there was no open, or proven, participation of foreign armed forces on either side.

CONCLUSION

Under the cloak of good diplomatic relations, respect for international legal norms, advocacy for peace and good cooperation, there will always be parallel relations permeated with conflicts, tensions, and pressures with the aim of realizing one's own interests. Many sovereign subjects seek, to a greater or lesser extent (depending on the power they possess), to undermine the power of their rivals, even according to official policy and "friendly" countries, thus striving to pursue their interests, even if they violate moral norms.

The hybrid aspect of the term means a combination of previously defined forms of warfare, conventional, irregular, political or informational. The combination of different means in different dimensions of warfare is not new, but originates from the very beginnings of warfare.

From the point of view of the Russian Federation, the approach to warfare, which includes various forms of projection of power, is not new, nor is it a reflection of a new strategy. First of all, this approach shows that, in the Russian Federation, it is correctly understood how modern wars are fought, regardless of who participates in them. Modern wars, in the simplest sense, are fought with the combined application of various instruments of national power. The West, and primarily the United States, has long adhered to this approach, which in the times in which we live is popularly called "smart power". The concept of hybrid warfare is thoroughly elaborated in contemporary Western military thought, but the problems to which hybrid warfare needs to be answered are not new, but the answers were previously given in the context of considering unconventional and political warfare.

The hybrid war has become a catchphrase describing the use of the instruments of national power of the Russian Federation in the conflict in Ukraine, but it can be concluded that the Western academic and military professional public has been seduced by this term. In an attempt to correct the neglect of the Russian Federation over a long period of time, the West has tried to encompass all the activities of the Russian Federation in one term. Existing tensions over Ukraine, which have led to drastic mistrust between the Russian Federation and its neighbors, condition the perception of fear that the Russian Federation will intervene again in the immediate neighborhood. The crisis in Ukraine is not the first example in which the Russian Federation has demonstrated its determination and ability to apply the instruments of national power in the former USSR. It is necessary to know the capacities of the Russian Federation for the application of the instruments of national power, but it is unlikely that the Russian Federation would apply the approach like the one used in Ukraine once again. The application of the instruments of national power of the Russian Federation in Ukraine must be viewed in terms of intervention in a neighboring state which it considers to endanger Russia's vital national interests. This approach to action is certainly very well known to the United States, given that it has taken such an approach to a number of countries throughout its history.

Future conflicts will not be easily categorized as conventional or unconventional. The nature of the conflict is more complex, because it is difficult to recognize all potential threats, coming from state or non-state actors, but we must not assume that interstate conflicts have gone into oblivion. Interstate conflicts are unlikely, but it is necessary to understand that interstate conflicts do not have to be exclusively conventional or armed conflicts. Different capacities or contents that can be used for the purpose of warfare are available to an increasing number of actors, but also an increasing number of actors show the ability to coordinate the application of different capacities and abilities in order to achieve their own goals.

REFERENCES

1. Beriša Hatidža, Ivan Rančić: Hibridno ratovanje, Vojno delo br 3, Beograd, 2018,
2. Vojni leksikon, Vojnoizdavački zavod, Beograd, 1981.
3. ГЕРАСИМОВ, Валерий Васильевич, Ценност науки в предвидении, Военно-промышленный курьер, 2013, http://vpk-news.ru/sites/default/files/pdf/VPK_08_476.pdf.
4. GALEOTTI, Mark, The 'Gerasimov Doctrine' and Russian Non-Linear War, Blog: In Moscow's Shadows, 2014, https://inmoscowsshadows.wordpress.com/2014/07/06/the-gerasimov-doctrine-and-russian-non-linear-war/.
5. GAO 2010 Analysis of DoD Military Concept & Briefing Documents & Academic Writings, https://www.gao.gov/new.items/d101036r.pdf.

6. Hybrid Conflicts as an Emerging Security Challenge: Policy Considerations for International Security, PfPC Emerging Security Challenges Working Group Policy Paper No.3, јануар 2015, https://www.pfp-consortium.org/index.php/pfpc-products/policy-papers/item/95-hybrid-conflicts-as-emerging-security-challenge-policy-considerations-for-international-security.
7. Panarin I.N, Hybrid War: Theory and Practice, Club of Generals and Admirals of Serbia and Association *Milutin Milanković*, Belgrade 2019
8. Milenković M. and Mitrović M., Colored revolutions in the paradigm of hybrid war, Vojno delo 6/2019, Belgrade 2019, p. 248 - 263.
9. Mitrović M, Nikolić N: Hybrid war - contribution to defining the concept, content and model of action, Institute for Strategic Research and Media Center *Defense* (in press), Belgrade, 2020
10. MCDC Countering Hybrid Warfare Project, Understanding Hybrid Warfare, January 2017
11. Saković R, Stojković D: Development of the defense system of Republic of Serbia in the conditions of hybrid threats, Vojno delo 7/2019, p. 307-308.
12. Cvetković, N, Kovač, M, Joksimović, B : The concept of hybrid war, Vojno delo, 7/2019, Belgrade
13. HOFFMAN, Frank G., Conflict in the 21st Century: The Rise of Hybrid Wars, Potomac Institute for Policy Studies, 2007, http://www.potomacinstitute.org/images/stories/publications/potomac_hybridwar_0108.pdf.
14. HOFFMAN, Frank G., Hybrid Warfare and Challenges, Joint Force Quarterly, Issue 52, 1st Quarter 2009, http://ndupress.ndu.edu/portals/68/Documents/jfq/jfq-52.pdf.
15. KOFMAN, Michael et al, Lessons from Russia's Operations in Crimea and Eastern Ukraine, RAND Corporation, САД, 2017, https://www.rand.org/content/dam/rand/pubs/research_reports/RR1400/RR1498/RAND_RR1498.pdf.
16. Munich Security Report 2015, Munich Security Conference, 2015, https://securityconference.org/assets/02_Dokumente/01_Publikationen/MunichSecurityReport_2015.pdf.
17. OTTIS, Rain, Analysis of the 2007 Cyber Attacks Against Estonia from the Information Warfare Perspective, Cooperative Cyber Defence Centre of Excellence, Естонија, 2018, https://ccdcoe.org/uploads/2018/10/Ottis2008_AnalysisOf2007FromTheInformationWarfarePerspective.pdf.
18. THORNTON, Rod, The Changing Nature of Modern Warfare: Responding to Russian Information Warfare, The RUSI Journal, Vol: 160 No: 4, 2015, http://koziej.pl/wp-content/uploads/2015/09/Responding-to-Russian-informationwarfare.pdf.
19. TC 7-100, *Hybrid Threat*, Department of the US Army, 2010, https://www.benning.army.mil/mssp/security%20topics/Potential%20Adversaries/content/pdf/tc7_100.pdf.

LEADERSHIP IN EXTRAORDINARY SITUATIONS

Nenad Kovačević, MSc[1]
Military Academy, University of Defense, Belgrade, Serbia

Nenad Komazec, PhD
Military Academy, University of Defense, Belgrade, Serbia

Mitar Kovač, PhD
Military Academy, University of Defense, Belgrade, Serbia

Abstract: Uncertainty is one of the modern age features, and as every uncertainty contains a certain level of risk, accordingly, the modern age is often perceived as the "age of risk". Actually, the modern age is the "age of safety", because we are witnessing an increasing number of natural disasters and technical-technological accidents, which result in extraordinary situations, and consequently the modern age has become an age in which security is perceived as a central value. Leadership is a process in which an individual exerts influence on a group or community in order to achieve a common goal, which is aimed at overcoming the consequences of extraordinary situations and establishing a state of safety. Due to the specifics of extraordinary situations, it is necessary to develop concrete concepts of leadership, which would improve resilience, and at the same time reduce the vulnerability of a particular community, or society as a whole. The focus of the paper is on the consideration of leadership as a concept, with special reference to leadership in extraordinary situations.

Keywords: leader, leadership, extraordinary situations.

INTRODUCTION

Current events in different parts of the world confirm that no country, regardless of its level of technological, economic and social development, can eliminate numerous risks, respectively, dangers from accidents, car accidents, breakdowns, natural disasters and other forms of destructive action on humans, natural, cultural and material goods and the environment in general. The frequency of accidents and catastrophes has increased over the last two decades. One of the assessments shows that during

1 inz.84kula@gmail.com

this period, only natural disasters killed 3 million people, while almost a billion inhabitants of the planet suffered or felt their consequences. (Salzberg, 2011)

Today, it is obvious that natural disasters and technical-technological accidents as generators of extraordinary situations present a threat of unprecedented proportions to future life on the planet. In order to reduce the risk of extraordinary situations, it is necessary to accept the necessity of joint action, i.e. to accept the principles of action according to the integrated concept. Each of us, as individuals, has a role to play in this, and therefore the actions we take in our lives, homes and at work are of paramount importance. These actions make sense, they strengthen the hope and enduring commitment that is necessary for success. Everything mentioned tells us that in the future special attention should be paid to the decision-making process and leadership in extraordinary situations, so that future extraordinary situations and events could be detected, prevented/resolved in a timely manner and their consequences could be more easily eliminated.

Due to the specifics of extraordinary situations, it is necessary to develop a concrete concept that will provide answers for successful leadership in extraordinary situations. In developing such a concept, the requirement to develop leaders' knowledge that enables decision-making during an extraordinary situation should be taken into account. What is the concept that will enable the leader to make optimal decisions and to have an effect on a group in order to achieve a common goal? To determine the model of leadership in extraordinary situations, it is necessary to determine the initial elements of this model, which includes the definition of: (a) the concept of leadership and (b) traits, styles and behaviors with charisma and knowledge that make a leader "a leader in extraordinary situations". Consequently, the paper is divided into five sections that describe the above mentioned elements of the leadership model with a focus on decision-making and the specifics of leadership in extraordinary situations.

THE CONCEPT OF LEADERSHIP

According to Northouse, there are almost as many different definitions of leadership as there are people who have tried to define it. It is similar with the terms democracy, love and peace, because although each of us intuitively knows what is meant by those words, these can still have different meanings for different people. It was James MacGregor Burns who first attempted to explain and define leadership, in the context of organizational systems, back in 1978. The definition of leadership includes: (1) simplified paradigm/leadership is good management/; (2) semantic description/leadership is the process of leading/; (3) transactional definition/leadership is social exchange between a leader and a follower/; (4) situational concept/leadership is a phenomenon that precedes and facilitates decisions and actions/ and (5) aesthetic concept/leadership is art or craft/. (Northouse, 2008)

Here it is necessary to make a distinction between the terms leadership and management. Leadership is a process focused exclusively on achieving common goals, and management on coordinating activities in order to do business. Consequently, managers are people who do "things the right way", and leaders are people who do the "right things". A manager does not have to be a leader, nor a leader has to be a manager. Managers have formal powers on the basis of which they act, while leaders do not have to have that. They may have informal power that allows them to play the role of leader; in fact, leaders in the organization do not have to have any official function and/or position, but despite this deprivation they can persuade others to follow and listen to them.

Petar Jovanovic points out that leaders need to integrate hard, rational, analytic, planning, organizational and control skills with soft, human skills. A top leader is first and foremost someone who knows

how to motivate those who know. He needs to know how to motivate his people to acquire necessary knowledge and apply it to specific problems, as well as to learn from each other. Leaders are not above followers nor they are more important than them. Leaders and followers should analyze themselves in relation to each other. They are together in the process of leadership - two sides of the same coin. Leaders exist in all spheres of human activity. A leader is a person who has the ability to influence other people to follow him, to do what he suggests. He knows how to win people over in favor of his opinion, that is, to make them follow his suggestions and decisions. Effective leadership requires leaders to be good psychologists, good communicators and animators, to know how to work with people, to convince them and lead them forward, towards the set goals. They need to be both good visionaries and forecasters, so that they can well predict future goals and the necessary changes and actions for their realization. (Jovanović, 2006)

Leadership essentially requires the ability to influence the behavior of others. The task of every leader is to organize work, give clear instructions, constructively criticize, show interest in people. In order to fulfill these tasks and achieve the goal, the leader needs to know how to communicate with the group he leads, to know not only how to speak, but also how to listen to others, and not to become a bottleneck in communication. Leadership is a process on which the survival, growth and development of the organization and effective adaptation to changes in the environment depend, and the power and influence of leaders largely depends on the way of communicating with the group and motivating members. (Salzberg, 2011)

LEADER TRAITS

At the beginning of the 20th century the qualities that make some people great leaders were studied. Theories of the "great man" were developed, so named because they sought to establish the innate qualities and characteristics of great social, political and military leaders (such as Mohandas Gandhi, Abraham Lincoln and Napoleon Bonaparte). Many researches such as Stogdill, Bryman, Lord, de Vader, Alliger, Kirkpatrick, Locke, Mann, and others have been dealing with identifying specific traits that separate leaders from followers. They present the approach to leadership as a peculiar set of qualities created on the basis of: intelligence, vigilance, responsibility, initiative, perseverance, self-confidence, sociability, masculinity, dominance, energy, integrity, etc. (Northouse, 2008)

Some of the main characteristics of a leader include as follows. Intelligence - presents innate ability to properly understand things and phenomena in life and the world. Self-confidence - means the ability to be confident in their own competencies and skills. Determination - implies a desire to get the work done and includes traits such as: initiative, perseverance, dominance and energy. Integrity - a quality that implies honesty and trust. Society demands that leaders possess a greater degree of integrity and character. Sociability is the aspiration of a leader to achieve pleasant social relations. In addition to these main qualities of a leader, there are other qualities of a leader, that are related to effective leadership, such as: vigilance, perspicacity, responsibility, initiative, perseverance, masculinity, dominance, energy, adaptability, extroversion, cooperation, tolerance, influence, etc. (Northouse, 2008).

It is important to point out here that special elements of leadership are: (a) charisma and (b) feelings. The word charisma originated in ancient Greece and meant "one who is closer to god" or "favorite of the gods". Charisma is one of the personal characteristics, which gives a certain person superhuman and special powers, and it is possessed by only a small number of people, and because of having it, others treat such a person as a leader.

Possessing certain personality traits is related to whether someone is an effective leader or not. The "big five" personality factors are: neuroticism, extroversion, openness, agreeableness and conscientiousness (reliability). Extroversion is the factor that is most associated with leadership, and neuroticism is negatively correlated with leadership, given that the characteristic of neuroticism is a tendency towards: depression, anxiety, insecurity, vulnerability and violence. When striving to do exceptional things in an organization, leaders stick to these five modes of action that characterize exceptional leadership: (1) modeling the way; (2) inspiring shared vision; (3) challenging the process; (4) enabling others to act and (5) encouraging the heart. (Goleman, 2004)

TYPES OF LEADERS, LEADERSHIP AND LEADERSHIP BEHAVIOR

Every leader must find a way to influence others in order to achieve common goals. Communication is often one-way, but without supportive behavior, without establishing true, honest interpersonal relationships, a leader's style will not achieve effective work performance. Researchers who studied the approach to leadership style found that leadership consisted of two basic types of behavior: (a) task-oriented behavior and (b) relationship-oriented behavior. The main purpose of the approach to leadership style is to explain how leaders combine these two types of behaviors to influence subordinates and their efforts to achieve a goal. (Northouse, 2008)

According to the Blake and Mounton managerial (leadership) network, five basic leadership styles can be identified: authoritarian, humane, impoverished, compromise, and team management. In addition to the five main styles given in the leadership network, Blake and his colleagues identified two other styles: (a) paternalism and (b) opportunism. Paternalism refers to a leader who uses both authoritarian and humane styles but does not integrate them. He is a "merciful dictator" who acts mercifully, but does so in order to achieve his goal. Opportunism refers to a leader who uses any of the five basic style combinations for personal advancement. (Northouse, 2008)

However, people almost always have a backup style that comes to the fore when the usual way of solving a problem does not prove successful. In some situations, leaders need to be more task-oriented, while in others they need to be more relation-oriented. Based on a situational approach that is oriented to leadership in different situations and which states that in different situations there is a need for different types of leaders, effective leadership means adapting your style to the requirements set in different situations. Leadership styles, based on the situational leadership model, consist of patterns of behavior of the person seeking to influence others, including commanding behavior (division of tasks) and supportive behavior (establishing interpersonal relations). (Salzberg, 2011)

Considering that employees move up and down the development ladder (the level of development is the degree to which subordinates possess the competencies and commitment necessary to accomplish a particular task or activity), it is crucial for leaders to be flexible in their leadership behavior. Leadership styles are classified into four different categories of command behavior and providing support: (1) ordering - in which commands are strongly expressed and support is weakly expressed; (2) coaching - in which both commands and support are strongly expressed; (3) supporting - in which the leader predominantly provides support, while the orders are weakly expressed; and (4) delegating - in which support and weak issuance of orders are weakly expressed. (Goleman, 2004)

Contingency theory describes leadership styles motivated by tasks and interpersonal relations. In order to understand the actions of leaders, it is crucial to understand the situations in which they lead the followers. Effective leadership depends on the degree to which the leadership style conforms to the

appropriate parameters in the environment. Situations that will be assessed as the most favorable are those in which there are good relations between leaders and members, defined tasks and strong power of the leader position. It is important to say that contingency theory emphasizes that leaders are not effective in all situations. (Northouse, 2008)

Petar Jovanovic states that the following types of leaders should be distinguished:

- ✓ charismatic leader - a person whose influence and ability to lead derive from his personality (a large number of military leaders, politicians and businessmen belong to this group);
- ✓ traditional leader - a person who acquires a leadership position by birth or inheritance (kings, religious leaders, tribal leaders);
- ✓ situational leader - a person who is able to accept the role of a leader in a certain period, in different situations (if he is in the right place at the right time);
- ✓ formal or bureaucratic leader - a person whose leadership position derives from the position to which he is appointed (manager and other executives) and
- ✓ functional leader - a person who does not provide his leadership position by the position in the organization, but by his own work and performing certain tasks. (Jovanović, 2006)

It can be stated that there is no best leadership style that applies to all situations. In one situation it is better to apply autocratic, in another participatory style. However, today, a contingency approach to leadership is increasingly used where the leadership style is adapted to a specific situation. This approach requires a good analysis and knowledge of the specific situation and all specific factors relevant to the selection of the best leadership style. (Jovanović, 2006).

Using a leadership style that best suits the motivational needs of subordinates is a challenge for a leader. This is achieved by choosing behaviors that will complement or replace what is missing in the environment. Leaders seek to improve the degree of achievement of goals by providing information or giving rewards within a given environment; leaders provide subordinates with the elements they feel they need to achieve their goals. Whether a certain behavior of a leader motivates subordinates or not, depends on the characteristics of subordinates and the characteristics of tasks. The path-goal theory suggests the following types of leader behavior that differently affect the motivation of subordinates: (1) command leadership - provides guidance and psychological structure; (2) support leadership - provides care; (3) participatory - enables inclusion; and (4) achievement-oriented leadership - provides a challenge. (Northouse, 2008)

According to Northouse, charismatic leaders show certain personality traits, but also certain types of behavior. First, they are a powerful role model for the attitudes and values they want their followers to adopt. For example, Gandhi was against violence and was a true example of civil disobedience. Second, charismatic leaders are perceived by the followers as competent. Third, they articulate ideological goals that encompass moral values. The famous speech, "I have a dream" by Martin Luther King, is an example of this type of charismatic behavior. Fourth, charismatic leaders place high expectations on their followers and then show and have confidence in their ability to meet those expectations. (Northouse, 2008)

SPECIFIC OF DECISION-MAKING IN EXTRAORDINARY SITUATIONS

Extraordinary situations are not a set of events in which we simply give in, but a set of events that require responsible decision-making from responsible institutions and individuals. In extraordinary situations, an optimal decision should be made urgently, aimed at preventing or at least reducing losses: human lives and/or material resources, protection of vital infrastructure facilities on which the functioning of the state and society depends, that is, certain organizations and care of victims. In the conditions of unclear circumstances, in which there is not enough information, in which too much, sometimes contradictory information begins to arrive in a short period of time, and thus it is quite difficult to make an optimal decision. (Gor, 2010)

Therefore, in addition to insufficient insight into what is currently happening, the decision maker usually does not even have enough time to analyze the situation and alternatives, but on the other hand, he has a huge responsibility, because it is on his correct and timely decision on what should be done first and who is in charge of doing so, that the further course of events and the dimensions of its consequences depend. All this, along with the often present severe moral doubts, represents a serious professional challenge for decision makers, but also an extremely stressful situation in the psychological and ethical sense.

In addition to the above mentioned, according to Jovanovic, decision-making in extraordinary situations, especially in those whose size exceeds the limits of an individual organization and/or local community, region and country, involves a larger number of participants, at different levels and with different powers, internal hierarchical relations and structure, organizational culture and more or less clearly and precisely defined inter-organizational relations, where they all need to be coordinated and integrated into a harmonious system, which provides an adequate crisis response. In this regard, leaders are in a difficult position, because each expects of them a signpost for action and reduction of uncertainty by their choice, to overcome their own anxiety and direct the available capacities in a way that they can only hope is right and appropriate to the situation and circumstances. (Jovanović, 2006)

Responding to extraordinary situations is a challenge by the nature of things. Decision makers need to solve complex dilemmas without the information they need in a changing organizational environment and bureaucratic policy and in conditions of serious stress. Namely, the way of making decisions in the conditions of extraordinary situations does not fit into the usual concept of bureaucratic decision-making. Urgent decision-making is not possible if formal rules are strictly followed.

An extraordinary situation creates tensions and pressure on decision makers who are not sure, but need to decide quickly, which can cause a feeling of helplessness and consternation. Decision makers can compensate for their sense of insecurity with a rigid and sometimes obsessive preoccupation with only one possible solution. It is usually thought of by analogy, and the reference point is the last similar situation. Since extraordinary situations are generally quite different, measures taken on the basis of such reasoning can be counterproductive.

Particularly significant is the earlier joint experience of individuals and institutions in resolving extraordinary situations, a reasonable degree of mutual trust, and a precise delimitation of competencies, which reduces competition, rivalry and struggle between the people and/or organizations involved, and clearly establishes powers - who leads and, accordingly, makes the final decisions, and who advises and therefore has the obligation to “tell the truth to the authorities” even when it is unpleasant. However, even in the best of circumstances the influence of hierarchy is always present in groups with a

clear authority structure, so some group members will analyze the leader's post-event choices and say what they think he wants to hear, or at least avoid saying what they think he wants to hear. (Jovanović, 2006)

SPECIFICS OF LEADERSHIP IN EXTRAORDINARY SITUATIONS

Kešetović and Toth notice the need to urgently make the right decisions aimed at stopping or at least reducing the consequences for human lives, material resources or critical infrastructure. Such decision-making poses a serious professional challenge before the decision-maker and an extremely stressful situation in the psychological and ethical sense. (Kešetović & Toth, 2012)

According to Goleman, nothing can test a leader as an extraordinary situation, which has the potential to very quickly reveal the latent strengths of a leader or the core of weaknesses. The leader should be ready for an extraordinary situation, to establish control over the situation, provide a minimum of damage and effectively prevent, mitigate and reduce the duration of an extremely difficult situation. Every skill, trait and perspective are very important tools for leadership during an extraordinary situation, but these stand out as follows: communication, clarity of vision and goal, care, personal example, character, ability, courage, determination. There are many other qualities and skills that develop and occupy a significant place during extraordinary situations, and these are the following: the ability to accept change, promote reward and recognition, maintain discipline in consistency and honesty, being enthusiastic and optimistic, cultivate a sense of humor, supporting professional development process for employees and aligning the strength of the leader with the requirements of extraordinary situations (such as knowledge of another foreign language or computer skills). (Goleman, 2004)

Northouse believes that for the study of leadership in extraordinary situations, it is very important to observe the behavior of the leader, his characteristics and how these are manifested in extraordinary situations, and how the course of the extraordinary situation influences the metamorphoses from an informal into a formal leader. Future extraordinary situations impose on us the task of classifying which are the desirable traits of leaders in extraordinary situations in order to deal with them successfully. In extraordinary situations, the leader's first task is to determine the true nature of the situation. It is necessary to find the answers to the questions: What tasks were subordinates given to perform? Do they have the desire to complete the job they got/accepted? Are they trained to perform the task? How complex are these tasks? Consequently, leaders need to be able to show a high degree of flexibility. (Northouse, 2008)

It is also necessary to choose behaviors that will supplement or replace what is missing in the work environment. Effective leadership is achieved by realizing goals by providing information or giving rewards within a given environment. If subordinates are insufficiently competent, it is recommended to the leader to apply a commanding style. If the employees are competent but without enough self-confidence, leadership with the application of a support style is suggested. Leaders need to consider the needs of their subordinates and then adjust their own style in an adequate way. Too authoritarian style in an extraordinary situation can lead to a conflict between leaders and followers.

When it comes to the behavior of leaders, in one of the elements of the leadership model in extraordinary situations, it can be divided according to the phases of the course of extraordinary situations, respectively:

- ✓ *Phase I*: Preparation for the extraordinary situation (communication, vision and goals, care and connection as a preparation for the extraordinary situation);
- ✓ *Phase II*: Guidance during extraordinary situation (communication during extraordinary situation, clarity of vision and goal and care in extraordinary situation); and
- ✓ *Phase III*: Post-extraordinary situation guidance (inspect and correct, renew and reassure, maintain, restore and rehabilitate).

Leaders mostly express their skills in turbulent, that is, changing conditions. Frequent change of conditions increases risks in decision-making, so it brings to the surface many important characteristics of a good leader: quick understanding of the situation, good risk assessment and choice of ways and means, as well as quick decision. The leader should therefore have well-developed skills of managing time and stress. One of successful ways of effective leadership in extraordinary situations is the timely creation of a "Reminder in an extraordinary situation". Such a reminder is formed for every possible extraordinary situation, and if the leader sticks to the plan from the reminder, there is a great chance that the extraordinary situation will be successfully resolved.

CONCLUSION

The modern age imposes the idea that a part of the challenges we face in resolving extraordinary situations stems from the way we think about it, both as individuals and as a community. Accordingly, it is clear that the time of average and mediocrity has passed, and that today we are striving for the better, or, more precisely, for the ideal. An extraordinary situation requires a change in approach to leadership. Everyone should think like a leader and act in the best interest of the organization. When a leader seeks advice it is an indication of strength, not weakness. In organizations, employees are focused on the outcome, not on someone who is leading, who is the leader at the moment. (Salzberg, 2011)

In extraordinary situations, roles and responsibilities are often unclear. It is essential that leaders take responsibility when needed. It is very important to make key decisions, determination has always been the key to successful leadership in extraordinary situations. Leaders need to be determined, and willing to take risks, so as to be successful. Also, in extraordinary situations, the leader's calm is very important. Leaders need to show confidence and resilience to cope with the initial trauma and exhaustion, as well as to follow the course of events normally. Everyone wants leaders who can be brave and willing to take responsibility for their expertise and position. It is indisputable that leadership in extraordinary situations depends on the strength of the person, on the practiced skills and competencies. Each characteristic of a leader directly or indirectly influences leadership behavior in extraordinary situations. Leadership should compensate for everything that society has not systematically solved.

Leadership development is an area that is lacking in higher education institutions. This is especially characteristic of organizations that are more often exposed to extraordinary situations. Leaders need to take a more active role in higher education as leadership development takes time, commitment and patience. Moreover, leaders do not develop overnight or in a comfort zone. This process of creating a competent and capable leader usually takes several years. Leadership is a skill that is learned through life experiences and by observing other leaders. Effective leaders need to constantly adapt to permanent change and never stop learning. (Nikolic & Zivkovic, 2010)

Based on all of the above, it can be concluded that in extraordinary situations, leadership is more expressed, that is, it comes to the fore. Followers gather around the leader, follow him, want to cooperate with him. Francis Fukuyama calls this the "rally around the flag" syndrome. These are situations

where a leader either uses his qualities, skills, competencies and style, or simply proves that he is only a formal leader without effective leadership. When we say: "Leaders are shaped by their own experiences", it means that leaders are not born as such. Therefore, these experiences should be transferred, intensively, especially experiences from extraordinary situations, in order to greatly help in resolving, identifying future extraordinary situations, but also to build a general model of leadership in such situations.

REFERENCES

1. Goleman, D. (2004). What makes a leader, Harvard Business Review
2. Gor, A. (2010). Naš izbor-putevi rešavanja klimatske krize, Beograd: Pravni fakultet
3. Jovanović, P. (2006). Upravljanje promenama. Beograd: Fakultet organizacionih nauka
4. Kešetović, Ž. & Toth, I. (2012). Problemi kriznog menadžmenta. Velika Gorica: Veleučilište Velika Gorica
5. Nikolić, V. & Živković, N. (2010). Bezbednost radne i životne sredine. Niš: Fakultet zaštite na radu
6. Northouse, P. (2008). Liderstvo-teorija i praksa. Beograd: Fakultet organizacionih nauka
7. Salzberg, B. (2011). New Leaders. Leadership Excellence. 3 (2)
8. Komazec N., Mladenović M. & Dabižljević S.: Etiology of the notion of event in terms of decision-making and determination of organizational system risk conditions, DMAME, doi.org/10.31181/dmame1801165k, pg 165-184
9. Karović, S., Komazec, N, (2015). Modeli kriznog ponašanja u vanrednim situacijama, 1. Naučno stručna međunarodna konferencija, Bezbednost i krizni menadžment-teorija i praksa, Beograd, pp. 244-251
10. Komazec, N., Bozanic, D., Pamucar, D, (2014), Aspects of Decision-making in extraordinary Situations, ICT Forum Nis, pp. 55-59

MODEL OF PUBLIC-PRIVATE PARTNERSHIP IN THE CRITICAL INFRASTRUCTURE PROTECTION OF MONTENEGRO

Marjan Marjanović, PhD[1]
Institute for Risk Assessment and Critical Infrastructure, Podgorica, Montenegro
Milan Milošević, PhD[2]
Faculty of Business Studies and Law, Belgrade, Serbia

Abstract: Aware of the fact that an effective system of critical infrastructure protection creates preconditions for the normal and undisturbed functioning of the wider social system, Montenegro has made significant efforts in recent years, both in terms of normative definition of that sector and in finding optimal mechanisms for protection of national critical infrastructure. These efforts should not be understood solely as responding to current trends in the field, but also as a necessity, that is, an obligation to align national legislation and practice with the acquis communautaire in the process of accession of this country to the EU. All this also represents a discontinuity with an earlier state in which national critical infrastructure was viewed solely from the perspective of the armed forces and the needs of the state's defense system. Therefore, the objective of the work is presentation of public-private partnership in the critical infrastructure protection of Montenegro.

Keywords: Montenegro, critical infrastructure, critical information infrastructure, public-private partnership, private security sector, public sector

INTRODUCTION

The functioning of everyday life in modern society is based, among other things, on highly developed infrastructure, especially in the areas of management and control of energy supply, provision of drinking water sources, transport, maintenance of information technology systems, telecommunications

1 marjan.marjanovic@iprki.me
2 milan.milosevic@fpsp.edu.rs

and others. The processes of globalization and technological revolution have made infrastructure systems very complex and interdependent, but at the same time extremely important for modern society. In this sense, the infrastructure that provides the basic functions of the state is as important as the infrastructure systems that enable the provision of goods and services to the population. One of the increasingly common modern models in the field of critical infrastructure protection implies cooperation and partnership of the state with private actors.

THEORETICAL FRAMEWORK

The term "infrastructure" itself can be defined as "the basic framework of a system or organization" while a multitude of definitions can be used for the phrase "critical infrastructure", because the term "critical" is variable and difficult to define. Despite the complexity of the definition, the notion of critical infrastructure is usually defined in one of two ways. The first way consists of listing all vital infrastructures (The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets, United States Government, Washington, 2003). From the scientific point of view, another approach is especially important, as it defines criticality as a result of specific characteristics. In this case, certain (relational) properties of the system are determined, because the given system is critical in relation to other systems or entities. Namely, the system is critical for the second system when the first is necessary in order for the second to continue the work. Thus, the German National Critical Infrastructure Protection Strategy defines criticality as a relative measure of the consequences of a disruption or failure of a function related to the delivery of goods and services to society (Bundesministerium des Innern Nationale Strategie zum Schutz Kritischer Infrastrukturen, Bundesministerium des Innern. Berlin, 2009, p.7). In this sense, critical infrastructure is the infrastructure which is needed to continue the operation of other major technical and / or social systems or which is needed to provide goods or services that are considered vital to the functioning of modern society (Lukitsch, Mueller, Stahlhut, Engels, 2018: 12). From the above, we can see that the essential problem in defining the term is the term criticality. In this regard, it is important to determine that "a certain system is critical if it provides routine functions, if there are no practical possibilities of rapid replacement, sudden dysfunction that causes non-trivial damage, and if it is built into integrated systems" (Egan, 2007: 5).

Most infrastructure researchers use the terms "criticality" and "critical" in a descriptive sense, similar to its use in political discourse. In doing so, some authors take as a starting point services to the population (water supply, energy, etc.) and to economy that are considered necessary, which is why the technical systems that provide these services are marked as critical infrastructure (Moteff, Copeland, Fischer, 2003: 5-7). In a scientific approach there is a historical or developmental perspective, starting from a set of vital goods and services and following how in certain societies or time periods certain services were considered increasingly important, which is why criticism is the result of collective preferences (Hogselius, 2013: 5-7).

Trying to define the cooperation of the public and private sector in the realization of public services in a unique and generally acceptable way is not an easy task, for which there are numerous reasons. Initially, the concept of public-private partnership primarily included urban construction projects that facilitated joint development and reconstruction of problematic urban areas. Today, it has become a very heterogeneous concept, which critics say has evolved in the direction of all possible new or known forms of cooperation between the public administration and the private sector (Swapnil, Sachin, 2017: 3792-3793). The concept of connecting the public and private sectors in theory and practice is denoted by the unique name of public-private partnership, or its acronym PPP. The Inter-

national Monetary Fund defines public-private partnership as "a contractual relationship in which the private sector takes over the provision of infrastructure and services traditionally provided by public administration" (Public-Private Partnerships, Prepared by the Fiscal Affairs Department International Monetary Fund, 2014, p. 4, https://www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf). World Bank offers a much broader definition of the term, according to which "public-private partnership projects relate to investment and service delivery traditionally provided by the public sector, with the private sector assuming much of the risk and the public sector retaining an important role in providing services or taking significant risks. project" (A World Bank Resource for PPP in Infrastructures, https://ppp.worldbank.org/public-private-partnership/). The European Commission (EC) has defined a public-private partnership as "investment projects transferred to the private sector that it has traditionally carried out or funded by the public sector" (European PPP Expertise Center (EPEC), PPP Guide, p. 1, http://www.eib.org/epec/g2g/intro2-ppp.htm). The European Commission's Green Paper document explains the most important elements of public-private partnership. The European Commission, in its Guidelines for Successful Public-Private Partnerships, European Commission, March 2003, http://ec.europa.eu/regional_policy/sources/docgener/guides/ppp_en.pdf) defined the term as "a partnership between the public and private sectors for the purpose of implementing a project or service traditionally provided by the public sector", which is characterized by the division of investments, risks, responsibilities and profits among partners. In addition, a public-private partnership is characterized by a relationship that involves sharing power, work, support and (or) information with others in order to achieve common goals and (or) mutual benefits (Kernaghan, 1993: 59-63). In this way, the relations between organizations are especially emphasized, as well as cooperation and common goals. Despite the fact that for many this phenomenon is a novelty, it already has a long tradition in many countries (Sarsengali, 2016: 1113-1114).

ORGANIZATIONAL AND INSTITUTIONAL ASPECT OF CRITICAL INFRASTRUCTURE PROTECTION IN THE EUROPEAN UNION

The EU Council Directive (2008/114 / EC) emphasizes three specific requirements that European Critical Infrastructure owners and operators must meet. The first requirement stipulates that each defined European Critical Infrastructure must have an Operator Protection Plan in place that identifies the critical infrastructure resources of the European Critical Infrastructure, as well as security measures to protect the infrastructure concerned. The subject protection plan should be established within one year after the infrastructure has been determined as such, with the obligation of regular updating. In connection with the above, the second obligation is to make a Hazard Assessment. The third obligation arising from the Directive is that the owners and operators of a particular European Critical Infrastructure must appoint liaison officers, responsible for communication on safety issues between the owner (operator) and the competent authority of the Member State. In addition, each Member State must establish a "communication mechanism" between the relevant authority of the Member State and the liaison officer for the purpose of exchanging information on identified risks and threats to European Critical Infrastructure (Lindstrom, 209: 47). From the aspect of management and practical implementation at the EU level, the protection of European Critical Infrastructure is a process that is divided into phases of identification, designation and protection of European Critical Infrastructure.

Table no. 1: *Phases of management and regulation of European critical infrastructure protection*

Identification	Application of sectoral criteria Application of cross-criteria Application of the definition of critical infrastructure Application of cross-border elements Identification of potential critical infrastructure and transition to the next phase
European critical infra-structure	Informing Member States that may be affected by critical infrastructure Involvement in bilateral discussions with these Member States Agreement with Member States that may be affected Determining critical infrastructure and moving on to the next phase
Determination of Europe-an critical infrastructure	Checking the existence and development of an operator safety plan Regular review of the operator's security plan Checking the existence and development of security officers Reporting to the European Commission every two years on risks and threats to critical infrastructure

(The Review of the European Programme for Critical Infrastructure Protection (EPCIP). Commission Staff Working Document, SWD(2012) 190 final. Commission of the European Communities, European Commission, Brussels, 2012, r. 8, http://ccpic.mai.gov.ro/docs/epcip_swd_2012_190_final.pdf)

PUBLIC-PRIVATE PARTNERSHIP MODEL IN CRITICAL INFRASTRUCTURE PROTECTION OF MONTENEGRO

The Government of Montenegro has decided to use the subject model more intensively through the privatization process. In the explanation of the mentioned decision of the Montenegrin government, it was pointed out that when there are areas (resources) in which the state does not act efficiently enough and where significant budget funds are not allocated for revitalization of a certain sector, it is more convenient to "delegate" a certain area to companies that are willing to invest the necesary financial resources to achieve a certain goal. On the other hand, legal provisions protect national interests and prevent the permanent allocation of such resources and infrastructure to private companies. In practice, the number of concluded public-private partnership agreements has been on the rise in the last few years. In addition to the above, there are numerous stakeholders in Montenegro who, with their capacities, can play a significant role in providing comprehensive and structural responses to current security threats. Namely, economic reasons and the dynamics of social changes have caused the reduction of the state monopoly in the field of security. Although the private security industry in Montenegro started operating in 1992, which is relatively early compared to the surrounding countries, the full development of the sector began in the late 1990s (Keković, 2013: 182-183).

National Security Strategy of Montenegro

The strategy is the basis for other strategic documents and plans in the field of security. When analyzing the strategic interests of Montenegro, the provisions related to "protection of natural and all other resources and potentials of Montenegro" are especially important. Although the mentioned provision

is quite broad in its scope and content, so that it can include critical infrastructure, viewed as a set of national resources that are important not only for the functioning of the state and society, but also represent national resources. As an important national interest, the Strategy recognizes the protection of critical infrastructure primarily from the angle of "encouraging cooperation between state institutions, civil and private sector, in order to strengthen civilian readiness to respond to security challenges, risks and threats." In this way, the subject strategy puts in the foreground the partnership of different structures, all with the aim of strengthening the capacity in the protection of critical infrastructure. In addition to the above, the National Security Strategy places special emphasis on the protection of the state's information infrastructure and security system (National Security Strategy of Montenegro, Official Gazette of Montenegro, No. 085/18). The National Security Strategy has an indirect approach to the issue of public-private partnership. This is manifested in the parts of the text that refer to the unity of action in response to modern challenges, risks and threats, which, among other things, implies the cooperation of state and civil bodies, institutions and organizations. In addition to the above, the Strategy defines the concept of civilian readiness, which should enable cooperation between state institutions and the private sector, given that modern security challenges require a response from the entire society. The special unit of the Strategy, which refers to the national security system within the special elements of the system, includes, among others, private security agencies and security services. This is also the usual way in which the private security sector is most often mentioned in that document as an element of the structure of national security (National Security Strategy of Montenegro, Official Gazette of Montenegro, No. 085/18).

Law on Protection of Persons and Property

The Law on Protection of Persons and Property is crucial in the implementation of the concept of public-private partnership in the protection of critical infrastructure, given that it regulates issues of importance for the performance of its protection. On the other hand, in order to apply this concept, the law in question should undergo the largest number of changes within the national legislation. Namely, a special article of the existing law refers to the obligatory protection of facilities, and Montenegro, in the meantime, has started the process of adopting the Law on Critical Infrastructure (Law on Protection of Persons and Property, Official Gazette of Montenegro, No. 43/2018, Art. 13). This creates a mismatch between these laws, which may negatively affect the functioning of the private sector in the protection of critical infrastructure. Simmilar applies to the larger majority of articles of the Law on Protection of Persons and Property, which regulate the activity of protection, the meaning of basic terms and the like, and which should contain the concept of critical infrastructure harmonized with the new special law. In addition, the Law on the Protection of Persons and Property requires the use of weapons in the protection of critical infrastructure, given that the law defines their use in physical protection and protection of goods in transport (Law on Protection of Persons and Property, Official Gazette of Montenegro, No. 43/2018, Art. 16). The current Law on Protection of Persons and Property contains provisions that are particularly important from the point of view of implementation of the concept because it opens the possibility of establishing an operational center for the need of performing protection. This is especially important for the adequate exchange of real-time information between persons engaged in the provision of protection services of critical infrastructure and the competent state authorities. This opens the possibility of permanent coordination not only on the issue of critical infrastructure protection but also on a much wider scope, which can positively affect the creation of trust between the public and private sectors. Given the fact that the critical infrastructure is very diverse in terms of security, the establishment and operation of the operational center should not be generalized by law, but rather offer opportunities to show creativity in each case in its operation, all

in order to increase critical infrastructure security (Law on Protection of Persons and Property, Official Gazette of Montenegro, No. 43/2018, Article 17). Although the above provisions of the Law have their general justification, for the application of the concept of public-private partnership it is especially important to establish conditions for protection of critical infrastructure by the private sector. This also stems from the general importance of critical infrastructure, which is why security arrangements cannot be left to private sector actors who do not have adequate capacities and resources. In order to achieve this, one possibility is that a special provision of the law contains specific criteria that must be met by the private security sector in order to participate in the protection of critical infrastructure. The current provisions of the Law on Protection of Persons and Property provide general conditions (Law on Protection of Persons and Property, Official Gazette of Montenegro, No. 43/2018, Articles 18, 20), however, those related to more detailed elaboration are missing on opportunities (capabilities) of the private sector to participate in the protection of critical infrastructure.

Critical Infrastructure Act

The Draft Law on Critical Infrastructure of Montenegro has been drafted in the spirit of European regulations in this area. The analysis of the Draft Law shows that the legislator has opted for a sectoral approach in the identification of critical infrastructure. In this regard, eight sectors of critical infrastructure have been defined, with the possibility of further expansion open. One of the basic objections to the proposed legal solutions is the inclusion of environmental protection as a sector of critical infrastructure.

Table no. 2: *Proposal of the sectors and subsectors of critical infrastructure of Montenegro*

SECTOR	SUBSECTOR
ENERGY	- production and distribution of electricity - oil refining, storage and distribution - gas storage and distribution
TRAFFIC	- road traffic - railway traffic - air traffic - maritime traffic
WATER SUPPLY	- drinking water supply - water quality control - water supply control
HEALTH CARE	- medical emergency services - medical care - production and distribution of drugs
FINANCE	**funding**
INFORMATION AND COMMUNICATION TECHNOLOGIES	- ICT software - ICT communications and hardware
FOOD	- food production and distribution - food safety - commodity food stocks
FUNCTIONING OF STATE AUTHORITIES	- public administration system and law enforcement - emergency services - military infrastructure

By introducing a coordinator for the protection of critical infrastructure, security plan, etc., Montenegro has harmonized its national legislation in this area with European standards, and in particular with Directive 2008/114 / EC. However, the main shortcoming that can be objected to the legislator is the lack a specific ministry which would have jurisdiction regarding the issue of critical infrastructure.

Law on Public-Private Partnership

At the moment, the Draft Law on Public-Private Partnership is in the procedure of consideration and adoption in the Parliament of Montenegro. The proposed solutions of the new legal act, among other things, systematically regulate issues related to contractual investment between a private and public partner. In this way, a synergy of the authority of public institutions and the expertise and knowledge of the private sector is achieved, with the aim of building and reconstructing public infrastructure, as well as performing public works and providing public services. In this legal text, the main goal of the public-private partnership is to increase the quality of services for the end user, because without this segment, the public-private partnership does not have the elements of a quality contract and project. The new law elaborates in detail the procedure for concluding a public-private partnership contract - from the idea to the realization of the project that ends with the contract. In this regard, according to the provisions of the Draft Law, public-private partnership contracts are concluded for a period of 3 to 30 years. In addition, it is important to note that the mentioned draft law brings novelties in the institutional framework in the entire Montenegrin investment policy. This primarily refers to the formation of a new body - the Investment Agency of Montenegro, which is positioned in the system in accordance with the Law on Public Administration and which as such represents a further step in public administration reform and unification of bodies dealing with different policy segments in this area. Namely, in addition to the prescribed scope of work related to public-private partnerships, the Agency will also unite the existing bodies in the field of investment policy. The significance of the new law is also in the fact that it precisely defines the issues related to the preparation of tender documentation and justification analysis, and that it elaborates the entire procedure through which the proposal of one project passes to the final adoption. It is also important that the legislator especially emphasized the importance of the public interest, since the analysis of justification that accompanies each public-private partnership project is its important segment.

Organizational aspect

From the aspect of critical infrastructure protection, the organization consists of various entities involved in this process. This largely determines the complexity and imposes the need for constant coordination of activities. A special challenge is to choose the best protection model that suits national needs. In addition, when establishing such a model, the possibility that it may prove in practice to be inappropriate or inadequate should not be ruled out. From the aspect of the topic of this paper, the Coordination Body for Critical Infrastructure Protection is of special importance in Montenegro, but as a permanent body, as well as the private security sector engaged in critical infrastructure protection.

Critical Infrastructure Protection Coordination Body

With the draft Law on Critical Infrastructure, Montenegro has envisaged a Coordination Body for Critical Infrastructure Protection. Although the scope and content of the Coordination Body's work is diverse, we can conditionally classify them into several basic functions: planning, coordination, control, reporting and information. We can conclude that the Coordination Body must have sufficient capacity to achieve the set goals. Its organizational structure must be established on the basis of division of labor, grouping of tasks, delegation of authority and responsibility and appropriate coordination and control mechanisms.

Private security sector in critical infrastructure protection

The private security sector in the protection of critical infrastructure in Montenegro should be subordinated to the Coordination Body and the Ministry of Interior. In terms of legal authority, the process of obtaining a certificate for performing critical infrastructure security activities, as well as losing the right to engage in those activities, is the responsibility of the Ministry of the Interior. When it comes to the competencies of the Coordinating Body, its role in this domain is primarily to exchange information that is important for the provision of protection of critical infrastructure with the private sector. However, it is necessary to regulate the obligations of the private sector more precisely in this area, especially when it comes to the development of plans necessary for the protection of critical infrastructure. In other words, it is necessary to regulate in more detail the organizational aspects of the private security sector in critical infrastructure protection, define the minimum capacities and resources, as well as the relations of private sector actors with other entities in the field. In that way, conditions will be created for more efficient functioning of the private security sector, but also for more adequate control in the field of critical infrastructure protection. The private security sector in Montenegro is obliged to harmonize its work and action plans with the National Security Strategy of Montenegro. This primarily refers to the defined challenges, risks and threats from the aspect of critical infrastructure in each specific case of security and protection. In addition, the private security sector must have prepared work plans in case of regularity, state of emergency and state of war, as set out in the National Security Strategy. In this sense, there must be a set of predefined measures to be taken in each of these cases. This largely determines the very organization of critical infrastructure protection. The public-private partnership agreement is of special importance for the organization and activity of the private security sector. The contract in question determines, among other things, the obligations of the private sector engaged in the protection of critical infrastructure. In this regard, it is advisable that this contract also regulates the obligations in case of application of technical and fire protection measures. The contractual obligations defined in this way are also important from the aspect of exercising control over the private security sector and creating a responsible relationship between the entities of that sector in terms of the assumed obligations.

CONCLUSION

There is no doubt that an efficient system of critical infrastructure protection creates preconditions for the normal and uninterrupted functioning of the wider social system. In accordance with this fact, great efforts are being made in Montenegro in order to identify and implement adequate mechanisms for critical infrastructure protection. Aggravating factors in this regard are primarily related to a wide

range of vital sectors that include critical infrastructure, such as traffic, transport, energy production and distribution, information and communication systems, health services, water and food supply systems and the like.

The European Union attaches great importance to norms, standards and policies in the field of critical infrastructure protection and today represents one of the key actors in this field at the international level. Issues of functioning and coordination between the member states of the European Union in that domain have been regulated by the EU Directive on the Protection of Critical Infrastructures since 2008. The mentioned normative act can be viewed as an appropriate model that provides opportunities for taking over certain solutions in the protection and functioning of critical infrastructure in Montenegro. Despite the need for greater opportunities for private sector participation in critical infrastructure protection, the limiting factor is that Montenegro does not have a legal framework to support the implementation of this concept. In that sense, the adoption of the Law on Critical Infrastructure should be accompanied by amendments to the current law relating to private security. One of the reasons is the inconsistency of the conceptual apparatus between the two mentioned legal acts, which can have negative consequences in their application. That is why it is important to adopt a new law on private security, which would include the possibility of involving the private security sector in the protection of critical infrastructure.

REFERENCES

1. (A World bank Resource for PPP in Infrastructures, https://ppp.worldbank.org/public-private-partnership/)
2. Högselius, P. (2013) The Making of Europe's Critical Infrastructure: Common Connections and Shared Vulnerabilities. Houndmills, Basingstoke, Palgrave Macmillan https://www.researchgate.net/publication/262684604_The_Making_of_Europe's_Critical_Infrastructure_Shared_Connections_and_Common_Vulnerabilities
3. Moteff J. Copelan,d C. Fischer, J. (2003) Critical Infrastructures: What Makes an Infrastructure Critical? https://fas.org/irp/crs/RL31556.pdf.
4. Public-Private Partnerships, Prepared by the Fiscal Affairs Department International monetary fund, 2014, p. 4, https://www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf
5. The Review of the European Programme for Critical Infrastructure Protection (EPCIP) Commission Staff Working Document, SWD(2012). Commission of the European Communities, European Commission, Brussels, 2012, p. 8 http://ccpic.mai.gov.ro/docs/epcip_swd_2012_190_final.pdf).
6. Bundesministerium des Innern Nationale Strategie zum Schutz Kritischer Infrastrukturen, Bundesministerium des Innern. 2009.
7. Egan, M. J. (2007) Anticipating Future Vulnerability: Defining Characteristics of Increasingly Critical Infrastructure-like Systems. *Journal of Contingencies and Crisis Management*. 15, 5
8. Jomo, K. S. Chowdhury A. Krishnan S. Platz D. (2016) Public-Private Partnerships and the 2030 Agenda for Sustainable Development: Fit for purpose?, Department of Economic & Social Affairs, DESA Working Paper No. 148, 3
9. Keković, Z., Kentera, S. (2013) Montenegrin Police: Current Profile and Future Trends, *Handbook on Policing in Central and Eastern Europe*, New York: Springer, 182-183

10. Lindstrom M. (2009) The European Programme for Critical Infrastructure Protection. *Olsson S. (ed.): Crisis Management in the European Union, Cooperation in the Face of Emergencies*, Wiesbaden: Springer, 2009, 47
11. Lukitsch, K. Müller, M. Stahlhut, C. (2018). *Key Concepts for Critical Infrastructure Research*. Wiesbaden: Springer
12. Sarsengali A. (2016) Development of Public-Private Partnership in the Republic of Kazakhstan, *IEJME—Mathematics education*. Vol. 11, No. 5, 1113-1114
13. National Security Strategy of Montenegro, Official Gazette of Montenegro, no. 085/18
14. Swapnil G., Sachin G. (2017) Rethinking Public-private Partnerships: An Unbundling Approach, *Transportation Research Procedia.* 25, 3792- 3793
15. The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets, United States Government, Washington, 2003 Law on Protection of Persons and Property, Official Gazette of Montenegro, no. 43/2018

TOPIC IV

SOCIAL, ECONOMIC AND POLITICAL FLOWS OF CRIME

OPERATIVE COMBINATIONS IN THE CRIMINALISTIC ANDFINANCIAL INVESTIGATIONS OF ECONOMIC AND FINANCIALCRIMINALITY IN THE REPUBLIC OF NORTH MACEDONIA

Svetlana Nikoloska, PhD[1]
Faculty of Security, Skopje, University "St. Kliment Ohridski", Bitola, North Macedonia

Marija Gjosheva[2]
Sector for Cybercrime and Digital Forensics,
Ministry of the Interior of the Republic of North Macedonia

Abstract: Economic - financial crime consists of several criminal offenses distinct from classical crime in most circumstances and that this crime is carried out by perpetrators who abuse their office, employment, power and influence in society in order to gain high of criminal proceeds.

Prosecution of perpetrators of this crime means revealing, clarifying and providing evidence for the overall criminal situation in terms of organization, status of perpetrators within which they act criminally, their connection, evidence of specific crimes and evidence of the type, amount and the flow of criminal money and proceeds of crime. That is why operational combinations are needed with the application of legal measures and actions, such as operational-tactical measures, investigative actions, special investigative measures and actions and application of financial investigation methods and tactics and techniques of monitoring criminal financial transactions. In order to fully clarify and provide the evidence necessary for the successful conduct of criminal proceedings, the sanctioning of perpetrators and the imposition of measures to confiscate criminal proceeds and a ban on performing a profession, activity or duty. The subject of the paper is the analysis of measures and actions in the operational combination and analysis of the implementation in the period between 2014 and 2019 in terms of the effectiveness of providing evidence and judgments and measures against perpetrators of economic and financial crime in the Republic of Nort Macedonia.

Keywords: operational combinations, economic-financial crime, criminal investigation, criminal proceeds, confiscation.

1 svetlana.nikoloska@uklo.edu.mk
2 gjoshevamarija@gmail.com

INTRODUCTION

Economic-financial crime is a serious security phenomenon characteristic of all societies, because citizens have always and everywhere tended to get rich, power in the country, privileges and the like. Only the forms and forms of crime changed depending on the economic order, social and political life in the country. Transitional states are a "fertile ground" for the emergence of new forms and forms where perpetrators skillfully use their professional and professional knowledge, their positions, power in society, and especially political power in terms of influence and avoid initiation of detection procedures and sanctioning the perpetrators, many of the perpetrators are "privileged" and remain undetected and "enjoy the fruits of criminal activity."

Economic-financial crime has several important features, such as: low visibility, complexity, difficulties in detection and processing, weak penal policy, legal inaccuracy and problems that arise in the status of delinquents. Its importance can be talked about according to the scope and severity of the consequences. It is the damage caused, primarily as financial and social consequences, as well as the fact that this type of crime causes certain processes that by interaction can lead to destabilization of social relations. Threats to the development of democracy, the rule of law and human rights and national security, stability and economic development of countries in Southeast Europe and beyond are serious. (Arnaudovski Gj., Nanev L. and Nikoloska S.: 2009) This crime is a privilege of professionals from the appropriate profession, persons who use their profession for criminal purposes, but also persons who achieve criminal goals after obtaining high positions and positions due to "political merits", and they use them by abusing them for their own purposes, that is, personal enrichment.

The consequences of economic and financial crime are felt by the state and its citizens, and are a "blessing for the perpetrators" for reasons that they are not disclosed, sanctioned and their criminally acquired property and other proceeds are not confiscated. Position and power is not only used to commit crimes within their powers, position or by using professional and expert knowledge, but it is also used to "hide" especially criminally obtained money by transferring it to "safe places" where it is difficult to detect and the possibilities for confiscation are small. In addition to the basic or predicative financial crimes, the perpetrators also commit money laundering as a second-degree crime to generate and conceal criminal proceeds from the first-degree crime.

This crime is a "cancer wound" of any modern society, but also a serious danger to national and world economic and legal relations in an era of expansion of capital movements. Theoretical observations of this crime indicate that this crime is essentially identical, and differs from one economic to another political-legal system in intensity, manifestations and forms, the degree of threat to the state fabric and the activities of the institutions of the system that had the main role in the process of detecting and prosecuting its perpetrators. (Nikoloska S. , 2013)

Due to the nature and criminal characteristics of economic-financial crime, the procedure for detecting, elucidating and providing evidence for the committed crimes, as well as for the perpetrators and their connection and the type and amount of criminal proceeds is complex. The criminal investigation of economic-financial crimes begins with clues from the perpetrator to the acts, unlike the classic crimes where it starts from a reported crime to an unknown perpetrator.

In order to combat economic and financial crime in the Republic of N.Macedonia, since the beginning of 2000, serious reforms have been initiated in redefining economic and financial crimes, envisaging criminal liability of legal entities and envisaging the measure of immediate and extended confiscation, establishing new state bodies and institutions that have police powers for criminal investigation of this crime. The legal set-up of the concept of pre-investigation and investigative procedure has been

introduced, where the main role is played by the public prosecutor for coordination and planning of all measures and activities and team action of operational officers from several competent state bodies and institutions.

The Republic of N.Macedonia cannot be noticed for its "reformist spirit" especially in the field of criminal law because all international documents of the Council of Europe have been signed and ratified by the UN (Tupancevski, 2015), but the recommendations of most international organizations that continuously monitor the legislation of our country, FATF, Manival; Greco et al. and almost all relate to economic crime. Despite all the reforms based on the International Recommendations, there is a lack of consistency in the prevention and suppression of this crime. There are numerous factors that affect primarily non-disclosure, but also factors that affect the non-judgment of the perpetrators of economic-financial criminality.

DEFINITION AND APPEARANCES OF ECONOMIC AND FINANCIAL CRIMEIN THE REPUBLIC OF NORTH MACEDONIA

With the introduction of the new socio-economic regulation and the introduction of the market management system, the notion of economic crime in economic crime changes, where as the largest group of crimes are economic-financial crimes, and according to the Chapters of the Criminal Code are all crimes against labor relations, crimes against public finances, payment operations and the economy and crimes against official duty, but among these crimes are also some of the classic property crimes related to certain manipulations in the insurance system (Tupancevski, 2015) and specific business-related fraud involving stock and share fraud, known as financial fraud.

There is no unified definition of the term economic-financial crime in the world. Sutherland's first definition of "white collar" crime is, in fact, the starting point for many theorists and practitioners investigating this crime. Namely, Sutherland distinguishes the crime of perpetrators with "white collars" from the crime of perpetrators with "blue coats" as a crime committed by professionals with high professionalism and abuse of political power.

The perpetrators of economic and financial crime are not ordinary antisocial persons such as the perpetrators of classical crime, but they are criminals of the establishment, members of the middle and upper social strata. These are people who occupy high social positions and enjoy a reputation. Sutherland distinguished between perpetrators by distinguishing between a "white collar worker" and a "blue-collar worker" in the field of crime. The first layer of criminals "white collar worker", "nice people" from the elite or upper strata, as criminals according to the committed criminal acts were more dangerous than manual workers (blue - collar worker). Aristotle had already dealt with this division of criminals, so he wrote that "the greatest crimes were not committed to obtain the necessary, but to obtain the superfluous." They are professional criminals who belong to certain social groups who perform certain functions and abuse them driven by the motive of reckless greed, infected by consumer psychology and the need for a luxurious life. (Vitlarov, 2006)

Examining for a long time the most common manifestations and forms of economic-financial crime, the findings are that this crime can be divided into two main groups of crimes, the first of which are aimed at criminal behavior by which perpetrators evade legal obligations to the state (non-payment of contributions for health, pension and disability insurance, tax evasion, customs offenses, etc.), and

in the second group are criminal acts by which the perpetrators, using their function, power, job and influence, are using their position and authorities to commit criminal acts that illegally extract funds from the state budget (abuse of official position and authority - most often through crime in public procurement, use of discretionary powers, forgery of official documents, etc.) (Nikoloska S. , 2013)

With both groups of crimes, the most common victim of economic-financial crime is the state directly, and the citizens indirectly, but not all, a small part (perpetrators and their families) are "profiteers" of the crime they committed, and for which they may never be disclosed because the evidence is "invisible" or well-concealed, since "there is no one to disclose it".

Important characteristics of economic-financial crime are the following: (Tupancevski, 2015)

• Non-violent perpetration of criminal acts in the economic-financial system,

• Committing crimes by persons who enjoy high social status, reputation and power in society (persons belonging to the social elite),

• Executors are persons who use their influence (their high socio-economic position, high position in the social hierarchy) to violate legal regulations,

• They commit criminal acts within their professional activity (violation of the laws that regulate their professional activity),

• The purpose of their criminal activity is to gain enormous material and financial benefit,

• Causes serious disorganizations in the economic system,

• Disrupts social relations,

• Exceptional adaptability to the economic system, the way of its organization and functioning,

• High degree of certainty that they will evade justice (avoidance of criminal sanctions - dark and undetected crime).

Economic-financial crime, in addition to its criminological characteristics, has its own criminological characteristics that are upgraded to criminological ones and refer to the manner of execution, the means by which it is committed, the time and place of execution, the status characteristics of the perpetrators, etc. Forensic research should be based on knowledge of the criminological characteristics that are the basis for its recognition and taking action on general suspicions raised to the level of grounds of suspicion that are a prerequisite for taking specific legal measures and actions. In order to detect and prosecute, a comprehensive criminal and financial investigation is necessary with a coordinated pre-investigation and investigative procedure in which appropriate operational combinations of operational-tactical measures, investigative actions, special investigative measures and parallel financial investigation will be provided in which solid and relevant evidence that is important for successful conduct of criminal proceedings in which the perpetrators will be sanctioned and a measure of confiscation will be imposed, but also the confiscation to be successful with real confiscation of criminally acquired proceeds and property.

The efficiency of the investigative and judicial bodies in the suppression of economic-financial crime is measured through the analysis of statistical data, but due to the unequal ways of recording the data in all individual state bodies, the relevant data for research are statistical data for reported, accused and convicted perpetrators published in the Annual Reports of the State Statistical Office.

THE ANALYSIS OF PREVIOUS RESEARCH ON THE VOLUME, DYNAMICS AND STRUCTURE OF THE ECONOMIC-FINANCIAL CRIME

According to the investigations for criminal acts against official duty for the period between 1997 and 2006, the conviction is 12.7% in relation to the reported perpetrators. While in the structure of perpetrators of economic-financial crimes the representation is with 48.4% for crimes against official duty, with 39.9% are perpetrators of crimes against public finances, payment operations and economy, the remaining 11.7 % are for perpetrators of other crimes in this area. (Dzukleski & Nikoloska, Economic Crime, 2007)

According to the research for the period between 2007 and 2013, the reported perpetrators of economic-financial crimes are a total of 13,954, of which 6,155 are accused and 4,036 perpetrators are convicted. The percentage of accusation is 44.1 in relation to the reported perpetrators, the conviction in relation to the accused perpetrators is 65.6%, and the convicted perpetrators are 28.9% in relation to the reported perpetrators. Compared to the previous period, the conviction has improved, which can be interpreted in several aspects, but above all there are the reforms in the system of bodies and institutions responsible for this crime, since 2001 the Financial Police Directorate has been established and police powers have been given for prosecuting perpetrators of this crime by the Customs Administration. The result is that in addition to the criminal police, the mentioned institutions are also responsible for the economic-financial crime.

For analysis of the situation from the previous investigated periods, data are analyzed for reported, accused and convicted perpetrators of economic-financial crimes in the Republic of North Macedonia for the period after the reform of the criminal procedure legislation where major changes were made regarding the competencies and key role of the Public Prosecutor's Office in the process of pre-investigation and investigative procedure, especially in the part of coordination and planning of measures and actions to be taken in the process of criminal and financial investigation and providing solid evidence relevant to the role of the prosecutor in the criminal procedure where he represents the indictment and the evidence in order to properly judge the perpetrators.

VOLUME, STRUCTURE AND DYNAMICS OF PERPETRATORS OR ECONOMIC-FINANCIAL CRIMES IN THE PERIOD BETWEEN 2004 AND 2019

In order to make a comparison with the previous investigated periods, especially for the part of the efficiency of the investigative and judicial bodies in the suppression of the economic-financial crime, an analysis will be made only for the criminal acts that constitute the main part of the economic-financial crimes and the criminal acts against the public finances, payment operations and economy from Chapter 25 and Crimes against official duty from Chapter 30, for reported, accused and convicted perpetrators in the period beween 2014 and 2019.

Table no. 1. Scope, Structure and Dynamics of Perpetrators of Economic-Financial Crimes

Year	Chapter 25			Chapter 30			Total				
	Rep.	Cha.	Con.	Rep.	Cha.	Con.	Rep.	Cha.	%	Con.	%
2014	310	396	277	566	355	243	876	751	85,7	520	69,2
2015	344	331	277	664	279	201	1008	610	60,5	478	78,4
2016	419	298	261	613	187	113	1032	485	46,7	374	77,1
2017	376	209	177	593	152	96	969	361	37,3	273	75,6
2018	210	152	119	608	123	92	818	275	33,6	211	76,7
2019	213	121	90	708	87	53	921	208	22,6	143	68,8
Total	1872	1507	1201	3752	1183	798	5624	2690	47,8	1999	74,3

According to the data shown in Table no. 1 in the research period 2014 - 2019 are analyzed data on the largest subgroups of economic-financial crimes that make up the capital, which are the crimes of Chapter 25 and Chapter 30. Of the total number of reported perpetrators 5624, there are 1872 or 33.3% for the first subgroup, and from the second subgroup there is a total of 3,752 or 66.7%. The table shows data on reported, accused and convicted perpetrators. Regarding the reported perpetrators, out of the total number, 47.8% are accused or criminal proceedings which have been initiated, and 74.3% of them have been convicted. The percentage of convictions in relation to defendants indicates relatively well-secured and substantiated evidence, but the percentage of convictions in relation to reported perpetrators is 35.5% and this is the data that compared to previous research periods is much better than the period before the 1997 reforms. In 2006 it was 12.7%, and in the period of the reforms between 2007 and 2013 it was 28.9. If we analyze them by subgroups then we have indicators that 64.2% are convicted in relation to reported perpetrators of crimes against public finances, payment operations and the economy, as opposed to the indicator that 21.3% are convicted in relation to reported perpetrators of crimes against official duty. These are good indicators for further forensic analysis of what measures and actions should be taken to achieve better results in terms of providing relevant evidence and solid evidence with which the prosecutor will successfully defend the charge and contribute to the prosecution, the verdict of the perpetrators.

OPERATIONAL COMBINATIONS DURING THE CRIMINAL AND FINANCIAL INVESTIGATION OF THE ECONOMIC-FINANCIAL CRIME

The criminal investigation is carried out by the competent state authorities with police authorization, by the criminal police from the Ministry of Interior and the Financial Police Directorate, which has police powers arising from Article 47 of the Law on Criminal Procedure. (Official Gazette of RM no. 150/10)

Forensic research takes place from the first phase of detection, through elucidation to the provision and analysis of evidence. The basic ways, means and methods for obtaining knowledge are: cooperation with citizens, use of legal sources, method of analogy, actions, personal remarks, etc.

In this phase, information is collected and checked in order to determine: (Dzukleski G. , 1995)

- Factors that condition criminal phenomena;

- The material consequences of the crime and

- Criminal realization.

The first phase of detection is related to general suspicions which are checked with future activities, analyzed using legal sources of knowledge, but also using information from the operational network of operational officers of informants and associates.

The cooperation of the operational officers with the citizens can be at the level of obtaining information from an established operational network of informants and associates, depending on the degree and manner of the established cooperation between the citizens and the operational officer. There is no modern police in the world that has not used or does not use this simplest, but at the same time controversial, delicate and subtle source of information. Without its use, it is practically impossible to detect, clarify and prevent certain types of crimes in the field of economic-financial crime, given that, often, other ways of finding out about the preparation or existence of a crime are also powerless, also as well as the most modern technical means and aids. Therefore, the informant as an inevitable means of criminal activity, which as the main bearer of the "criminal reporting service is of great importance in the repressive and preventive prevention of crime."

In order to obtain information, the operational officers, most often, hire experts from a certain profession or an expert from a facility as informants. The professional informant has the maximum degree of expertise, information and communication, which enable their profession and narrow specialization in the workplace in all sectors of economic and financial operations, so that they notice such criminal facts and external manifestations of crimes related to abuses that do not discover informants who have no knowledge or close connection in the profession, profession and workplace. (Nikoloska S. , 2015)

Legal sources occupy an increasingly important place in terms of detecting or verifying information obtained from the operating network, and this refers to the published data and documents on the websites of the institutions that are legally obliged to publish them, which are public procurement contracts, inspection and audit reports, financial statements, etc. In addition to legal sources, the principle of analogy is practiced, which is applied by comparing previous criminal situations with the same criminological characteristics or for persons who have previously appeared as suspicious or are in a situation to make financial manipulations, especially in tax evasion with tax refunds. Added value or in certain forms of abuse, especially in public procurement with construction of facilities. The use of analogy is a kind of use of the indicative method. "Crime assessment, possible forecasting and versioning are based on indicative methods, such as the logical operation of analysis and synthesis." (Dzukleski G. , 1995)

Police officers from the competent institutions have at their disposal the police instrumentation (Angeleski, 1999), i.e. operational-tactical measures or in accordance with the new law on criminal procedure police reconnaissance, investigative actions and special investigative measures. Police reconnaissance is undertaken by police officers without a special order from the public prosecutor, but with his coordination primarily due to the danger of overlapping competencies, for the same case in a certain period do not take measures police officers from the criminal police and the financial police.

The criminal investigation depending on the criminal situation is analyzed as a team by the operatives and the public prosecutor and it is planned what future measures should be taken respecting the principles of criminology and the need for comprehensive action. Therefore, in planning, operational combinations of all measures and actions are made that will achieve good effects in the

process of elucidation and the provision of evidence. In that regard, the Public Prosecutor uses all legal possibilities to perform expert controls and provide business documentation provided by law. Operational combinations are a system of operational-tactical measures, investigative actions and special investigative measures. From what is provided by law as a basic measure is the inspection of business premises and inspection of business documentation, but in cases where necessary the public prosecutor can directly request from state bodies, bodies of local self-government units, organizations, legal and physical persons exercising public authority or other legal entities to submit the data requested by them, may request control in the operation of a legal entity and a natural person and temporary confiscation of money, securities, objects and documents until a final judgment is rendered. This can serve as evidence to request a tax audit and be provided with data that can serve as evidence of a crime or property acquired by committing a crime, performing an inspection and request notifications of data that are in connection with unusual and suspicious monetary transactions.

The mentioned entities are obliged to submit data, notifications, documents, cases, bank accounts or documents that they need during the procedure. The public prosecutor has the right to request data, notifications, documents, cases, bank accounts or documents from other legal entities and citizens who may reasonably consider that they have such data or information. According to the law, the subjects are obliged to take the necessary measures without delay, but within 30 days at the most, to submit to the public prosecutor the requested data, notifications, documents, cases, bank accounts or documents.

However, as a basic measure, a direct inspection of business facilities and inspection of business documentation by the operational officers in the presence of officials and responsible persons should be done, for which a report should be prepared. In parallel with this measure, a conversation can be held in order to establish or clarify certain facts that arise from the inspection of the documentation. (Law on Criminal Procedure, Official Gazette of RM no. 150/10)

In a situation of more extensive, comprehensive and complex application of the measure inspection or search of business premises or inspection of business documentation, the need arises to cooperate with certain professional services or bodies that within their competences also have the right to undertake this measure, and they have staff whose specialty is keeping business and financial documentation (Public Revenue Office, inspection services, etc.) and, primarily, have the purpose of selecting the relevant and eliminating irrelevant documentation. (Banovic, 2002). The purpose of the inspection of business documentation is to determine the subjectivity of the legal entity, the status of the perpetrators for which there are doubts, the legal operation in the realization of certain specific works, determining the completeness of documentation, possible manipulations with double invoicing, falsifying documents or displaying conditions in business documentation that are fictitious.

The operative combination includes the application of investigative measures arising from the criminal situation, but also the need to provide data and information on the criminal event. Because business operations and business correspondence are carried out electronically, the public prosecutor may also order the seizure of temporarily confiscated computer data, such as data stored in a computer and similar devices for automatic or electronic data processing, devices used for collection and transmission of data, data carriers and subscriber information available to the service provider. With a special decision of the judge in the preliminary procedure, and upon the proposal of the public prosecutor, protection and storage of computer data can be determined, while it is necessary, and for a maximum of 6 months, then they are returned unless they are involved in committing computer crimes, specified in the law. (Article 198 of the LCP)

The clarification of the economic-financial crime in most situations is conditioned by checking data that are bank secret, bank safe deposit box, monitoring payment operations and account transactions, and based on the data, the need for temporary suspension of certain financial transactions. These are the needs that the research team should consider and depending on the needs to request the financial research in the part of monitoring the financial transactions and providing other financial data from the country and abroad to request acting in accordance with the legal competencies from the Financial Intelligence Office.

Based on the information provided, the public prosecutor in situations when there is a reasonable suspicion that a certain person receives, keeps, transfers or otherwise disposes of proceeds of crime from their bank accounts, and that return is important for the investigation procedure of that crime or subject to forced confiscation, upon a reasoned request from the public prosecutor, the court may issue a decision ordering the bank or other financial institutions to submit documentation and data on bank accounts and other financial transactions and affairs of that person, as and persons who are reasonably believed to be involved in those financial transactions or activities of the suspect, if such information could be evidence in criminal proceedings. The request of the public prosecutor refers to data of a legal entity or a natural person, of all the proceeds that he receives, stores, transfers or otherwise disposes of them.

If the person keeps in a bank safe, or otherwise disposes of proceeds of crime, and that return is important for the investigation procedure of that crime or is subject to forced confiscation under the law, upon a reasoned request by the public prosecutor, the court may issue a decision to order the bank to allow the public prosecutor access to the safe. The decisions shall also specify the deadline within which the bank or other financial institution must act upon. If there are circumstances with well-founded suspicions upon a reasoned proposal of the public prosecutor, the pre-trial judge may issue a decision ordering the bank or other financial institution to monitor the payment operations, account transactions or other matters of a certain person and to regularly inform the public prosecutor for the time specified in the decision and may order the financial institution or legal entity to temporarily suspend the execution of a certain financial transaction or work, and the property is temporarily confiscated. In urgent cases, the public prosecutor may determine the measures without a court order. The public prosecutor shall immediately inform the pre-trial judge about the undertaken measures, who should issue the order within 72 hours. In case the pre-trial judge does not issue an order, the public prosecutor will return the data without first opening it.

For full clarification and provision of evidence, the investigative action of expertise is applied. In the case of economic-financial crime, it is an expertise of economic-financial documentation (Cudan & Nikoloska, 2018), but recently the forensic audit of economic-financial documentation compared to the actual situation is practiced. Or it would mean that through forensic analysis of business documentation to determine manipulations regarding the presentation of things that are partially or completely unfulfilled. This is a special case in public procurement where in the business documentation things can be shown that are not realized at all, but are shown and invoiced for payment. It is forensic auditing that can help provide relevant evidence.

In addition to the investigative actions, some of the special investigative measures are applied in cases when evidence cannot be provided in any other way, and these are:

• Opening a simulated bank account, as a method of detecting financial crime with elements of money laundering, ie opening an account that is made available to the criminal organization and it “arranges” the transfer of criminal money for their “laundering” and

• Simulated registration of legal entities or use of existing legal entities for data collection. This measure enters the chain of legal entities involved in illegal trade or legal entities that are preparers of falsified documentation and appear in the role of perpetrators of crime with elements of tax evasion. This is a classic way of organizing and criminal functioning of "Tax pyramids".

The operational combinations in the forensic and financial investigation of the economic-financial crime usually have a complex character, which and how they will be applied depends primarily on the assessment of the Public Prosecutor, but of course in consultation with the operational officers. The Public Prosecutor has the power to decide, coordinate analysis, evaluation and representation of the prosecution with all the evidence, but the operational experience, operational spirit, professionalism and expertise of operatives in the field of criminology should not be neglected, as well as professional knowledge and skills, which are gained through many years of practical work.

CONCLUSION

Economic-financial crime is a crime that is actually committed in the Republic of North Macedonia and for which pre-investigation and investigative procedures are conducted, but the conduct of criminal proceedings is preconditioned by the efficiency of law enforcement agencies and timely taking of measures and actions.

In the Republic of North Macedonia, major reforms have been made in the criminal substantive and criminal procedural legislation based on the Recommendations from the International Documents that have been ratified and are part of the national legislation.

The efficiency of law enforcement agencies is measured through the analysis of statistical data on reported, accused and convicted perpetrators, which based on the presented and analyzed data for the investigated period between 2014 and 2019, which is the following of two previously investigated periods can be concluded that the percentage of convictions from the initial research when it was 12.7% is improving and in this research period it is 35.5%, which indicates an improvement of the condition. However, if analyzed individually, there is greater efficiency in prosecuting and convicting perpetrators of crimes against public finances, payment operations and the economy, unlike crimes against official duty where the conviction rate is 21.3%.

Criminal procedure legislation provides sufficient breadth in terms of prescribed measures and activities, but how they are applied and what is the effectiveness of the application, especially in criminal offenses against official duty, is debatable from several aspects. These crimes have always been problematic in history to prove, and the perpetrators themselves have a certain influence for not judging or influencing the judiciary by using certain pressures that they allow themselves from their power and influence in the society. Of course, corruption, especially high-impact corruption, also plays a role in preventing perpetrators of abuse from being sanctioned.

In forensic research, operative-tactical measures, investigative actions and special investigative measures are applied, but as traditional measures that are most often used are inspection of business premises and inspection of business documentation, primarily because the degree of suspicion is "grounds for suspicion" and no special order from the public prosecutor is needed and a measure that gives good results if it is realized professionally and professionally. Some of the future measures also depend on this measure, but in certain situations this measure is the basis and driver of further research and expansion in order to fully clarify the criminal situation.

The role of the Public Prosecutor is crucial and therefore it is recommended that prosecutors working on cases of economic-financial crime, in addition to their continuous education, use more and more professional consultants allowed by law, but of course to have a correct and professional relationship with operatives who are still key players in the discovery process through the daily gathering of information and knowledge.

REFERENCES

1. Arnaudovski Lj., Nanev L. and Nikoloska S. , Economic Crime in the Republic of Macedonia, Macedonian Review of Criminal Law and Criminology, no. 1, Skopje, 2009.
2. Angeleski, M., Fundamentals of Economic Criminology - NIP Gjurgja, Skopje, 1999.
3. Banovi,, B., Provision of evidence in the criminal case against criminal offenses, Belgrade, 2002.
4. Vitlarov, T., "Repression and prevention of corruption", 2nd August Stip, 2006.
5. Nikoloska, S. , Methodology of research of economic - financial crime, Van Gogh, Skopje, 2013.
6. Nikoloska S., Economic Criminalistics, Van Gogh, Skopje, 2015.
7. Nikolovski P., Forensic Audit of Financial Statements, Macedonian Scientific Society Bitola, Bitola, 2020.
8. Petrović A., Forensic Methodology, High School of Internal Affairs, Belgrade, 1978
9. Tupancevski N., Economic Criminal Law, Stobi Trade DOOEL, Skopje, 2015.
10. Cudan A. and Nikoloska S., Economic Crime, Criminal Police Academy, Belgrade, 2018.
11. Dzukleski, G. , Criminal control and processing of the crime - Tax evasion, Security no. 3, Skopje, 1995.
12. Dzukleski, G. and Nikoloska, S., Economic Crime, Skopje, 2007.

THE IMPACT OF SETTLEMENT STRUCTURE ON CRIME

Szabolcs Mátyás, PhD[1]
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

Endre Nyitrai, PhD
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

László Frigyer, PhD
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

László Bói, Ph.D
Faculty of Law Enforcement, University of Public Service, Budapest, Hungary

Abstract: Unfortunately, in most cases, geographical factors are not given sufficient weight when examining the factors influencing crime. Among the geographical factors influencing crime, the present study aims to address the settlement structure. The importance of this factor is indicated by the fact that even almost a hundred years ago, some researchers discovered a close connection between the settlement structure and the number and structure of crimes. Among the Hungarian settlements – due to its size – Budapest is the settlement where the connections between settlement structure and crime can be presented most sensitively.

Keywords: criminal geography, crime, geography, law enforcement, spatial crime

INTRODUCTION

The investigation of crime has a rather long history. Even centuries ago, researchers tried to find connections between the structure, number, distribution, etc. of crimes. This was sometimes depicted on a map to make it even more illustrative and to discover as many correlations as possible.[2] The sociological and geographical study of crime, however, dates back to recent times. These researches have already shown a clear correlation between the settlement structure and the closely related social environment, as well as the extent and quality of criminal behaviour. Structural analysis of settlements can

---

1 mszabolcs1975@gmail.com

2 See more: André Michel Guerry (1833): Essai sur la Statistique Morale de la France.

bring significant results in case of larger settlements, where duality characterizes the crime situation, because of the size and structure of settlements. So, when starting the criminal geographic analysis of a settlement, it is essential to examine the structure of the settlement.

The paper aims to present the main stages of the urban development of the Hungarian capital (Budapest), and to answer whether typical crimes can be observed in typical settlement structures. A further research question is whether certain stages of urban development have affected (and are currently influencing) the structure of crime significantly?

Why do I consider it necessary to write my study? Because, in most cases, researchers do not consider the impact of geographical factors at all or with sufficient weight when examining the factors influencing crime. I feel that there is no particular need to justify why the relationship between urban structure and crime is illustrated by the example of the capital. Due to its size, it is the capital where the correlation between crime and settlement structure can be presented the most sensitively amongst all Hungarian settlements. The social, settlement and spatial structure and criminal differences stand out here the most.

Nor can we ignore the fact that in the case of Budapest, not only one centre can be observed in the city (as in the case of most of our cities), but also, due to the development characteristic of the city, many centres, sub-centres and peripheral areas can be observed. The reason why the studies of the capital particularly engaging is that the individual districts are at different stages of urban development.

What makes the research particularly interesting is the fact that there is a very significant social, economic, demographic, etc. difference among the districts. Differences can be discovered, which creates radically different criminal geographical conditions. Therefore, it is not expedient to manage the uniform database of the Budapest Police Headquarters (containing the criminal statistics of all districts) in a homogeneous way.[3] If we examine the criminal geography of Budapest, it is definitely worth examining the subcultures that have developed there (i.e. subcultures that is different from the usual ones in the given environment.)

A city of the size of Budapest already has separate settlement parts with inhabitants of different value systems and social statuses. Here, differences in criminality can already be detected, and the distribution of crimes is adapted to the nature of the residential area.

At the end of the introduction, I definitely want to mention that the present study is the first half of a more detailed research. The first part can be considered as a theoretical introduction and a historical overview, while in the second part of the study, each district and major part of the city is presented in detail.

HISTORICAL ANTECEDENTS OF THE STUDY OF URBAN STRUCTURE AND CRIME

The first major studies of the relationship between settlement structure and crime was examined in Chicago in the United States (see the Chicago School), where such studies were conducted as early as the early 1900s. Why were the studies needed? The city of Chicago in the early 19th century was a small settlement of only a few thousand people (1840: 4470 inhabitants), which by the end of the century had become a world city with more than one million inhabitants (1890: 1.09 million inhabitants).

3 Mátyás, Szabolcs (2014): 93-103

However, the population growth in such a short period has had not only beneficial effects, but also a number of negative consequences, including an increase in crime. The Hungarian capital is suitable for similar research, even though the rate of population flow was not as great as in Chicago.

What did researchers at the Chicago School find? Among others, "that the place where the offense was committed clearly determines the affiliation of the particular criminological event or series of events and, in general, its material circumstances" [4]. "In their work published in 1925, they point out that in understanding the phenomena of urban society and society in general, environmental conditions, the material conditions of life, and especially the structure and physical structure of space have an explanatory power; regularities can be demonstrated in the spatial organization of society."[5] It was primarily Burgess whose research made the concept of zone theory (or concentric circle theory) known (1926). In his research, Burgess pointed out the inverse relationship between the number of crimes and the distance from the city centre. It is not the purpose of the present study to analyse Burgess's zonal theory in detail, but it can certainly be forward-looking when examined in parallel with some of its research findings, even though it is known that zonal theory has been widely criticized decades ago. Criticism was partly due to the unanimous recognition of pioneering results because, after a time, Chicago researchers were no longer able to give an exact explanation for certain social phenomena, and so many people criticized the theory after World War II.

The criminal geographical analysis of Budapest is still pending, and many studies have already touched on the Hungarian capital, but such study has not yet been conducted. In the case of the capital, one of the most comprehensive analysis was performed by István Kobolka and János Sallai (2008), who examined the whole of Budapest for the period between 1960 and 1985. [6] The main database of the research was provided by BRFK (Budapest Police Headquarters) reports, which are extremely incomplete for today's needs, and by the statistical data of KSH (Hungarian National Statistical Office), between which quantifiable differences could be observed. These greatly influenced the follow-up of contemporary criminal processes, yet a number of problems that have been present for decades still need to be addressed today (football hooliganism, organized crime, juvenile delinquency, etc.).[7] The question may arise of why Budapest has not yet been fully analysed from a geographical perspective on crime. The answer is very simple. The capital can be considered a complex and diverse area that researchers did not "dare" to explore. The present study does not undertake a complete analysis of the capital either, it only seeks to introduce the relationship between settlement structure and crime.

SPATIAL STRUCTURE AND CRIME

Numerous social science trends have shown a clear correlation between the settlement structure, the social environment, which is closely correlated with this, and the extent and quality of criminal behaviour. Therefore, in most cases the duality characteristic of the crime situation in an area can be understood only by getting to know the structure of the settlement. So, when starting a settlement-level crime analysis, it is essential to examine the settlement structure.

The structural analysis of the settlement structure can yield spectacular results mainly in the case of larger settlements, where due to the size and settlement structure of the settlements the crime is dual:

4 Michalkó, Gábor (2002): 68
5 Szirmai, Viktória (1995)
6 Kobolka, István –Sallai, János (2008): 86-102
7 Mátyás, Szabolcs – Sallai, János (2014): 335-353

both metropolitan and rural – and in some places farm – crime is present. Metropolitan crime is mainly characteristic of the ancient settlement core and housing estate area, while the latter is mainly characteristic of suburban and peri-urban areas, where completely different modes of crime and types of crime occur. Separate areas are inhabited by people of different values and social status, among whom significant differences in crime rates can be observed.

The above is especially true for Budapest. To understand the current crime situation in the capital, we must first get to know the natural geographical conditions and development of the settlement, which can later serve as a kind of crutch for a clear view of the current criminal and settlement sociological processes. In the case of Budapest, local and situational energies played a prominent role – to quote the words of Jenő Cholnoky and Tibor Mendöl. Among the most important settlement factors of the city, we emphasize that the capital is located at the junction of landscapes with different natural geographical features (fairway), the Buda Castle Hill is located in a well-protected place, and the Danube is an important transport route.[8] Our ancestors found the most favourable crossing opportunity on the river in the vicinity of today's Budapest, which also marked the present location of the city.

In a geographical sense, we cannot speak of a unified Budapest, as Buda and Pest are two areas with radically different natural geographical features. However, even this factor, considered by many to be insignificant, results in significant differences. Just think of the formation of the settlement structure. On the Pest side, the road network was practically free to develop, while on the right bank of the Danube, the development of the road network was strongly determined (see, for example, the location of the capital's boulevards). One consequence of this is the significantly different population density, which should be considered as a relevant factor in crime. What especially justifies the study of the relationship between settlement structure and crime in the case of the capital is that due to the size of the settlement, each centre, sub-centre and peripheral area is currently at different stages of urban development, which makes the study particularly interesting. It is also important to note that in the case of Budapest, the city itself should not be examined alone. It is also necessary to study the agglomeration living in an organic unit with it, as it greatly influences the criminal situation in the capital. Of course, the above can also be observed in the case of other, smaller settlements, but they can be less discovered in settlements with a smaller population and size, compared to such a sharp, almost textbook example.

THE MAIN STAGES OF BUDAPEST'S URBAN DEVELOPMENT AND ITS CRIMINAL GEOGRAPHIC ASPECTS

Due to length constraints, the study cannot cover the formation and morphological development of the city in detail, but the most important developmental stages, which are still relevant today, should be mentioned, even if only schematically. Prior to the unification of the capital (before 1873), the city consisted of three large parts (Pest, Buda and Óbuda), which later grew into one settlement as a result of centuries of organic urban development and became the "Queen of the Danube". Out of the functionally existing districts, the Castle District is the one that has undergone the slightest change in recent centuries. Partially the topographic conditions marked its location, which did not allow further expansion later. The castle district can therefore be considered as one of the most constant points of the Budapest city structure for almost seven centuries.[9]

8 Szűcsné Kerti, Anita – Szűcs, István (2007): 103
9 Gábor, Anikó

The development of the town was hampered by the fall of Buda to the Turks in 1541, which caused significant destruction both in the settlement structure and in the population. The city was recaptured in 1686, but after more than a hundred years of Turkish rule, the city had a hard time finding itself, and for decades both the population and the building stock had hardly grown. At the end of the 17th century, however, new germs of development unfolded in the area of the Water City (Buda), which became the engine and core area of the city's rebirth a few decades later. The Pest part also gradually revived. Initially, within the medieval city wall, and then in the first half of the 18th century, parts of the city began to form. The significant increase in the population, the expansion of the building stock, the road network, and the construction of other infrastructures laid the foundations for the preparation of the unification of Pest and Buda.[10]

We jump to a few decades in time to reach a compromise (1867), which gave an impetus to the development of the capital that truly unparalleled its pace of development in European cities. In a few decades, Budapest, as it is known today, was practically born. The infrastructure networks providing the primary connection, the buildings and public institutions that create and define the cityscape, the bridges providing the crossing of the Danube were built, and let's not forget the population growth (1851: 151 016, 1873: 296 867). At the beginning of this amazing phase of urban development, the decision-makers decided to unite Pest, Buda and Óbuda (1873), which gave further impetus to the development. Of course, the expansion of the city did not stop behind the medieval walls, but was so dynamic that the "ingestion" of the surrounding settlements also began. Thus, after a few decades, many settlements (e.g. Kispest, Újpest, Erzsébetfalva, Pestszentlőrinc, etc.) became an integral part of the now unified Budapest. This chapter in the history of the capital can be seen as a period of urban development in terms of the stages of urban development (urbanization), when not only the city itself but also the agglomeration underwent significant development.

Decades after the "happy times of peace" left relatively few positive traces on the spatial structure of the city, unfortunately. World War II wreaked havoc on the infrastructure and population of the capital's settlement, the consequences of which can still be traced to this day. This is partly due to the slumminess of some parts of the central districts. Among the population of these areas were large numbers of Jewish descent who either died during World War II or chose to emigrate after returning home.[11] As a result, the properties they maintained "in the manner of a good owner" became abandoned, and in a few years – partly as a result of the devastation of the war – deteriorated physically. After World War II, the municipality (council) was never able to invest a significant amount in the rehabilitation of these areas, which were, therefore, considered neuralgic points in the city centre for decades. Empty properties were often taken over by people with unfavourable social statistics and above-average fertility coefficients, which still results in significant criminal contamination in these areas.

After the Second World War, the settlement structure of the capital was greatly influenced by the establishment of Greater Budapest (January 1, 1950). In the course of this, Budapest and 23 other settlements were united, as a result of which a multitude of new centres and sub-centres were necessarily formed, the effect of which is still visible on the city's criminal map. Such a growth of the capital is presumably complete, but the full integration of the attached settlements is still in progress of spatial cohesion.[12]

Also, the "products" of the post-World War II period are the housing estates, which are determining elements of the spatial structure of the city. The need to build housing estates has emerged in many

10 Gábor, Anikó

11 Kovács, Tamás (2007): 73-78

12 Budapest városfejlesztési koncepciója (2011)

major European cities. The boom in Hungary after the Second World War occurred mainly in the capital. Budapest was one of the centres of forced industrial development, so this development, which cannot be called organic, resulted in a significant labour shortage in the city.

Of course, the capital, especially after World War II, could not provide housing for large numbers of people, so the government decided to build housing estates in the 1960s and 1970s. In the case of housing estates, we can state the fact that one of the negative consequences of this artificial and forced urban development has already been found in several sociological aspects of research. In the above periods, it was not only large-scale housing estates that modified the spatial structure of the capital. From the sixties onwards, the development of the metropolitan line infrastructure received a new impetus. It was then that many motorways, expressways and a number of infrastructural investments were built, which had a significant impact on the spatial relocation of certain urban functions, and are still an important part of the spatial structure of the capital.

Regarding the movement of the population, we can mention that in addition to the external population movement, a very significant internal movement can be observed from the sixties and seventies: wealthier people moved to Buda, the surrounding settlements and newly built residential parks on the outskirts of the city. Based on the stages of urban development, this period can be considered as a period of suburbanization, when people move to the suburbs and suburban areas, which provide calmer and healthier living conditions. After the change of regime, the population movement accelerated again. This was mainly due to the economic recession, as many of the capital's major factories closed permanently, leading to a deterioration in living conditions in Budapest, leading to an increasing number of people leaving the capital and settling in the surrounding settlements. As a result, most of the surrounding settlements were able to record significant development (economic, population, etc.). Thanks to the significant outflow, the capital's population of nearly two million has now shrunk to 1.7 million. The change of regime thus brought the stage of de-urbanization. As a result, the population of the central city is declining and the population of the periphery, the agglomeration, is beginning to grow. The last stage of urban development is re-urbanization, the early germs of which can already be observed in the case of the capital. In doing so, the slummy, segregated downtown areas are rehabilitated according to the needs of today (e.g. parts of districts VII, VIII and IX) and there is a qualitative increase in population, which in all cases results in a decrease in the number of crimes.

SUMMARY

The paper presents the urban development of Budapest. With urban development, the settlement structure has also changed, which has a significant impact on the number and structure of crime. In the first phase of urbanization the population has increased greatly. As a result, the number of crimes (mainly thefts, homicides) has increased significantly. Due to sub-urbanization, the individual social strata became more separated from each other. Wealthier people moved to the suburbs and outer districts. One could observe that in the suburbs people came home to sleep only. Therefore, suburbs provided ideal terrain for burglary during the day. During the period of de-urbanization, the population of the city decreased even more, resulting in a decrease in the number of crimes. As the number of crimes in Budapest decreased, it increased almost as much in the areas where people moved. That is why we cannot talk about an overall decline in crime. New housing estates and shopping malls have been built in the settlements around the capital. Home burglaries have occurred in residential parks, pickpockets and car burglaries have occurred in the parking lots of shopping malls. Re-urbanization is the last stage of the urbanization process. City centres were infected by crimes. This part of the city

renewed physically and socially. As a result, the number of crimes is significantly reduced. In case of Budapest, the number of robberies, pickpockets and bodily injuries decreased. Valuable new properties, in turn, attract home burglars.

REFERENCES

1. Budapest városfejlesztési koncepciója (helyzetelemzés) 4 Budapest társadalma, 2011
2. Dávid, Lóránt – Molnár, István – Bujdosó, Zoltán – Dereskey, Anna (2007): Biztonság, terrorizmus, turizmus. In: Gazdálkodás 51. pp. 58-75
3. Gábor, Anikó: A budapesti agglomeráció története. Szent István Egyetem, Gödöllő (http://interm.gau.hu/miau/22/ga/mernok.htm)
4. Guerry, André Michel (1833): Essai sur la Statistique Morale de la France. Crochard
5. Kobolka, István –Sallai, János (2008): Budapest kriminálgeográfiája 1960-1985. között. KBH Szakmai Szemle 3. pp. 86-102.
6. Kovács, Tamás (2007): Menni vagy Maradni? Zsidó kivándorlás a DEGOB jegyzőkönyvek fényében, pp. 73-78. In: Botos János - Kovács Tamás (szerk.) Visszatérés-újrakezdés: tudományos emlékülés 2006. november 23., Budapest, Magyarország: Holocaust Dokumentációs Központ és Emlékgyűjtemény Közalapítvány
7. Mátyás, Szabolcs (2014): Budapest bűnözésföldrajzi vizsgálata 2009 és 2012 között. In: Magyar Rendészet 2014/3. pp. 93-103.
8. Mátyás, Szabolcs – Sallai, János (2014): Kriminálgeográfia. In: Ruzsonyi P. (szerk.) Tendenciák és alapvetések a bűnügyi tudományok köréből. Budapest, NKE, pp. 335-353.
9. Michalkó, Gábor (2002): Magyarország turizmusának kriminálgeográfiája. In: Belügyi Szemle 10. pp. 65-72.
10. Szirmai, Viktória (1995): A településszociológia alapjai. Településtudományi Felsőoktatási Füzetek (http://www.policy.hu/flora/szirmai.htm - 1. 3. 2020.)
11. Szűcsné Kerti, Anita – Szűcs, István (2007): Településföldrajz. DE AMTC AVK, Debrecen, 103. p.

GENDER ASPECTS OF SECURITY RISKS DURING THE COVID-19 PANDEMIC

Zorica Mršević, PhD[1]
Institute of Social Sciences, Belgrade, Serbia

Svetlana Janković, LLM[2]
Centre for Encouraging Dialogue and Tolerance, Čačak, Serbia

Abstract. The subject of the paper is focused on the facts that indicate that neither the COVID-19 virus, nor the measures against it has an equal impact on women and men. While analyzing the pandemic in the language of security, the focus must be on the fight against the virus from a human security-oriented point of view viewed through gender lenses. For example: women predominate in occupations where contact is inevitable, which increases the risk of infection, also there is a worrying increase in domestic and other forms of gender-based violence. In situations of stress and isolation at home while the availability of support services for victims of violence is reduced, women and children are exposed to increased mental, physical and sexual violence. The aim of this paper is to analyze the gender aspects of security risks, the importance of cooperation between the rule of law authorities and other actors providing protection services in order to reduce possible challenges, but also the need for violence prevention in every respect.

Keywords: pandemic, gender-based inequalities, jobs challenges, gender-based violence, human-oriented security, prevention

“The fight against coronavirus is gender marked.” (Ženske studije i istraživanja, 2020)

INTRODUCTION

The virus Covid -19 is one of the greatest natural disasters to ever hit the entire planet. A pandemic permeates all dimensions of life: health, political, social, economic, gender, security; the pandemic has shaken all of humanity, with unforeseeable consequences and challenges (Women in Black, 2020, May 20). We are now living in “risk society” as defined by Ulrich Beck (Beck, 2011), in the situation he described as loss of control, ignorance and uncertainty of the modern age. In the current situation,

1 zorica.mrsevic@gmail.com
2 svetlana.jankovic.cacak@gmail.com

the term coined by him as "risk society" may be accompanied by the second term, "other modernity" when national perspectives, as predicted by him, are overthrown with a cosmopolitanism that recognizes the interconnectedness of the modern world. Namely, the pandemic has caused a global crisis and its distorting effects will last for years (European Feminist Working Group, 2020, May 5). The global context of growing inequality is analyzed because neither the infection nor the measures against it affect women and men equally.

We are all already well aware that this virus is anything but democratic and that we are not equal before it, meaning that some are again more equal than others. Pandemic does not affect equally women and men, the rich and the poor, the old and the young, or people of colour and white people. Instead, this pandemic magnifies all existing inequalities and severely impacts those who are already vulnerable and disadvantaged. People who live and work at society's margins are exposed to the highest risk of infection and hardship, and are further stigmatized as a result. And in the near future, it is obvious that all social inequalities will deepen even more and that the powerful will come out of all this even more powerful and with even greater control in their hands. What is certain is that now, in a situation of general confusion and uncertainty, it is difficult to imagine any near future (Golubović Trebješanin, 2020, July 14).

We are also aware that a pandemic carries with it security risks and that they are also not the same for everyone, because different categories of people face different risks, and also risks of different intensity. Death rates are higher in low and middle-income countries (World Health Organization for European Region, 2020, May). The economic consequences are already largely visible. As the virus did not spare the world's strongest economies, it means that not only the semi-periphery and periphery of the world capitalist system will suffer from the consequences of the pandemic, but its centre will also be solidly affected. The political consequences could be very severe. This primarily refers to the tendency to stifle democratic freedoms and institutions, which in some parts of the world and before the crisis peak did not stand quite well. Another political consequence that is closely related to the concentration of power in the hands of individuals during the peak of the crisis is an adequate response to the crisis and resistance to these tendencies. Therefore, the basic problems that lead us to be concerned and which the specter of corona virus has exposed to the end, could be divided into four basic groups: economic, political, cultural and socio-psychological (Drobnjak, 2020, May 13).

This division lacks a clearly separately defined gender aspect of the challenges, although in all four mentioned there could be identified gender as well. The pandemic faces us globally, regionally but also nationally, locally with all four mentioned, added by gender component. The problem is that if the gender elements of all aspects of the pandemic are not perceived and analyzed now, it is unlikely that the responses to today's crisis will be gender- sensitive. And when achieving gender equality is not seen as essential to the effective functioning of society, it is a sign that democracy is failing.

Gender-coloured pandemic consequences are numerous but can be grouped in two basic categories of security character, gender specificities in socio-economic relations (mostly erosion of gender equality) and intensified gender-based violence, particularly the domestic violence. Both aspects are also much interconnected, conditioning and intensifying each other. The increase in gender-based violence threatens the economic situation of women, while the deterioration of their socio-economic position puts them in a situation of intensified risk of violence. The public health measures taken in response to the coronavirus pandemic, particularly lockdowns and in-place orders, have further highlighted the particular challenges women face in Serbia as well as in developed and developing countries alike, from domestic violence to gender imbalances in child care responsibilities (World Politics Review, 2020, July 13). The pandemic revealed how serious this human rights violation is and how still this

fragmentary, but illustrative fact is that only in the first week of the pandemic measures in Serbia, 31% of women who experienced violence lost their jobs, in the second week 55%, and in the fourth week, 92% were left without any income, according to the research by the "Athens" NGO (Dukić, 2020).[3]

GENDERED SOCIOECONOMIC RELATIONS

Any crisis situation is most likely to affect women, stated the Regional Association of Women Entrepreneurs Businesswomen, based on their members' previous experiences. Every crisis affects women like a big wave that throws them back for decades. Everything that had been won in terms of gender equality disappeared the moment the crisis brought women back home and brought them double working hours and all obligations. And the longer-term impact of the crisis will continue to exacerbate and re-produce gendered inequalities across the globe.

The Corona virus crisis has hit all Europeans hard. But its economic impact is hitting women harder than men. While at the beginning of the crisis women's work in hospitals, childcare and supermarkets was appreciated with applause on the balconies and public declarations, they are still dramatically underpaid. Women are now losing their jobs at a much faster rate than men. Many of them work in "client-facing sectors" - tourism, events, hotels, restaurants, retail trade, care taking, different forms of therapy and many others which have been particularly affected by the crisis.

The burden of the corona epidemic virus and the measures taken in the state of emergency have been carried out to a much greater extent by women than men. They make up the majority in the sectors that were "at the forefront": health, trade, hygiene, but at the same time in most cases they were burdened with housework, unpaid work, one in which they have been present for decades more than men and now with additional responsibilities for caring for family members, especially the elderly, children and their school obligations. In 70% of the cases these jobs are performed by women (Stevanović, 2020, May 15). Health and care sectors all over Europe are highly feminized. Women and those who take care of the elderly, children, and sick people in hospitals via the formal care sector—who also often occupy the lowest-paid roles in these sectors—have not stopped their duties. During the pandemic, their shifts and tasks have redoubled and they are under constant risk of infection.

Unpaid domestic work usually done by women becomes more demanding under such difficult conditions. As services are suspended and formal care responsibilities are pushed back to be done at home, this creates the danger of societies going back decades with regard to the gendered division of labour. Recognize that care and reproductive work are fundamental to producing social wealth, so value this work accordingly, both in social and monetary terms. Organizations representing women, LGBTIQA+ persons, and other minorities in particular have found their activities restricted during this time.

The UN Women stress that (UN Women, 2020, July 2) the current Covid-19 pandemic is further stressing and devastating social and economic consequences for women and girls[4] that could reverse limited progress toward gender equality over the last 25 years (UNDP Gender Equality Strategy 2018-2021).[5] Over 128 women's organizations and activists from 17 countries in the Balkans, Eastern Europe and Central Asia called on governments and development partners to engage in dialogue with

3 "Women's social entrepreneurship is the right recipe for overcoming the consequences of this, but also all other crises."

4 Goal 5: Achieve gender equality and empower all women and girls.

5 Putting Women at the Forefront of Covid-19 Response in Europe and Central Asia.

civil society to bring women's needs to the decision making places in response to the Covid-19 crisis, such as during the recovery from the ensuing crisis. They point out the great connection and key role that individual and personal security, as well as human rights play in the broad picture called international security (The UN Women, 2020).

Central and East European Network for Gender Issues[6] warned that above all this pandemic is a time for the progressive left social-democratic forces to recoup and revisit where they fell short in the protection of equitable socio-political systems, social justice and solidarity. They should assume the lead in launching ambitious and bold recovery plans and guide the strategic choices we make for the "new" post-Corona order at all levels. How to stimulate the economy and finance the recovery? How to rehabilitate the public health sector, how to deal with unemployment and poverty, how to use this unfortunate situation to make our countries and systems more socially sensitive, gender-sensitive, fair and just?

Those all are the questions which are to be responded as soon as possible. The pandemic has caused a global crisis and its distorting effects will last for years. While the fall out may appear to threaten the progress of feminism, it also offers an opportunity. Therefore, it is extremely important that the measures introduced now take into account the gender impact and this perspective must be used to find appropriate solutions to the current situation. Aiming at this, the Rosa Luxemburg Stiftung Organized the European Feminist Working Group in May 2020, issued a feminist manifesto for confronting the corona crisis in Europe (Information NEWS, 2020, May 5).[7] They stressed the need to defend the achievements of progressive movements against authoritarianism, and to resist the backlash against feminism and support struggles for dignity and social justice.

GENDER-BASED VIOLENCE

World Society of Victimology issued the statement of victimological impact and consequences of Covid-19[8] warning that we are confronted individually and collectively with an unprecedented health, humanitarian and socio-economic crisis. The WSV is aware of rising patterns of victimization including instances of abuse of power within the context of especially marginalized communities and vulnerable groups and individuals. Since the restrictions on mobility were imposed all over Europe, intimate, sexual and reproductive violence has been increasing, affecting women and children in their homes, as well as LGBTIQA+ persons living in homophobic households.

Since the lockout measures of pandemic began, the police, women's shelters and NGOs have reported an increase in domestic violence, especially violence against women. People go out much less, many have lost their jobs, housing conditions are aggravated, multi-member, multi-generational families are cramped in small flats, there is a general feeling of frustration, insecurity, increased anxiety, which all leads to conflicts in relationships between partners and other relationships. Women, children, old parents are beaten.

The increase in violence against women should be given the most attention because women are more exposed to the risk of domestic violence. All regional and domestic women's organizations which were

6 Newsletter, COVID-19 APPLYING THE GENDER LENS 2st Quarter 2020.

7 This Feminist Manifesto was written by members of the European women's working groups Rosa-Luxemburg-Stiftung. We live and work throughout Europe, in Belgium, the Czech Republic, Germany, Greece, Poland, Russia, Serbia, Spain, the United Kingdom and Ukraine.

8 Domestic violence concerns during lockdown. 2020, March 30th.

consulted were seriously concerned because social distance and limited movement raised an additional risk of domestic violence. Already at the very beginning of this great health crisis in the world, it was shown that pandemics, i.e. the taken measures, differently affect women and men. Domestic violence against women increases in times of crisis: women spend longer periods of time with violent partners at homes, so they are more exposed to violence. The home is not always a safe place for women, who are particularly at risk during restraint measures, as domestic abusers cannot be avoided and it is difficult, if not impossible, to call the police, the SOS phone, or anybody, to report the violence and ask for assistance due to the proximity of the abuser (UN Women, 2020). In short, the current situation is especially dangerous for women and children who share their home with a violent perpetrator (European Feminist Working Group, 2020). When the crisis is over, it will be even harder for them to leave the bully, due to the financial insecurity that will follow. In this case, relatives and neighbours can play a big role, they can report violence if they suspect that women are exposed to violence, especially if the woman is not able to call for help (FemPlatz, 2020, 3-4). Stressful situations, such as those being experienced during the Covid-19 pandemic and economic instability, exacerbate the risk. Moreover, the current distancing measures in place in many countries make it harder for women and children to reach out to family, friends and health workers who could otherwise provide support and protection.

When it comes to security risks caused by gender-based violence, it should certainly be noted that many international organization, both governmental (non-territorial subjects of international law, as a permanent institutional form of cooperation between member states in achieving common goals)[9] and nongovernmental (Danilović, 2019, 98),[10] have reacted at the international level. It is important to mention this, because all international organizations usually have somewhat slow flows of bureaucratic, hierarchically strictly defined decision-making procedures. As a result of slow procedures, expressing a public stand, not to mention condemnations or warnings, usually takes a long time. But when it came to risks of gender-based violence, clear warnings came very quickly, already at the beginning of pandemic measures, really at the right time, and moreover from the highest positions. We emphasize the reaction of the Organization for Security and Cooperation in Europe, which has been the source of reactions to gender-based violence since the beginning of April 2020.

The Organization for European Security and Cooperation was the first to respond concretely by press releases and especially by appeals to the governments of the member states (OSCE, 2020, April 2). Protection from domestic violence urgently needed for women and children under stay-at-home orders, a statement issued by the OSCE officials at the Vienna/ Copenhagen/ Warsaw meeting (OSCE, 2020, April 6). A warning was issued about the increase of gender-based violence, the competent government bodies were called upon to react, the media to inform about the possibilities of protection, as well as non-governmental organizations to stay available to provide assistance to those with experience of gender-based violence. “State of emergency might cause a rise in the number of domestic violence cases. We call upon all competent institutions to treat the calls related to domestic violence as their highest priority, and to take all measures to protect the victims. In these hard times, the media needs to intensify reporting about the risks of domestic violence, and highlight existing support services so that victims can learn where they can turn for help.” “It is important for civil society organizations

9 It is necessary to notice that the founding act of international governmental organizations is a multilateral treaty and by it the member states transfer part of their sovereign powers to the international organization. At the same time, the founding agreement has the characteristics of a constitutional act of the organization and it prescribes, among other things: the goals of establishment, competencies of the organization, organization and rights and obligations of bodies, conditions for acquiring and losing membership, method of financing.

10 International non-governmental organizations are an institutional form of international cooperation whose subjects are not states, and the founders are individuals, groups, associations or institutions from different countries in various fields of human activity, with the aim of achieving common interests.

to remain available to potential victims, and for state institutions, including police and centres for social work, to work to reduce the risks of domestic violence by conducting information campaigns and keeping services open during the crisis." "Women and children, but also other family members, are subjected to mental, physical and sexual violence. In situations of stress and home isolation, this can further escalate. The Government has increased the availability of services for victims around the country", said the Head of the OSCE Mission to Skopje, Clemens Koja.

Persistent gender inequality might worsen due to the impact of the pandemic caused by the corona virus if not properly addressed from the beginning. The participants emphasized the importance of collaboration between rule of law authorities and protection service providers, as well as the need to secure increased funding and support for local organizations providing support to victims of gender-based violence. Noting a troubling rise in domestic violence in relation to the Covid-19 pandemic lockdowns and self-isolation guidelines in many countries, the OSCE leaders called today for measures to be taken by governments to protect women and children. Home is not always a safe haven, women and children cannot live free of violence in times of families finding themselves in self-isolation. "Some governments are already taking measures to counter domestic violence during the lockdown, which we hope can serve as best practices for others", (OSCE Secretariat, 2020, April 8).

The Council of Europe (FoNet, 2020, April 20), The Committee of the Council of Europe adopted the Declaration on the implementation of the Istanbul Convention during the corona virus pandemic. The importance of respecting all its standards and recommendations in activities during the corona virus pandemic has been emphasized. It has been observed that violence against women and domestic violence tend to increase in times of crisis and that new data show an alarming increase in the number of reported cases of certain types of such violence. The introduction of isolation measures has increased, as statistics from a large number of countries show, as well as the number of cases of domestic violence. Victims now have even fewer ways to turn to someone for help. The approach of those states that seek innovative ways to adapt their institutional responses to violence is welcomed. The approach to such violence is victim-centered and based on human rights.

The World Health Organization for Europe (WHO Europe Statement on Interpersonal violence during Covid-19) Copenhagen, Denmark (Kluge, 2020, May 7).[11] Violence remains preventable, not inevitable! Member States are reporting up to a 60% increase in emergency calls by women subjected to violence by their intimate partners in April this year, compared to last. Online enquiries to violence prevention support hotlines have increased up to 5 times.

The WHO Europe president sent 3 main messages: 1) to governments and local authorities: to make sure services to address violence are available and resourced, and expand hotlines and online services; 2) to communities and the public: stay in touch, contact and support your neighbors, acquaintances, families and friends. If you see something, say something; 3) to those experiencing violence: violence against you is never your fault. It is never your fault. Your home should be a secure place. Get in touch -safely- with family, friends, shelters or community groups that have your safety and security at heart.

The European Institute for Gender Equality - EIGE. Rapid action taken by several countries shows the understanding that violence at home is a problem which crises can exacerbate. The most wide-ranging measures to prevent domestic violence are laid out in the Istanbul Convention, which has been signed by all EU Member States and ratified by 21. Following this guidance remains the best way to protect women – in crisis times and beyond. Creativity and adaptability are key. Over the last few months, governments, support services and private companies have worked together to create digital tools that facilitate reporting and provide hotel rooms for those fleeing violence. Pharmacists and delivery per-

11 Statement to the press by Dr Hans Henri P. Kluge, WHO Regional Director for Europe.

sonnel have been trained to assist victims. What did we get right and what will we need to do better to protect women from violence? EIGE will provide answers in a special study on Covid-19 and violence against women to be published later this year (EIGE, 2020, June 9).

FIFA, WHO and the European Commission have joined forces to launch the #SafeHome campaign to support women and children at risk of domestic violence. The campaign is a joint response from the three institutions to the recent spikes in reports of domestic violence as stay-at-home measures to prevent the spread of COVID-19 have put women and children experiencing abuse at greater risk. "Together with the World Health Organization and the European Commission, we are asking the football community to raise awareness to this intolerable situation that threatens particularly women and children in their own home, a place where they should feel happy, safe and secure," said FIFA President Gianni Infantino. "We cannot stay silent on this issue that negatively affects so many people. Violence has no place in homes, just as it has no place in sports. Football has the power to relay important social messages, and through the #SafeHome campaign we want to ensure that those people experiencing violence have access to the necessary support services they need (FIFA, European Commission and World Health Organization, 2020, May 26)."[12]

CONCLUSION

The pandemic crisis is turning into an enormous crisis for women's income, life-long earnings, pensions, overall participation and power in society. Due to this extra amount of extra work at home, women hardly have time to participate in the public debate anymore. Women have less time than ever to invest in their careers - while rising unemployment leaves companies ample choice in hiring among men. This will make women's advancement to the higher echelons of decision-making even more difficult.

Now is the time to turn this moment into an opportunity for the advancement of gender equality. The crisis, which is both health and economic, political and human rights, offers a chance to think about the type of world we want to live in, in which people and solidarity would be priorities.

One of the ways towards the wishful gender-equal changes is offered by the campaign led by the members of the greens of European Parliament "the #halfofit". It comprises the demand to half of the EU Corona funds will be dedicated for women. They urge the European Commission and the European Council to make sure that at least half of the volume of the Recovery and Resilience Instrument is spent on women's jobs and the advancement of women's rights as well as equality between women and men. It is the European institutions task to ensure the implementation of Art. 23 of the European Chart of Fundamental Rights: "Equality between women and men must be ensured in all areas, including employment, work and salaries."

REFERENCES

1. Beck, U. (2011). *Svetsko rizično društvo: u potrazi za izgubljenom sigurnošću*. Novi Sad: Akademska knjiga.
2. Danilović, N. (2019). Međunarodne organizacije i njihova uloga subjekta međunarodnog javnog prava. *Megatrend revija*, 16/3, 95-115. Preuzeto 5. marta 2020. sa, https://scindeks-clanci.ceon.rs/data/pdf/1820-3159/2019/1820-31591903095D.pdf.
3. Drobnjak N. (2020, maj 13).Bauk kruži svetom – bauk koronizma. Preuzeto 30. maja 2020. sa, https://www.noviplamen.net/glavna/bauk-kruzi-svetom-bauk-koronizma/.
4. Dukić, M. (2020, jul 20) Interview for the magazine "Business&Finance": Work has protected women. Interview with Jelena Hrnjak from NGO Atina for the monthly magazine "Business&Finance". Social inclusion of the victims of human trafficking and violence. Preuzeto 20. jul 2020. sa, http://atina.org.rs/en/interview-magazine-businessfinance-work-has-protected-women.
5. European Feminist Working Group. Rosa Luxemburg Stiftung. (2020, May 5). NEWS. Inequality / Social Struggles - Gender Relations - Europe - Europe / EU - Corona Crisis - Feminism Now! A feminist manifesto for confronting the corona crisis in Europe. Preuzeto 6. maja 2020. sa, https://www.rosalux.de/en/news/id/42140/feminism-now.
6. European Institute for Gender Equality - EIGE (2020, June 9). Covid-19 and gender-based violence: Has the pandemic taught us anything? *News article. Violence.* Preuzeto 20. juna 2020. sa, https://eige.europa.eu/news/covid-19-and-gender-based-violence-has-pandemic-taught-us-anything.
7. Femplatz. (2020). Ostani kod kuće. Korona virus stavlja žene na prvu liniju odbrane. Ur. Kosana Beker, K., Janjić, B. i Husar Tokin, M. *Femplatz Magazin*, 3, 3-4. Preuzeto 26. Aprila 2020. sa, http://femplatz.org/index.php?n24.
8. FIFA, European Commission and World Health Organization. (2020, May 26). Joint News Release. Preuzeto 10. juna 2020. sa, https://www.who.int/news-room/detail/26-05-2020-fifa-european-commission-and-world-health-organization-launch-safehome-campaign-to-support-those-at-risk-from-domestic-violence.
9. FoNet. (2020, april 20). Rast nasilja nad ženama u Evropi. *Danas.*Preuzeto 20. maja 2020. sa, https://www.danas.rs/drustvo/rast-nasilja-nad-zenama-u-evropi/.
10. Golubović Trebješanin, B. (2020, juli 14). Pred virusom nismo jednaki. *Politika*. Preuzeto 14. jula 2020. sa, http://www.politika.rs/scc/clanak/458351/Pred-virusom-nismo-jednaki.
11. Kluge, H.H.P. (2020, May 7). Statement to the press by Dr Hans Henri P. Kluge, World Health Organization Regional Director for Europe. Copenhagen, Denmark. Preuzeto 7. juna 2020. sa, https://www.who.int/news-room/detail/26-05-2020-fifa-european-commission-and-world-health-organization-launch-safehome-campaign-to-support-those-at-risk-from-dome- stic-violence.
12. OSCE Mission to Skopje, Communication and Media Relations Unit. (2020, May 6). OSCE Mission to Skopje and its partners call for proactive approach on domestic violence prevention. Preuzeto 6. maja 2020. sa, https://www.osce.org/mission-to-skopje/449650.
13. OSCE Secretariat, Communication and Media Relations Section. (2020, may 8). Adverse effects of the coronavirus crisis on promoting gender equality focus of OSCE event. Preuzeto 8. maja 2020. sa, https://www.osce.org/secretariat/449797.

14. OSCE Secretariat, Communication and Media Relations Section. (2020, April 2). Protection from domestic violence urgently needed for women and children under stay-at-home orders, say OSCE officials Vienna/ Copenhagen/ Warsaw. Preuzeto 2. aprila 2020. sa, https://www.osce.org/secretariat/449515.

15. Stevanović, M.N., (2020, maj 15). Teret epidemije podnele su žene. *Danas.*

16. United Nations Women. Europe and Central Asia. (2020). Putting women at the forefront of the COVID-19 response in Europe and Central Asia. Preuzeto 10. jula 2020. sa, https://eca.unwomen.org/en/digital-library/publications/2020/04/putting-women-at-the-forefront-of-the-covid-19-response-in-europe-and-central-asia.

17. United Nations Sustainable Development Goals. (2020). Goal 5: Achieve gender equality and empower all women and girls. Preuzeto 17. jula 2020. sa, https://www.un.org/sustainablede- development /gender-equality/.

18. Women in Black. (2020. May 20). In Lockdown, Challenge to Our Social Model. Belgrade: Press release.

19. World Health Organization for Europe - WHO. (2020). Violence against women. Preuzeto 16. jula 2020. sa, https://www.euro.who.int/en/health-topics/disease-prevention/violence-and-injuries/areas-of-work/violence/violence-against-women.

20. World Politics Review. (2020, July 13). Despite Advances in Women's Rights, Gender Equality Lags around the World. *World Politics Review*. Preuzeto 15. jula 2020. sa, https://www.worldpoliticsreview.com/insights/28034/despite-advances-in-women-s-rights-gender-equality-lags-around-the-world.

21. World Society of Victimology. (2020, March 30). Domestic violence concerns during lockdown. Preuzeto 1. aprila 2020. sa, https://victimsupport.eu/covid-19information /?fbclid=IwAR3KYSC14Elm055wqRVwrMKIbd-1Bao3mJ2n_-kOD5K7g32-Upcpvp7hFY.

22. Ženske studije i istraživanja. (2020, jul 1). Šta žene od 65+ (ne)mogu danas u Srbiji, Bilten #1. Novi Sad: Ženske studije i istraživanja. Preuzeto 2. jula 2020. sa, http://www.zenskestudije.org.rs/aktivnosti/173-onlajn-upitnik-sta-zene-od-65-ne-mogu-u-srbiji-danas.

ADAPTATION TO CLIMATE CHANGE – SERBIAN SCENARIO

Vladimir Veković, PhD[1]
Faculty of Law, University of Priština, Kosovska Mitrovica, Serbia

Violeta Ćulafić, MSc
Ministry of Environmental Protection of the Republic of Serbia

Mihailo Veković
Trainee lawyer

Abstract: Anthropogenic factors joined the astronomical and geophysical generators of climate change at the beginning of industrialization in the second half of the 18th century. Human action has resulted in accelerated climate change which, due to its huge negative impact on civilization and the human community, deserves a serious approach. It is a global problem that, however, manifests itself at the regional, national and local levels. During strategic planning and practical action in the field of agriculture, water management, forestry, energy, ecology, protection of human health, etc. climate change is crucial. The aim of the authors is to, following a review and a detailed analysis of climate change in Serbia, point out possible directions of action in order to increase the adaptive potential of our society, and reduce the negative impacts.

Keywords: climate change, environment, anthropogenic factors, Serbia, adaptation, environmental policy.

GLOBAL CLIMATE CHANGE AND THE INTERNATIONAL RESPONSE

Climate change in a broader sense is a consequence of complex abiotic and biotic processes and is reflected in statistically significant changes in climatic parameters over long periods. For millions of years, these changes were primarily determined by the action of two groups of factors: astronomical (relating to the activities of the Sun and other astronomical objects, as well as the relations of these

1 vladimir.vekovic@pr.ac.rs

objects and the Earth distance, trajectories, relative position, inclination, etc.) and geophysical ones (e.g. volcanic eruptions, tectonic plate movement and inclination changes) (Sekulić, Dimović, Kalmar Krnajski Jović & Todorović, 2012: 13). Under their influence, climate changes took place gradually, which enabled the flora and fauna, but also the human species to adapt to them without major difficulties. With the beginning of industrialization, in the second half of the 18th century, astronomical and geophysical factors were joined by anthropogenic factors (created by human activity) and in the next two centuries the latter took precedence, leading to accelerated climate change. Namely, industrialization involves the combustion of large amounts of fossil fuels (for the purpose of obtaining electricity) and the transfer of natural habitats (for example deforestation) to urban and agricultural areas, which resulted in disruption of the existing balance in the presence of certain gases in the atmosphere. Due to the increased concentration of carbon dioxide, water vapor, methane, nitrogen sub oxide, Freon and ozone, the Earth is unable to absorb the short-wave radiation of the Sun, which usually returns to space, so infrared rays remain under the gas layer and our planet absorbs them. Under the influence of this process, the greenhouse effect occurs along with global warming as its consequence.

The most significant driver of global warming is atmospheric carbon dioxide, whose concentration has increased significantly in the last few decades. During the 1990s, the combustion of fossil fuels emitted about 6 Gt of carbon per year, and at the beginning of the 21st century, that amount increased by 30% and amounted to 7.8 Gt. Emissions resulting from deforestation due to the expansion of areas intended for housing and agricultural activities account for about 12% of total anthropogenic carbon dioxide emissions. Given that the emissions of other greenhouse gases (GHG) are caused by human activity; it is obvious that we live in an age of anthropogenically induced climate change. Thus, climate change in a narrower sense represents those climate changes that occur as a result of human activities in the biosphere. Accordingly, the climate change defined in Art. 1, Para. 1, Item 2, of the United Nations Framework Convention on Climate Change (Law on Ratification of the United Nations Framework Convention on Climate Change, with annexes, Official Gazette of the FRY International Agreements, no. 2/97, UN Convention/UNFCCC) is directly or indirectly conditioned by human action.

Global warming and climate change have a negative impact on ecosystems and biodiversity, land, agriculture, forestry, hydrology, water resources, energy, human health, availability of drinking water and food, transport, etc. It is a summary and certainly incomplete presentation of the worrying consequences of climate change for civilization and the entire human community, so it is quite understandable that the UN General Assembly in the late 1980s and early 1990s defined the issue of climate as a global problem and common concern of humanity. The already mentioned UN Convention, which was adopted at the 1992 Conference on Development and the Environment in Rio de Janeiro, is of special importance. Accordingly, there has been a consensus for many years on the need to reduce greenhouse gas emissions in order to prevent the causes of climate change (mitigation measures). Given that this is an extremely complex and long process that requires huge financial resources, as well as well-designed and synergistic action at the global, regional, national and local levels, the positive effects of mitigation measures cannot be expected for many years to come. Due to that, more and more attention is paid to adaptation measures, i.e. climate change adaptation measures. Adaptation is essentially a measure aimed at reducing the vulnerability of natural and anthropogenic systems to the observed or expected effects of climate change. In any case, a meticulous consideration of climate change, its causes and consequences, as well as planning an adequate response (regardless of whether it is a mitigation or adaptive measure), is one of the greatest challenges to humanity in the 21st century.

SERBIAN POLICY IN THE FIELD OF CLIMATE CHANGE

In proportion to its area, population and economic potential, Serbia significantly contributes to global warming and climate change. According to the data of the International Energy Agency (IEA) from 2009 (which have not changed significantly in the meantime), the intensity of greenhouse gas emissions in relation to the national product in Serbia is five times above the world average. In relation to the national product calculated at purchasing power parity, the observed carbon dioxide emission ranks our country among the top ten most important emitters in the world. In addition, Serbia has an extremely small national product per unit of energy consumed four times less than the world average and six times less than the average of the member countries of the Organization for Economic Cooperation and Development (OECD). Therefore, the energy consumed in Serbia contains an above-average amount of greenhouse gases and produces an economic result below the average, which makes it one of the poorest countries in Europe. In the region of Western Balkans, Serbia stands out with its relatively significant contribution to global warming: namely, its share in carbon dioxide emissions is higher than its share in national product (GDP), primary energy consumption (TPES) or population (Kovačević, 2010: 147-149). An additional concern is the fact that 70% of electricity is of fossil origin, i.e. produced in thermal power plants by burning lignite of poor quality. Equally unfavorable news is that the development of renewable energy sources is still in its infancy, although Serbia has significant sources of energy from the sun, wind, water, biomass and geothermal energy, and that the environmental awareness of citizens is extremely low. Accordingly, it is not surprising that, if these unfavorable trends continue and intensify, Serbia will be severely affected by global warming and climate change. According to the relevant climate scenarios, an increase in temperature of 1°C by 2040, or 2°C by 2070 and 4°C by the end of the century are to be expected in our country (Climate change and health, 2016). This could result in a number of frightening consequences, including: increased frequency of climatic extremes (droughts, storms, "acid rains", floods, landslides, erosion processes); accelerated melting of snow cover and glaciers on high mountains and poles; threatening the survival of small island states and states with low coastal zones due to rising sea and ocean levels; salinization and shortage of drinking water; reduction of areas under agricultural crops; desertification; migrations of population in search of food and water; armed conflicts over limited resources; danger of spreading infectious diseases and increased degree of morbidity and mortality, etc.

In the Second Report of the Republic of Serbia to the UNFCCC from August 2017 (Report), our country presented a number of alarming data on observed and expected climate change (climate scenarios) and their negative impact in the following sectors:

1) Hydrology and water resources: 99 significant flood areas have been identified, located along the banks of large rivers the Danube, Tisza, Sava, Drina, Velika Morava, South Morava and West Morava. The floods of May 2014 affected 1.6 million people, and the damage and losses were estimated at around €1.5 billion. Starting from climate scenarios, further intensification of erosion processes can be expected in the future, with moderate to high reliability; torrents and floods on small rivers and increased flooding by the rivers of medium size (with moderate reliability). Measures of adaptation to changed climatic conditions in the sector of hydrology and water resources are, according to the period required for their implementation, divided into short-term, medium-term, long-term and continuously long-term. There is also a division into risk-free measures (NR no regret), low risk regret (LR low regret) and those that require additional technical and economic analysis (TEAR techno economic analyzes required) (Report, 2017: 85-90);

2) Forestry in the period between 2003 and 2012, damage from forest fires occurred on an area of 36,095 ha, which is about 1.6% of forests in our country. In 80% of cases, forest fires occurred during March, April, July and August. The expected increase in temperature, as well as more frequent and longer dry periods, will contribute to faster expansion and increase of forest areas that will be affected by fires. Pedunculate oak (*Quercus robur L.*) and beech (*Fagus sylvatica L.*) are most exposed to the negative impact of climate change. The most common negative factors in forest ecosystems during the observed period were pests, primarily moths (*Lymantria dispar*) and diseases. Given that there is a real danger that gubernatorial attacks in the future will contribute to significant economic losses in this sector and reduce the number and quantity of ecosystem services provided by forests, a number of short, medium and long-term adaptation measures have been proposed (ibidem: 90-95);

3) Agriculture expected reduction of corn yield for the 2071-2100 period. It ranges from -22% to -52% for the entire country, while the reduction of winter wheat yields in the south of Serbia will be -10% (regional vulnerability). Water and aeolian erosion affect approximately 80% of agricultural land, primarily in hilly and mountainous areas, but also in lowland areas, primarily in Vojvodina. In the long run, the effects of extreme weather conditions can reduce soil fertility and significantly impair its functions, so the selection and introduction into production of drought and high temperature resistant varieties, crop rotation, rational and efficient use of fertilizers, increasing organic content in the soil, irrigation, afforestation to protect the land from erosion processes, as well as other adaptation measures should be given priority (ibidem: 95-101);

4) Human health - intense heat waves (tropical nights and summer days), increase in average temperatures, increasingly present climatic extremes (droughts, storms, floods, etc.), poor air quality, high concentration of carbon dioxide and other greenhouse gases, along with other climate changes affect the increased incidence of vector-borne infectious diseases (malaria - *Malaria tropica*, Lyme disease - *Lyme borreliosis*, West Nile fever - *Encephalitis Nili occidentalis*, Dengue fever), spread of water-borne infectious diseases (cholera - *Cholera* and diarrhea - *Diarrhea*) and an increase in the mortality of the vulnerable part of the population (persons with cardiovascular and respiratory diseases, diabetics, elderly people of lower socio-economic status, children, etc.) (ibidem: 101-103).

In addition, the Report lists the measures and activities that our country is taking or, according to the established dynamics, intends to take in order to adapt vulnerable sectors and systems through capacity building, strengthening resilience and reducing vulnerability to observed and expected climate change. Regarding its contribution to achieving the goals of the UN Convention, the following activities stand out: a) in June 2015, the Government of the Republic of Serbia submitted the Intended Nationally Determined Contributions to Reducing Greenhouse Gas Emissions, predicting a 9.8% reduction in GHG emissions by 2030, as compared to the levels released in 1990; b) a Department for Climate Change was established in the Ministry of Environmental Protection in 2008, with the aim of providing the necessary institutional structure for fulfilling the obligations towards the UNFCCC, but also in the process of accession to the European Union (EU); c) numerous and significant researches and systematic observations of climate change have been realized, primarily thanks to the participation of scientific, state and other institutions and individuals in scientific and technical programs of the World Meteorological Organization, EU, as well as projects financed and realized on the principle of bilateral and multilateral cooperation; d) contents on the environment that directly or indirectly deal with climate change have become an integral part of curricula, programs and textbooks for primary and secondary school students, but also for university students (which affirms the view that the development of environmental awareness is an imperative of modern times); e) in previous years, continuous efforts have been made to improve cooperation with Member States and UNFCCC bodies; f) through the process of drafting the Report to the UNFCCC, the establishment of a system

for continuous monitoring, reporting and verification (MRV) of data and information relevant to the fight against climate change has begun (ibidem: 107-114).

Based on the data from the Report, it can be unequivocally concluded that as a party to the UNFCCC, the Kyoto Protocol (Law on Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, Official Gazette of RS - International Agreements, no. 88/07 and 38/09 - other law), The Doha Amendment (Law on Ratification of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, Official Gazette of the RS - International Agreements, no. 2/17) and the Paris Agreement (Law on the Ratification of the Paris Agreement, Official Gazette of the RS - International Agreements, no. 4/17), Serbia contributes to the global fight against climate change in accordance with its capacities, national specifics and established development goals. At the same time, our country aspires to EU membership (accession negotiations opened on January 21, 2014), so the relations between the EU and Serbia in the field of climate change should be viewed as part of the overall relations between this organization and the candidate country in light of the possibility of harmonizing the policy and regulations of the candidate country with the policies and regulations of the EU. Hence, Serbia's efforts in the field of climate change are primarily determined by the activities carried out within the process of Serbia's approach to the EU, i.e. the process of harmonization of national legislation with the acquis communautaire. Climate change policy and law form an important part of Chapter 27 - Environment and climate change, which is not yet open. The experience of most countries that have completed accession negotiations indicates that this is an extremely demanding, complex and expensive chapter, both because of its scope and because of the marked lag in terms of environmental protection standards and the fight against climate change in relation to the EU. According to estimates by the European Environment Agency (EEA), almost 85% of national regulations in the field of environment and climate change derive from about 500 EU regulations and directives (Halpern, 2014: 215). The successful conclusion of the negotiations and the closure of Chapter 27 will only be possible if Serbia provides adequate guarantees regarding the timing and manner in which the full transposition, implementation and effective application of the acquis in this area will be ensured. The exceptional importance of this issue is confirmed by the fact that about 20% of all proceedings for non-compliance with EU regulations, which the European Commission initiates against member states, relate to the environment (Delivet, 2013: 227). Accordingly, it is necessary to raise the level of implementation of the National Program for the Adoption of the Acquis (NPAA) from 60%, as it was from 2013 to 2015, to over 90% in the coming period. Harmonization of national legislation with EU regulations is of key importance for our country (Vukasović & Todić, 2012), but it is also important to strengthen the existing administrative and judicial capacities, form new institutional resources and continuously improve the knowledge and practical experience of employees (Medjak, 2017). Last but not least, Serbia must successfully respond to the financial challenge. Communal and energy infrastructure lags drastically behind the level of environmental services in the EU (Belgrade, Novi Sad, Nis and other large cities do not have municipal wastewater treatment systems; the rate of solid municipal waste recycling is only 4%, while in the EU it is over 40%; exposure of population to emissions of sulfur dioxide is 5.5 times higher *per capita* than in the EU member states, etc.). Having in mind the stated data, the total costs of Serbia (capital, operational and administrative) for the fulfillment of the acquis communautaire from Chapter 27 for the period 2011 - 2030 are estimated at €10.6 billion. Operating costs (amounting to €4.6 billion) will not be financed from international sources, but in accordance with the application of the "polluter pays" principle and the principle of full cost recovery, from private sources, resource use fees, and the budget (National Strategy for approximation in the field of environment for the Republic of Serbia, Official Gazette of RS, no. 80/2011). Yet despite limited financial resources, there are still positive changes in the fight against climate change, as evidenced by the fact that the production of electricity from renewable sources has

grown significantly in recent years - 2019 from the total of 1,361 GWh of electricity obtained in this way, wind farms (Čibuk 1 - installed capacity 158 MW, Kovačica - 104.5 MW and Košava - 69 MW) produced 892 GWh, or 65.6%. Čibuk 1 is the largest wind farm in Serbia, in the construction of which required an investment of €300,000,000. It will supply electricity to about 113,000 households and will contribute to the reduction of carbon dioxide emissions by 370,000 tons per year. In the same year, mini hydropower plants (16.9%) and biomass processing plants (10%) significantly participated in the production of electricity from renewable sources (Spasić, 2020). Undoubtedly, this is an exceptional achievement of our country and an initial step towards an ambitious strategy formulated by the European Council in 2007, relating to the energy sector and climate change in the EU Member States until 2020. As a central part of the strategy, the 20-20-20 concept includes: a) reducing greenhouse gas emissions by 20% compared to 1990; b) increasing of the share of renewable energy sources in energy consumption by 20%; c) increasing energy efficiency in order to reduce energy consumption by 20% (Kronja et. al., 2015: 37-38).

CONCLUSION

As a party to the UNFCCC and supporting documents, Serbia contributes to the global fight against climate change in accordance with its capacities, national specifics and established development goals. Also, the process of joining the EU requires our country to fully comply with EU climate policy and take on an appropriate share in climate action. Therefore, the accession negotiations and the beginning of the implementation of the Paris Agreement (after December 31, 2020) impose significantly greater responsibility and more complex obligations on Serbia in the field of climate change. These obligations are closely linked and complementary.

According to the forecasts of the Intergovernmental Panel on Climate Change (IPCC), greenhouse gas emissions will increase in the next few decades, so that the positive effects of mitigation measures cannot be expected in the long run. Although mitigation is not being abandoned, in recent times, both globally and in Serbia, increased attention has been paid to adaptation measures, the implementation of which contributes to increasing tolerance to climate change. The choice of possible adaptation measures is hampered by Serbia's modest adaptive potential, the use of different, often inconsistent forecasting methods, and the unreliability of data. In order to overcome these shortcomings and select adequate adaptation measures, it is necessary to take into account the following recommendations: adaptation to climate change must be set as one of the priorities; adaptations not only reduce the damage, but also use the positive effects; it is necessary to achieve intensive cross-sectoral cooperation and regional approach, develop a National Strategy and form a National Council for Adaptations; balanced regional development, improving climate change monitoring, strengthening educational capacities and raising public awareness of this problem are prerequisites for effective adaptation; special attention must be paid to the development of resources and capacities for disaster risk reduction, application of 'soft', i.e. non-structural adaptation measures and the participation of the civil sector in the decision-making process and strategic documents (Sekulić et al., 2012: 59-60).

Based on the above, as well as the fact that there is a high degree of vulnerability of Serbia in an alarming climate situation, we can conclude that climate change due to its extreme complexity and potentially huge negative impact on the functioning and survival of human society deserves a very serious approach. This is a fundamental input and a crucial factor in planning and making strategic decisions, as well as in the implementation of mitigation and adaptive measures in the fields of hydrology and water resources, forestry, agriculture, human health, energy, transport, environmental protection, etc.

REFERENCES

1. Delivet, P. (2013). *Les politiques de l'Union européenne.* Paris: La Documentation française.
2. Halpern, C. (2014). La politique européenne de l'environnement. In: R. Dehousse (Ed.), *L'Union européenne* (pp. 215-226), Paris: La Documentation française.
3. *Klimatske promene i zdravlje.* (2016). Belgrade: United Nations Development Programme Country Office in Serbia, Ministarstvo poljoprivrede i zaštite životne sredine.
4. Kovačević, A. (2010). Mesto i uloga Srbije u procesu klimatskih promena. In: M. Simurdić (Ed.), *Klimatske promene:studije i analize* (pp. 147-162), Belgrade: Evropski pokret u Srbiji.
5. Kronja, J. et. al. (2015). *Strategija Evropa 2020: četiri godine kasnije: vodič.* Belgrade: Evropski pokret u Srbiji.
6. Law on Ratification of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, Official Gazette of the RS - International Agreements, no. 2/17.
7. Law on Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, Official Gazette of RS - International Agreements, no. 88/07 and 38/09 - other law.
8. Law on the Ratification of the Paris Agreement, Official Gazette of the RS - International Agreements, no. 4/17.
9. Law on Ratification of the United Nations Framework Convention on Climate Change, with annexes, Official Gazette of the FRY - International Agreements, no. 2/97.
10. Medjak, V. (2017, December 19). Nacionalni program za usvajanje pravnih tekovina EU (NPAA). *European Fund for the Balkans*, Belgrade. Accessed on July 17, 2020. www.balkansfund.org
11. National Strategy for approximation in the field of environment for the Republic of Serbia, Official Gazette of RS, no. 80/2011.
12. *Second National Communication of the Republic of Serbia under the United Nations Framework Convention on Climate Change.* (2017). Belgrade: Ministry of Environmental Protection.
13. Sekulić, G. Dimović, D. Kalmar Krnajski Jović, Z. & Todorović, N. (2012). *Procena ranjivosti na klimatske promene: Srbija.* Belgrade: WWF (Svetski fond za prirodu), Centar za unapređenje životne sredine.
14. Spasić, V. (2020, April 10). U 2019. duplirana proizvodnja električne energije iz obnovljivih izvora u Srbiji. *Balkan Green Energy News*, Belgrade. Accessed on July 12, 2020. www.balkangreenenergynews.com/rs
15. Vukasović, V. Todić, D. (2012). *Environmental Law in Serbia.* The Netherlands: Kluwer Law International.

JUVENILE CRIME TRENDS IN SERBIA AND PENAL POLICY – IS THERE A RELATION?[1]

Natalija Lukić, PhD[2]
Faculty of Law, University of Belgrade, Serbia

Abstract: The paper analyzes the relationship between juvenile crime and the penal policy of courts in Serbia. The author denotes the increase in the crime rate, which is especially evident in crimes against life and limb. The crime rate was calculated in relation to the total population, but also in relation to the age group that corresponds to the age category of juvenile offenders. The second method of calculation demonstrates even more noticeable increase in juvenile crime. At the same time, it can be stated that the penal policy of the courts is increasingly lenient and that the courts very rarely opt for institutional educational measures or juvenile imprisonment. Having in mind that the penal policy is influenced by legal solutions, the author also took into account the changes in juvenile criminal legislation.

Key words: crime rate, juvenile offenders, penal policy, legal solutions.

INTRODUCTION

Juvenile crime reopens many dilemmas, ranging from issues related to etiological factors, duration of criminal career, to various criminal law models of regulation, prevention measures and penal policy. One of the important issues is the prevalence of juvenile crime and various methods to determine it. This is one of the goals of this paper. Since there is no possibility of determining the actual extent of juvenile crime in Serbia on the basis of national victimization and self-reported studies, the paper analyzes the available statistical data. In addition, the aim of this paper is to compare crime data with the penal policy of the courts in order to discover whether possible changes in the crime trends are accompanied by changes in sanctions imposition. Since penal policy is affected by other factors as well, the paper also briefly presents the legal solutions that have regulated the criminal law status of juvenile offenders in the past decades. Crime trends, expressed primarily through the crime rate, as well as the penal reaction of the courts in Serbia were analyzed for the period 1980-2018.

1 The article is the result of work on the project of the University of Belgrade Faculty of Law entitled „Identity Transformation of Serbia for 2020“.

2 natalija.lukic@ius.bg.ac.rs

MEASURING JUVENILE CRIME

In the criminological literature, there is no unique position in defining the term juvenile. This is mostly caused by different legal requirements regarding the age limit for criminal liability, i.e. liability threshold for statutory offenses in legal systems in which this category exists. In addition, many criminologists use wider concept that transcends criminal law limits, thus under term juvenile including young offenders up to the age of 21 or 24 (Butts, Evans, 2014: 61-78). The extent and trends of juvenile crime can be analyzed in different ways. First, the prevalence of crime can be determined on the basis of official statistical data. In addition to the analysis of total numbers, it is common for the extent of crime to be expressed through the crime rate. Furthermore, since juveniles represent one specific age group, it is necessary to express their participation in crime as a percentage in relation to all registered crime. Finally, as official data do not contain information on all committed crimes, national studies on self-incrimination and victimization are used to determine the real extent.

When it comes to the crime rate, in most cases it is calculated in relation to the entire population within society. On the other hand, in order to obtain more accurate data on the prevalence and trends of crime within age groups, it is necessary to calculate the rate in relation to the specific age population. In the case of juveniles, this would mean that the total number of reported/accused/convicted juveniles is divided by the total number of persons of that age in a society and multiplied by a certain unit (usually 100.000). Consequently, we can see how many juveniles are registered or convicted in relation to that age population alone and the trend of juvenile crime in the similar way, as well. Since demographic changes are inherent in every society, this is very important. For example, the increase in overall crime in the United States during the 1970s and 1980s was partly explained by the large increase in birth rates in the post-World War II period, which in the decades that followed led to a 50% increase in the younger population compared to the previous seventy years (Wolfgang, 2002: 355-356). The crime rate as a method of measuring also has certain limitations. In addition to the objections related to the dark figure of crime, there are also the following shortcomings: cumulation of criminal offenses where only the most serious criminal offense is recorded, giving equal importance to all criminal offenses regardless of their severity, different approaches to the usage of demographic data, i.e. calculation based on decades-long censuses and not on an annual basis (Hagan, 2014: 115-116).

The literature also draws a parallel between the percentage of juveniles in reported/convicted crime with their percentage in the total population in order to establish if there is a proportion. Hence, the participation of young people aged 10 to 17 in committing violent crimes is around 19%, while the same age category makes up 13% of the total population in the USA, for example. (Butts & Evans, 2014: 71).

JUVENILE PENAL POLICY

The penal policy of courts is determined primarily by criminal law solutions, which, when it comes to juveniles, are most often between two models - the justice and the welfare model. However, there are other variations in the criminal law approach to juvenile crime between these two models (Škulić, 2011: 96-111). Comparative legal experiences demonstrate that various factors can influence the penal policy towards juveniles. For example, some authors state that penal policy in the United States varies from rehabilitation to repression, and that these cycles alternate. A change in the direction of response to juvenile crime occurs when the public and law enforcement authorities believe that juvenile crime has reached a limit that can no longer be tolerated (Bernard & Kurlychek, 2010: 10-29). Quite often,

several cases of serious crimes committed by juveniles get media covers which then leads to a wave of moral panic and finally to the adoption of more repressive legal solutions, (Singer, 1996: 5-13; Ostendorf, 2010: 91-104; Goldson & Yates, 2008: 103-117). The fluctuation of crime does not have to be related to the choice of criminal-political measures. For example, it is stated that in the United States there has been a gradual decrease in the number of juveniles arrested for property and violent crimes since the 1990s, and that this trend has been stable in the last ten years (Bishop & Decker, 2008: 3-35), while on the other hand, the USA legal system is characterized by a number of repressive legal possibilities against juvenile offenders (possibility of trial before regular courts, three strikes law, registration of juvenile sex offenders). However, since 2005 there have been several major juvenile policy shifts (laws prohibiting juveniles from being housed in adult prisons, expansion of juvenile court jurisdiction to older youth, altering laws to make it more difficult to try juveniles as adults, repealing life sentencing without parole for juveniles who have committed murder, reducing automatic transfer laws – McNeece & Ryan, 2014: 39). Germany, on the contrary, is cited as an example of a state that does not deviate from the welfare model while there has been a steady increase in reported juveniles since the 1990s (Dünkel, 2008: 225-262). Therefore, it is stated that apart from the crime trends, there are other circumstances that affect the adoption of legal solutions and penal policy of courts. These are the already mentioned moral panics, then the need to achieve the legitimacy of the criminal justice system through repressive reactions, although in practice substantial changes do not necessarily occur (Lukić, 2020: 318-319 according to Singer, 1996: 13-22), the impact of comparative legal solutions as well as socio-economic factors (Junger-Tas, 2008: 505-532).

JUVENILE CRIMINAL LAW IN SERBIA

Since the enactment of the Criminal Code for the Principality of Serbia from 1860, that stipulated age of 12 as the limit of criminal responsibility and rules for sentencing persons aged 12 to 16, it has been obvious that juveniles have had a specific position in Serbian criminal law (Srzentić, Stajić & Lazarević, 1978: 489). The general part of the 1947 Criminal Code distinguished between juveniles eligible for criminal liability and criminally irresponsible juveniles. To the first category only educational measures could have been imposed while punishment with certain restrictions (e.g. prohibition of the death penalty) was prescribed for the second category. Furthermore, this Code prescribed the possibility of imposing educational measures on younger juveniles who were criminally responsible if it was not necessary to impose a sentence in the interest of development and enhancement (Srzentić et al., 1978: 491). The Criminal Code from 1951 contained similar provisions as the previous Code, as well as the possibility of punishing a criminally responsible juvenile (Criminal Code, Official Gazette FPRY, 13/51). The most significant changes in the criminal law substantial position of juvenile perpetrators of criminal offences were made by the Law on Amendments to the Criminal Code from 1959. This Code abolished the distinction between juveniles eligible for criminal liability and criminally irresponsible juveniles. Educational measures became the basic criminal sanctions, while the possibility of imposing a prison sentence was stipulated only for older juveniles. In addition, the possibility of imposing educational measures to younger adults was created (Srzentić, 1978b: 288). The Criminal Code of the SFRY from 1977 contained only general provisions on juveniles, while more detailed regulation of this area was left to the republics and autonomous provinces.

The current Law on Juvenile Offenders and Criminal Law Protection of Juveniles (Official Gazette 85/2005) entered into force in 2006. Among the significant novelties introduced were diversion orders as measures of a special kind. In accordance to international documents and comparative legislation, the legislator opted for this solution which avoids criminal proceedings or the imposition of a crimi-

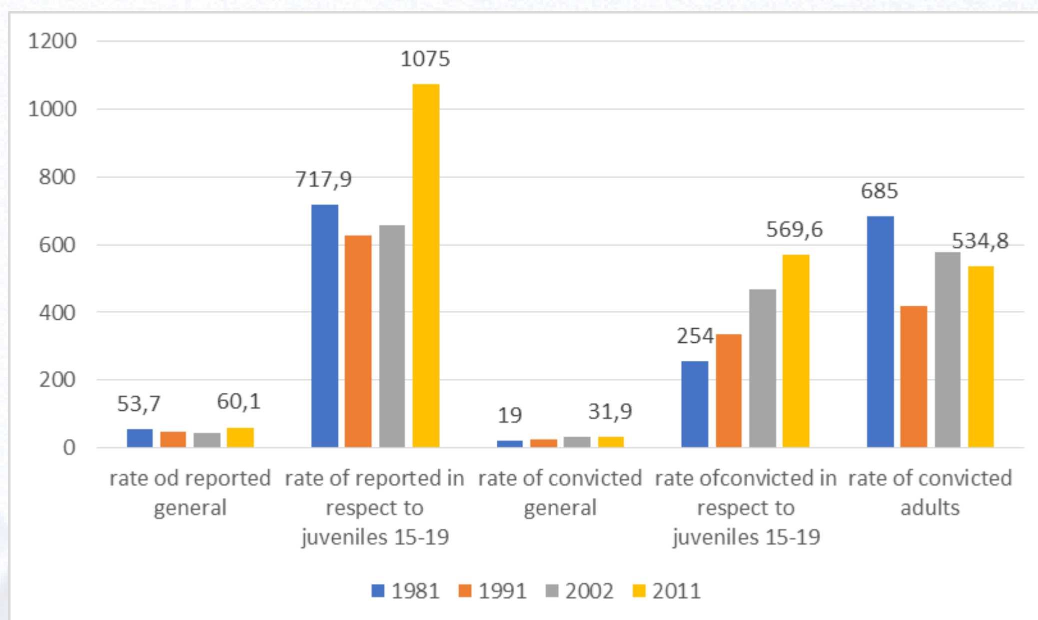
nal sanction for criminal offences that could be marked as “medium serious crime”. Furthermore, the number of educational measures within certain types has increased, and it has been pointed out that institutional educational measures are the last resort, (Perić, Milošević & Stevanović, 2008: 63-65). Juvenile imprisonment can still, under the conditions provided by the Law, be imposed only on older juveniles. The Draft Law on Juvenile Offenders and Protection of Juveniles in Criminal Proceedings (hereinafter the Draft) introduces certain novelties in the field of juvenile criminal law. Without being able to present them in detail, only a few will be listed here. The Draft expands the range of diversion orders, introduces the obligation for the court to determine the duration of the educational measure of remand to correctional facility, which was not the case before, and when it comes to the procedure - it expands the possibility of the public prosecutor for juveniles to defer criminal prosecution, so that it will no longer include only criminal offenses punishable by imprisonment for up to five years but also for up to eight years (more in Škulić, 2015: 39-68).

JUVENILE CRIME IN THE REPUBLIC OF SERBIA

In Serbia, the prevalence of crime in general, as well as juvenile crime, is determined primarily on the basis of official statistical data on registered crime. Many objections can be made to this method of crime measurement (Ignjatović, 2018: 118-121) and it would certainly be better if there was a possibility to complete the official data and compare them with the data obtained from self- incrimination and victimization studies. Juveniles, in accordance with the provisions of the criminal legislation, are considered to be persons who at the time of commission of the criminal offence have attained 14 years of age and have not attained 18 years of age, with the category of younger juveniles being persons aged 14 and 15, while older juveniles are aged 16-17. It should be noted that the methodology of recording data on juvenile crime is not always the same in the period that will be analyzed in the paper (1980-2018). First of all, the keeping of statistical data is determined by criminal law norms, and they have changed in the course of last four decades. Secondly, in certain years, the classification into younger/older juveniles was not performed, which is why it was not possible to analyze the difference for the entire specified period. Further, in the 1980s and 1990s, data were not kept for all criminal offenses, but for a certain number of groups of criminal offenses. Finally, it is important to note that since 1998 reports of the Statistical Office of the Republic of Serbia have not included data for the Autonomous Province of Kosovo and Metohija.

CRIME RATE

Graph No. 1 presents the crime rate calculated for reported and convicted juveniles. We calculated the rate in both ways, first in relation to the entire population, and then in relation to the population that is closest to the juvenile age, according to the criminal law provisions. Namely, data were collected for the years in which the census was conducted from 1981 to 2011. In order to enable comparison, we took the age category 15-19 for each analyzed year for which data were available and in relation to that number of persons calculated the crime rate of juveniles reported, as well as juvenile convicted perpetrators. In addition, the graph no. 1 shows the crime rate calculated for adult convicts. We calculated this rate taking into account only the population of adult citizens (excluding the age of 18 and 19 years).

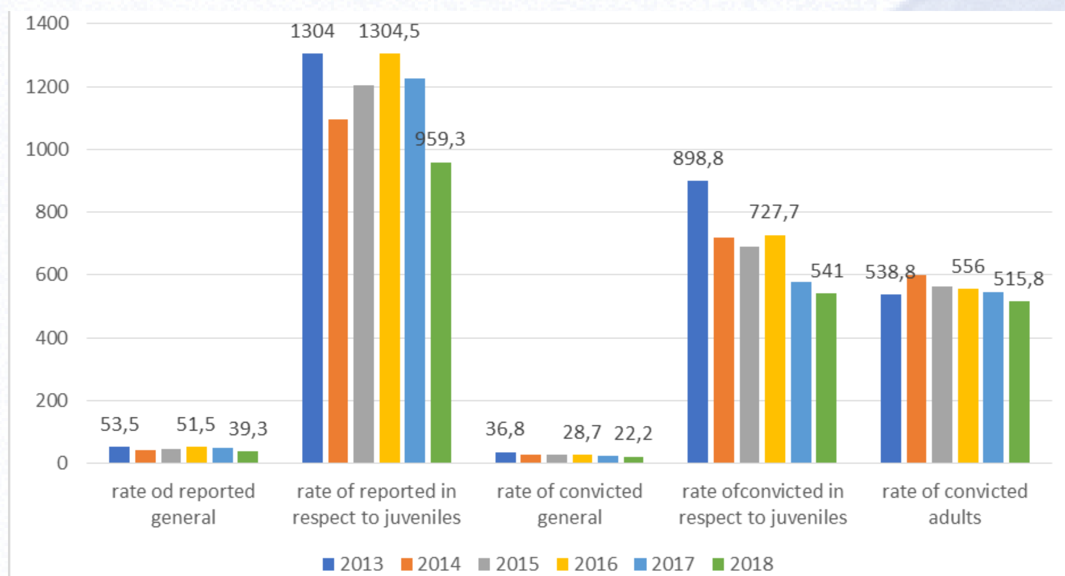


Source: Statistical Office of the Republic of Serbia

Graph No. 1: *Crime rate of juveniles and adults (1981-2011)*

Conclusion that there has been an increase in crime can be drawn from the data for the juvenile crime rate calculated in relation to the entire population. First of all, the rate of reported juveniles was the highest in 2011 (60.1), and the lowest recorded in 2002 (43.3), which makes a difference of 38.8%. On the other hand, the reported juvenile crime rate calculated in relation to the population aged 15-19 shows that after 1981 it gradually decreased (the lowest was in 1991 - 628.1) and the highest recorded rate was in 2011 (1075). Compared to 1991, the rate of juvenile reported crime increased by 71%, and compared to 1981 by 49.7%. So, in both cases, the increase is higher compared to the first way of calculating the crime rate. The situation is similar with the rate of convicted juveniles. Taking into account the entire population, it can be seen that the lowest rate was recorded in 1981 (19), and the highest in 2011 (31.9). Thus, the increase in the conviction rate was 67.9% from 1981 to 2011. The data for the rate calculated in relation to the population aged 15-19 show that the lowest rate (254) was also recorded in 1981, and the highest in 2011 and amounted to 596.6, which is an increase of 134.8%. On the other hand, unlike juvenile crime, which is on the rise according to the data for the analyzed years, the situation with adult crime is different. Namely, the rate calculated in relation to adult citizens shows that in 1981 the highest rate was recorded (685), and in the following analyzed years it was lower. The lowest rate was recorded in 1991 (419), but it is interesting that in 2002, as well as in 2011, the rate was also lower compared to 1981. The decrease in 2011 compared to 1981 is 28%.[3]

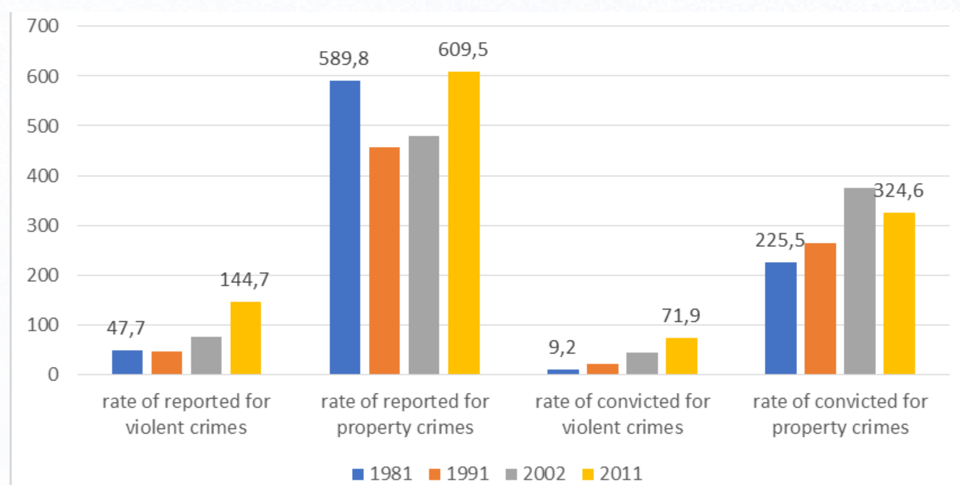
In graph No. 2 we analyzed the crime rate for the period 2013-2018. Data for juvenile age are available for the mentioned years, so we were able to calculate the crime rate exactly in relation to the age category which is determined as the category of juveniles in accordance with the criminal law provisions.



Source: Statistical Office of the Republic of Serbia

Graph No. 2: *Juvenile and adult crime rate (2013-2018)*

According to the data in graph No. 2, it can be concluded that the reported juvenile crime rate has had in principle a stable trend, except in the last two years when a decline was recorded. Comparison with previous decades is not possible because the data for ages 14-18 are not available for 1981, 1991 and 2002. The data for 2011 are available and they show that the rate of reported juveniles was 1336 and convicted 708. When it comes to the rate of convicted juveniles, we can see that the highest number was recorded in 2013 (36.8 and 898.8), after which there is a gradual decline. As far as adult convicts are concerned, the crime rate in the analyzed period is in principle stable and without major oscillations. The rate was calculated in relation to the population of adult convicts. As for juveniles in 2018, there is a noticeable decline in the rate of convicted crime, which is why it is necessary to monitor the crime trends of both adults and juveniles in the coming period to see if the declining rate continues.



Source: Statistical Office of the Republic of Serbia

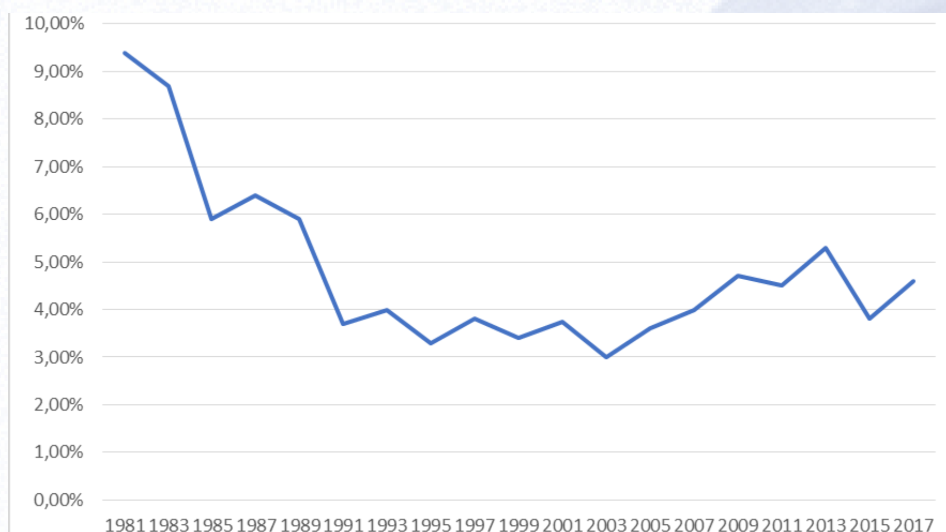
Graph No. 3: *Rate of reported and convicted juveniles for violent and property crimes*

Graph No. 3 presents the rates of certain crimes. These are criminal offenses against life and limb as well as criminal offenses against property. These groups were taken because of the possibility of

comparison in the analyzed years. Although changes in criminal legislation in recent decades have affected these groups of crimes, in practice the most common juvenile crimes (minor and aggravated bodily harm, theft, aggravated theft) have not changed significantly. The rate is calculated in relation to the population aged 15-19. When it comes to crimes against property, it is obvious that the rate of those reported is not followed by the rate of convicts. After 1981, the rate decreased, and the highest rate during the observed period was recorded in 2011. On the other hand, the rate of those convicted of crimes against property gradually increased, and in 2011 there was a slight decline. There is a noticeable increase in crimes against life and limb in both the reported and the convicted. Compared to 1981, the rate of reported persons increased by more than 200%, while the rate of convicts increased by 681%. This remarkable increase is visible even if we look only at absolute numbers. Hence, in 1981, 332 persons were reported for crimes against life and limb, while 64 were convicted. In 2011, 582 persons were reported and 289 convicted. At the same time, the population aged 15-19 has decreased. Thus, according to the 1981 census, it numbered a total of 696,338 people, and in 2011 it reached 401,994 people. Calculating the crime trends by taking into account only the exact age population in this case shows that in 1981, for every approximately 2,100 persons aged 15-19, one person was reported for a crime against life and limb, while in 2011 it was a ratio one versus 691. As essentially the absolute numbers of reported and convicted juveniles are not large, the calculation of the rate in relation to the entire population cannot show such striking differences in crime trends (although calculation in percentage does show differences) as is the situation with the crime rate calculated in respect to the specific age group. Thus, the rate of reported crimes against life and limb in 1981 in relation to the entire population was 3.6, the rate of convicts 0.7 while in 2011 the rate of reported 8 and the rate of convicts 4. As for the structure of crimes against life and limb, juveniles are most often convicted of aggravated bodily harm. For example, in 1983 the share of juveniles convicted of these two crimes in relation to all incriminations in the group was about 65%, in 1988 about 70%, in 1993 67%, in 1998 75%, in 2003 76 %, in 2008 74%, in 2013 80% and in 2018 87%. As for murders, the data show that, for example, in 1983 the share of convicts in the group of crimes against life and limb was approximately 20%, while in 2018 it was 3.5%. It should be borne in mind, however, that according to the Criminal Code of the Republic of Serbia from 1977, the criminal offense of aggravated robbery (Criminal Code, Official Gazette, 1977 with amendments, art. 169, para. 2) existed if during the robbery the person was intentionally murdered, which makes it impossible to follow the reports and convictions for murder with complete accuracy, because in the current Criminal Code this situation is stipulated by Article 114, para. 1, item 4 as aggravated murder.

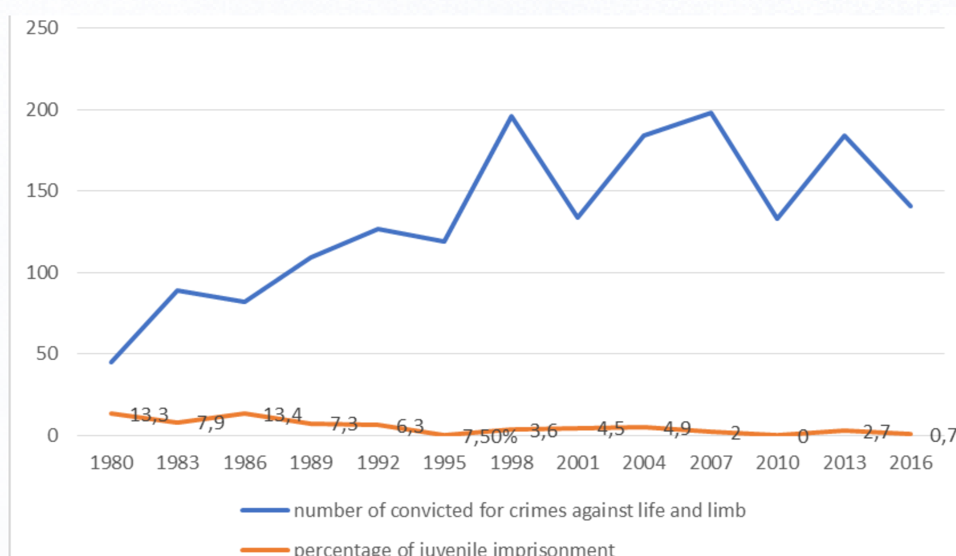
PERCENTAGE OF JUVENILE OFFENDERS IN TOTAL CRIME

Juvenile crime by its nature makes up a smaller part of the total crime in a state. When it comes to Serbia in the period from 2013-2018, the average share of juveniles in the entire population was 3.9%. In the total reported crime, 3.4% of persons were juveniles, and up to 5.6% of the population were convicted of crime. Hence, a conclusion can be drawn that juveniles are a more represented category in convicted crime in relation to the share of their age in the entire population. However, when comparing the data to the percentage of adults who have been convicted, similar results are obtained. Namely, the average participation of adult citizens in the entire population for the period 2013-2018 was 82.8%, while the share of adults in the total reported and convicted crime for the same period was over 90%. Thus, both juvenile and adult convicted perpetrators are a more represented category in relation to their age groups in the entire population.



Graph No. 4: *Percentage of correctional measures of liberty deprivation*

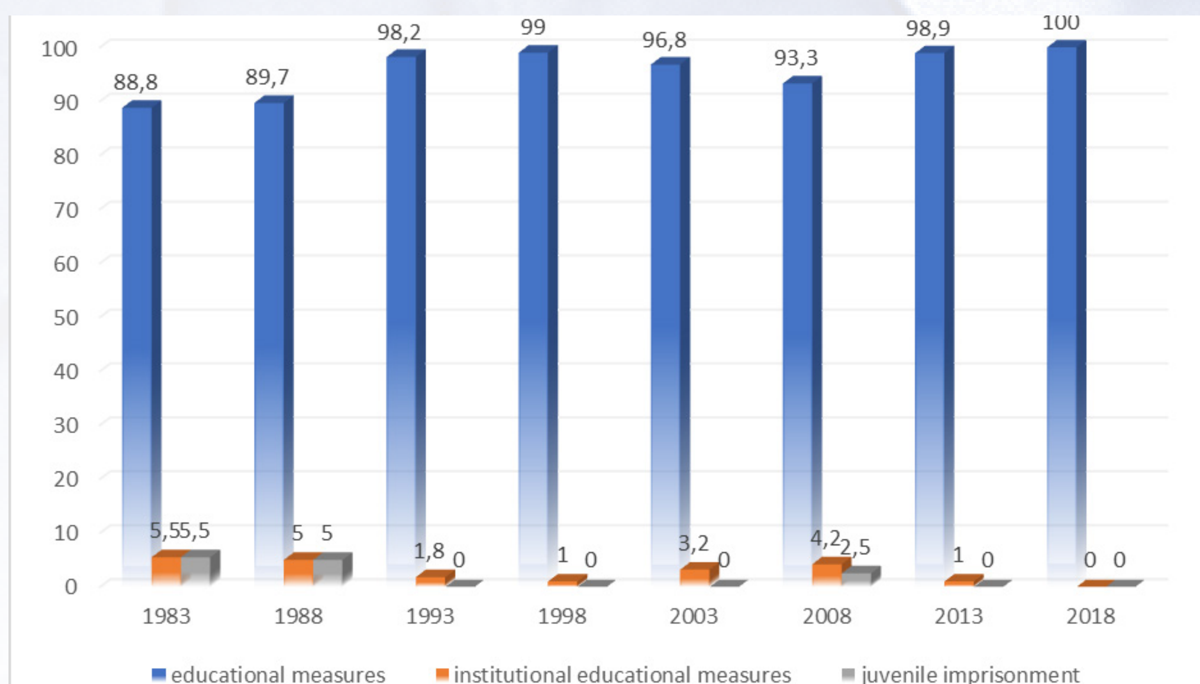
Graph No. 4 shows the percentage of imposed educational measures of deprivation of liberty, i.e. the following educational measures are in question: remand to rehabilitation institution, remand to correctional institution, committal to special institution for treatment and acquiring of social skills. It can be concluded that since 1981 the share of institutional measures in the group of all imposed educational measures has gradually decreased and that from the beginning of the 90s to 2007 there is a stable trend ranging between 3-4% whereas in the last decade there has been a slight increase by some approximately 1%. As in the period 1981-1991, there were no legal changes that could affect the trend of reducing the participation of institutional measures, it can only be concluded that courts have taken a more lenient approach and opted for these sanctions only in rare cases. It is possible, in addition, that the decisions of the courts were also influenced by the socio-economic circumstances at the time, bearing in mind that there was a milder approach in the early 1990s.



Graph. No. 5: *Relation between number of older juveniles convicted for crimes against life and limb and imprisonment percentage for these criminal offences*

Graph No. 5 presents the ratio between the number of older juveniles convicted for crimes against life and limb and the percentage of sentences of juvenile imprisonment for that group of crimes. Since the sentence of juvenile imprisonment can be imposed only on older juveniles, we have presented absolute numbers only of convicted older juveniles for crimes against life and limb. It can be concluded that the number of convicts has increased up to four times since 1980 with some oscillations, e.g. in 2001, 2010 and 2016, when a decrease in the number of convicts was recorded. However, an increase has been noticeable since 1994, and after that year, the number of convicts did not reach the level recorded during the 1980s. On the other hand, the percentage of juvenile imprisonment has decreased over time. From 13.3% in 1980 to less than 3% in the last observed decade. It is obvious therefore that penal policy is not conditioned by the crime trends. However, the question is whether such a penal policy can be justified if we keep in mind that there is an increase in number of crimes, and in this case in many situations serious violent crimes.

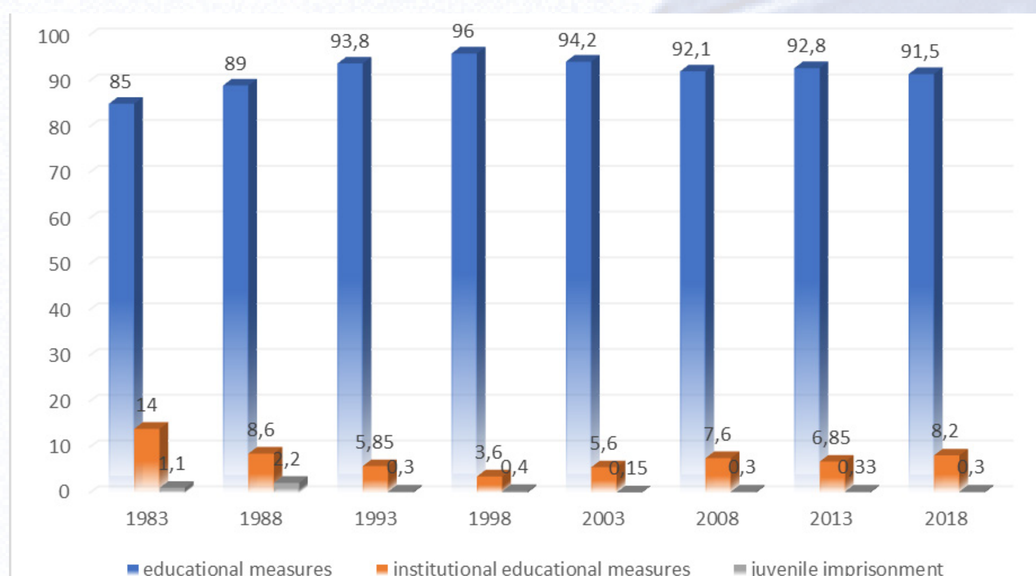
In graph No. 6, for the criminal offense of aggravated bodily harm we presented both the percentage of educational measures (which were divided into correctional and other measures) as well as the percentage of juvenile imprisonment imposed, while in graph No. 7 the same was done in relation to the crime of aggravated theft. These two crimes were analyzed due to their frequency in total number of juvenile criminal offences. First of all, when it comes to the criminal offense of aggravated bodily harm, it can be concluded that, in accordance with the general penal policy towards juveniles, courts approach has become more lenient. Thus, at the beginning of the 1980s, the share of correctional measures as well as juvenile imprisonment was slightly more than 5%, so that these sanctions were gradually imposed less frequently and reached a share of less than 1% in the last five years. The exception is 2008, when the share of these sanctions was higher, but in general, the sentence of juvenile imprisonment was extremely rarely applied.



Graph. No. 6: *Structure of penal sanctions for aggravated bodily harm*

When it comes to the criminal offense of aggravated theft, it can be concluded that the courts more often, in comparison with an aggravated bodily harm, opt for educational institutional measures, while the imposition of the sentence of juvenile imprisonment is rare. It is difficult to draw a conclusion

from the statistics as to why there is a stricter penal policy in relation to aggravated theft compared to aggravated bodily harm. In addition to the circumstances related to the personality of the juvenile and his/her environment, the courts also take into account previous convictions, complicity, attempt, etc. Furthermore, statistics do not provide information on the forms of crimes committed, which certainly affects the choice of sanction. However, even in respect to the criminal offense of aggravated theft, the more lenient penal policy in relation to the beginning of the 80's is noticeable.



Graph No.7: *Structure of penal sanctions for aggravated theft*

CONCLUSION

The analysis of statistical data on juvenile crime in the Republic of Serbia for the past four decades enables several conclusions to be drawn. First of all, the data on the crime rate show that in the last four decades, juvenile crime has been continuously growing, with the exception of the last two years (2017-2018) when a certain decline was recorded. As juvenile age lasts for only four years, we also calculated the crime rate in relation to the category of the population that approximately or completely corresponds to juvenile age in accordance with criminal law regulations, in order to determine crime trends more accurately. It turned out that this way of calculating demonstrates an even higher percentage increase in comparison to the crime rate calculated in relation to the entire population. The increase is especially evident in crimes against life and limb. We compared the data with the crime rate of adults, calculated in relation to the population of adults. The result was that, unlike juvenile crime, which is recording a continuous increase, adult crime with occasional oscillations is recording a stable trend, with the highest recorded rate being in the early 1980s.

We also analyzed the penal policy of the courts in the last four decades in order to see whether the changes in the crime trends were accompanied by certain changes in terms of sanctioning juveniles. Since criminal law regulations determine choices of sanctions imposed by courts, the paper presents legal solutions that have regulated the criminal law substantial position of juveniles in the last few decades. The analysis of statistical data showed that contrary to the trend of crime the penal policy of the courts is becoming more lenient. This was concluded primarily based on the analysis of the representation of educational measures of an institutional character, as well as the sentence of juvenile imprisonment. The intersection of the data on the number of older juveniles convicted of crimes

against life and limb and the percentage of juvenile imprisonment imposed for these crimes in the last four decades shows that with the increase in the absolute number of convicted juveniles, there was a continuous decline in the percentage of juvenile imprisonment. Furthermore, the analysis of the structure of criminal sanctions for criminal offenses of aggravated bodily harm as well as aggravated theft, which are very common in the overall number of juvenile convictions, shows that during the last four decades penal policy of courts has become more lenient, taking into account a continuous rise of educational measures of non-institutional character.

It can therefore be concluded that there is no uniformity between the crime trends and penal policy. The basis for a more lenient penal policy can be sought partly within normative solutions, bearing in mind that the current Law on Juvenile Offenders and Criminal Law Protection of Juveniles prescribes institutional measures to be imposed as a last resort (Article 11). But even without that, it is obvious that in the last three decades the courts have been less and less opting for depriving juvenile offenders of their liberty. Although such an approach does not necessarily have to be wrong due to the need to avoid stigmatization and future criminal behavior, the problem is that even at the preventive level there is no coherent and formed system of measures that would strive to prevent juvenile crime and especially juvenile violence (Simeunović-Patić, Meško & Ignjatović, 2016: 409-410). Given the evident increase in crimes with elements of violence, the question is whether a benevolent approach by courts is adequate in most of these cases. Is it justified for an older juvenile to receive a non-institutional educational measure for a serious crime, while on the other hand, the criminal legislation of Serbia in recent years has been characterized by repressive solutions (Kolarić, 2020: 208-210) that are applied to adult perpetrators of crimes? At the same time, adult crime is not characterized by an increase in the rate as is the case with juveniles. Of course, further analyses in this respect are needed and especially regarding violent criminal offences. There is no doubt that the future research in which the sample of convictions for serious juvenile crimes would be purposeful and would provide a more comprehensive picture of criminal courts decisions upon different sanctions, but even without that it is clear that in terms of criminal preventive measures, as well as within the application of criminal law, steps have to be taken in order to alter a trend that is obviously a negative one.

REFERENCES

1. Bernard, T. J. & Kurlychek, M.C. (2010). *The Cycle of Juvenile Justice* (2nd ed.), Oxford, UK, Oxford University Press.

2. Bishop, D. M. & Decker, S. H. (2008). Punishment and Control: Juvenile Justice Reform in the USA. In: J. Junger-Tas, S. H. Decker (Eds.), *International Handbook of Juvenile Justice* (pp. 3-35), New York, USA, Springer.

3. Butts, J. A. & Evans, D. N. (2014). The Second American Crime Drop. In: W. T. Church, II, D. W. Springer, A. R. Roberts (Eds.), *Juvenile Justice Sourcebook* (2nd ed., pp.61-78), Oxford, UK, Oxford University Press.

4. Dünkel, F. (2008). Juvenile Justice in Germany, Between Welfare and Justice. In: J. Junger-Tas, S. H. Decker (Eds.), *International Handbook of Juvenile Justice* (pp. 225-262), New York, USA, Springer.

5. Goldson, B. & Yates, J. (2008). Youth Justice Policy and Practice: Reclaiming Applied Criminology as Critical Intervention. In: B. Stout, J. Yates, B. Williams (Eds.), *Applied Criminology* (pp. 103-117), London, UK, Sage Publications.

6. Hagan, F. E. (2014). *Research Methods in Criminal Justice and Criminology* (9th ed.), Harlow, UK, Pearson.
7. Simeunović-Patić, B., Meško, G. & Ignjatović, Đ. (2016). Results from recent European Research on youth violence prevention: some lessons from Serbia. *Revija za kriminalistiko in kriminologijo*, 67(4), 404-413.
8. Ignjatović, Đ. (2018). *Metodologija istraživanja kriminaliteta*, Beograd, Pravni fakultet Univerziteta u Beogradu.
9. Junger-Tas, J. (2008). Trends in International Juvenile Justice: What Conclusions Can Be Drawn? In: J. Junger-Tas, S. H. Decker (Eds.), *International Handbook of Juvenile Justice* (pp. 505-532), New York, USA, Springer.
10. Kolarić, D. (2020). Višestruki povrat u krivičnom pravu Srbije – Osvrt na Zakon o izmenama i dopunama Krivičnog zakonika iz 2019. godine. In: Đ. Ignjatović (Ed.), *Kaznena reakcija u Srbiji X* (pp. 208-217), Beograd, Pravni fakultet Univerziteta u Beogradu.
11. Lukić, N. (2020). Evaluacija mera kriminalne politike prema maloletnim učiniocima krivičnih dela. In: Đ. Ignjatović (Ed.), *Kaznena reakcija u Srbiji X* (pp. 300-328), Beograd, Pravni fakultet Univerziteta u Beogradu.
12. McNeece, A.C. & Ryan, T. (2014). Juvenile Justice Policy: Current Trends and 21st- Century Issues. In: W. T. Church, II, D. W. Springer, A. R. Roberts (Eds.), *Juvenile Justice Sourcebook* (2nd ed., pp. 37-60), Oxford, UK, Oxford University Press.
13. Ostendorf, H. (2010). Strafverschärfungen im Umgang mit Jugendkriminalität. In: B. Dollinger, H.Schmidt-Semisch (Hrsg.), *Handbuch Jugendkriminalität, Kriminologie und Socialpädagogik im Dialog*, Wiesbaden, Deutschland, VS Verlag für Sozialwissenschaften.
14. Perić, O., Milošević, N. & Stevanović, I. (2008). *Politika izricanja krivičnih sankcija prema maloletnicima u Srbiji*, Beograd, Centar za mir i razvoj demokratije.
15. Singer, S. (1996). *Recriminalizing Delinquency, Violent Juvenile Crime and Juvenile Justice Reform*, Cambridge, UK, Cambridge University Press.
16. Srzentić, N. (Ed.), 1978. *Komentar Krivičnog zakona Socijalističke Federativne Republike Jugoslavije*, Beograd, Savremena administracija.
17. Srzentić, N., Stajić, A. & Lazarević, Lj. (1978). *Krivično pravo Socijalističke Federativne Republike Jugoslavije, opšti deo* (7th ed.), Beograd, Savremena administracija.
18. Škulić, M. (2011). *Maloletničko krivično pravo*, Beograd, Službeni glasnik.
19. Škulić, M. (2015). Reforma maloletničkog krivičnog prava u Srbiji. In: I. Stevanović (Ed.), *Maloletnici kao učinioci i žrtve krivičnih dela i prekršaja* (pp. 39-67), Beograd, Institut za kriminološka i sociološka istraživanja.
20. Wolfgang M. E. (2002). Youth Crime: Sumer and Later. In: R. A. Silverman, T. P. Thornberry, B. Cohen, B. Krisberg (Eds.), *Crime and Justice at the Millennium, Essays by and in Honor of Marvin E. Wolfgang* (pp. 353-364), New York, USA, Springer.

THE PURPOSE OF PUNISHMENT AS A CRITERION FOR IMPOSING A SENTENCE OF JUVENILE IMPRISONMENT

Dragan Blagić, PhD[1]
Faculty of Law, University of Priština, Kosovska Mitrovica

Zdravko Grujić, PhD[2]
Faculty of Law, University of Priština, Kosovska Mitrovica

Abstract: In the theory of juvenile criminal law, especially in a field of imposing criminal sanctions to minors, it is easy to recognize attitudes that point special prevention instead of general, and also giving much greater importance to the special prevention. Consistent opinions on special prevention have always been emphasized, while the impact of general, especially positive, general prevention is rarely mentioned. Considering that today in the theory of criminal law, the influence of the general i.e. positive prevention is prevailing, it is necessary to point out its importance when it comes to the imposing a punishment of a juvenile imprisonment.

Contemporary views on the purpose of punishment generally begin from a functional unity of special and general prevention. Sentencing is a very complex procedure that requires consideration of all the normative criteria, where the purpose of punishment certainly has a significant (or primary) role. Given the legal nature of a juvenile imprisonment and its specificity, it is possible that in one situation the objectives of general prevention require a more severe sentencing, while the objectives of special prevention require a more lenient sentence. Therefore, when imposing this sentence, it is necessary for the court to evaluate in each particular case the relation between special and general prevention and, without diminishing the importance of the other circumstances that affects the sentencing.

In the paper the authors first present the general questions related to the purpose of punishment, then explain the content and substance of the sentence of a juvenile imprisonment, while at the end trying to determine the correlation between basic purposes of a punishment and imposing the sentence of a juvenile imprisonment.

Keywords: purpose of punishment, juvenile imprisonment

1 dragan.blagic@pr.ac.rs
2 zdravko.grujic@pr.ac.rs

INTRODUCTION

Imposing punishment is to determine the limits of criminal sanction in accordance with the gravity of the crime committed and the principle of guilt, where all the circumstances related to the crime, the perpetrator and the victim had to be taken into account. The different circumstances and special characteristics of the perpetrator often require different sanctions for the same offense, and thus the right choice of criminal sanction leads to the basic form of criminal coercion. Among other, the most important activity of the court is to precisely select and impose criminal sanction, which, on the one hand, terminates criminal proceedings, while on the other, it exercises the protective function of criminal law (Drakić, Drakić, 2015: 1408). Determining the type and level of criminal sanction in our legal system is primarily done by the courts, therefore is called – court measurement, in addition to the legal one, performed by the legislature when prescribing criminal offenses, according to the adopted system of relatively defined penalties. When sentencing individual offenses, the range of the special minimum and the special maximum is very wide, leaving the court assess within the legal measurement, which results that the court sentencing is considered to be the only true/valid sentencing (Stojanović, 2014: 279).

When imposing a sentence of juvenile imprisonment, the courts have to take into account the fact that it is a special type of imprisonment - which should be weighed in accordance with its content and justification (Srzentić, Stajić, Lazarević, 2000: 518-519). As a rule, the punishment of a minor is only exceptional and, in addition to the fulfillment of all legal requirements, juvenile imprisonment does not have to be pronounced. On the contrary, sometimes is inevitably to impose a sentence as a reaction to the perpetrator and the crime committed, as well as all reaction to other potential perpetrators (juveniles) not to commit crimes in the future (Perić, 1979: 65).

THE JUSTIFICATION OF THE PURPOSE OF PUNISHMENT IN JUVENILE CRIMINAL LAW

In the context of the imposing juvenile imprisonment, it is necessary to achieve the purpose of punishment in the specific case, i.e to realize its meaning and essence. The purpose of punishment, in general, is one complex legal and philosophical issue that is of particular importance in the criminal and criminological sense. Therefore, regarding the purpose of punishment, it is necessary to point out different understandings, i.e. concept-based theories that aim to explain their content in more detail (Atanacković, 1988: 21). In the science of criminal law, different understandings about the purpose of punishment are generally classified into three basic groups of theories: absolute, relative, and mixed. The essential questions are explained through these theories, in terms of why society is punishing and what they want to be achieved with punishment (Stojanović, 2014: 295). Absolute theories base their attitudes on the idea of the existence of absolute justice, where the purpose of punishment is retribution (revenge) for the one who punishes, or atonement for the one who is being punished (Živanović, 1930: 428). According to this theory, the primary purpose of punishment is retribution for the act committed, the offender being punished for what they sinned but not to sin in the future. According to this theory, punishment is not seen as a way of achieving something in the future, but refers to the past, i.e. committed crime and present of the offender, i.e. their suffering. Thus, the purpose of punishment is to inflict harm on the offender in order to satisfy absolute justice (Stojanović, 1994: 219). As a further consideration of this theory, it is necessary to indicate the impact of the classical school and its influence on the governing doctrine of the purpose and substance of punishment. Furthermore, abso-

lute theories of the time, inspired by the ideas of some philosophers (Kant), indicate that retribution is an imperative of moral conscience, a postulate of practical reason, while according to Hegel it is seen as a necessary consequence of legal justice and that punishment is considered a culprit's right, because the culprit committing the crime is knowingly and voluntarily accepting to be punished (Srzentić, Stajić, 1970: 93-94). When it comes to absolute theories modern understandings in criminal law and criminology emphasize their unacceptability, that is, these theories are considered to be completely overcome. Namely, punishment cannot be accepted as a measure intended to serve the satisfaction of some abstract justice where retribution is the primary purpose of punishment (Bojanić, Mrčela, 2006: 435-436).

Relative theories in determining the purpose of punishment start with the idea that basic meaning and purpose of punishment would be affecting people not to commit criminal acts in the future. Punishment in this case is not an end in itself, and as such it is directed towards the future, because it is not punishing only for having sinned, but also not for sinning in the future (Platon, 1990: 379). In terms of how crime prevention should be achieved, relative theories can be divided into: theories of special (individual) prevention and theories of general prevention. According to the theories of special prevention, the prevention of committing criminal offenses, i.e. the protection of society from crime, is achieved through the offender who has committed the crime. The primary purpose of punishment in this case is for the offender not to commit the crime again (Stojanović, 1994: 223). Supporters of special prevention theories point out that the basic purpose and essence of punishment can be achieved in several ways: the theory of intimidation of the execution of punishment, the theory of guardianship, the theory of re-socialization. First, intimidation is accomplished so that the offender experiences the harsh impact of the sentence and does not commit any crimes in the future. Guardianship theory implies that an offender is put under surveillance and custody for a period of time in order not to commit the crime again (Laubenthal, Baier, Nestler, 2010: 232). Finally, resocialization is accepted as one way of achieving special prevention of the offender. It is understood as one process and a different approach to the convicted person's personality in terms of re-education, assistance and support, in order to return the convicted person back to the community and to continue daily life activities. However, more recent understandings raise many questions to which the re-socialization process did not provide valid answers. For example, the length of a sentence in re-socialization can be a problem, because the sentence often lasts for the duration of the re-education process. Are negligent offenses also required to apply resocialization and to what extent? Thus, in the theory of criminal law, there are understandings which would suggest that resocialization should not be the only one or the most important purpose of punishment. In this sense, offender should be helped and trained to live in society, so as not to commit crimes, if the offender himself accepts this kind of assistance and support (Roxin, 2006: 75-76; Vuković, 2014: 155; Novoselec, 2007: 373). Theories of general prevention predict that the purpose of punishment is to influence citizens not to commit crimes. Therefore, the purpose of punishment can only be achieved if the punishment affects all potential offenders to refrain from unlawful conduct. This effect of punishment prevents in advance all citizens who might have committed the crime of not doing so and thus avoided the receiving of punishment (Tahović, 1961: 322). Modern understandings regarding general prevention indicate the existence of the so-called negative general prevention that is achieved by intimidation of potential offenders and positive general prevention, which is achieved through strengthening and preserving citizens' trust in the legal order and respecting social and moral norms in order to prevent the commission of criminal offenses (Stojanović, 1994: 224). General prevention in this way, in criminal law theory, gives priority to positive prevention over intimidation of potential perpetrators, i.e. negative prevention. In this way, punishment is justified even when there is no danger of the offender committing the crime again (Jeschek, Weigend, 1996: 68). Despite many good points of positive general prevention, the theory of criminal law makes

some objections, one of which is taken as basic, which relates to the length of the sentence. The issue of harsher punishment in order to accomplish its purpose, on the other side, questions respect for human dignity. The intimidation of citizens by imposing harsher punishments is not a fundamental task of the purpose of punishment, but rather the importance of generally preventive action, first and foremost, should relate to the strengthening of moral (psychological) and social values by individuals (Roxin, 2006: 82-83).

Ultimately, mixed theories assume that the purpose of punishment is based on a combination of understanding both absolute and relative theories. On the one hand, punishment will result in retaliation for the crime committed, but it will also prevent future acts of crime. It is not easy to answer to what extent and how far you can go with the stated understanding that the purpose of punishing is retribution and especially - general prevention. Namely, Stojanović has all the right to believe that this theory has conflicting assumptions and that it is difficult to imagine that the purpose of punishment, on the one hand, allows "just retribution", while on the other hand it achieves the corresponding socially useful goals of punishment (Stojanović, 2014; 262).

THE PURPOSE OF PUNISHMENT ACCORDING TO CRIMINAL CODE AND JUVENILE CRIMINAL LAW

The purpose of criminal sanctions against juveniles in our criminal law is related to the general purpose of punishment, as indicated by the provision of article 4, paragraph 2 of the Criminal Code (hereinafter CC).[3] Within the general purpose of criminal sanctions, the protective function of criminal law is defined in the sense that by prescribing and imposing criminal sanctions on juveniles, they are suppressing acts that violate or threaten the fundamental values of society (Stojanović, 2014: 41).

Many "juvenile laws" do specifically prescribe the purpose of criminal sanctions on juveniles, such as the German Criminal Code in article 46 paragraph 1, Austrian in article 32 paragraph 2 which stipulates that preference is given to special prevention, whereby the court also considers its impact on the future life of the offender (Jeschek, Weigend, 1996: 885-886). Serbian Juvenile Criminal Law (hereinafter: ZM)[4], article 10 sets out a provision defining the purpose of educational measures and juvenile imprisonment. Although there is a difference made between the educational measures and the punishment of juvenile imprisonment (Tahović, 1962: 188), the purpose is prescribed with the same provision which indicates that they have another close functional connection. Educational measures and juvenile imprisonment reflect the specific common purpose of providing protection and assistance to a juvenile, ensuring his or her personality is properly developing, upbringing, increasing his or her personal responsibility and involvement in the community. Therefore, the above provision implies that the approach to juveniles is based on prioritizing the educational influence in the process of proper maturation, individual cognition and social evaluation by the juvenile (Lazarević, Grubač, 2005: 35).

Among other things, in order to achieve the purpose of educational measures and juvenile imprisonment prescribed in this way, it is necessary to anticipate, to a certain extent, the ways of achieving this purpose. To add, just mentioned legal provision explicitly determines the means which refers to providing supervision, protection, assistance as well as providing basic and technical training for ju-

3 Krivični zakonik "Službeni glasnik Republike Srbije" br. 85/2005, 88/2005 - ispr., 107/2005 - ispr., 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 i 35/2019).

4 Zakon o maloletnim učionicima krivičnih dela i krivičnopravnoj zaštiti malolenih lica, "Službeni glasnik Republike Srbije" br. 85/2005.

veniles. In order to implement a certain educational measure, i.e. in order to make the correct choice of a particular educational measure, the first thing that should be done is getting to know the juvenile's personality. With examining and getting to know juvenile's personality (Kostić, 2011: 488), the selection of educational measures would be performed in the way where the imposition and implementation of this measures would have individual approach and treatment of the juvenile's personality. The diversity of educational measures leads to the possibility that the juvenile offender, depending on some important personality traits, positive or negative tendencies, type of the committed crime, may be imposed an appropriate educational measure to eliminate precisely the reasons that led to the juvenile delinquent behavior. First of all, providing protection and assistance involves taking various measures to protect the juvenile from the various negative effects of the environment in which the juvenile grows up. For example, various problems with the use of alcohol or narcotics indicate the court's obligation to separate the juvenile from the environment in which they lived and to provide the necessary protection according to their needs in another environment. Assistance can then consist of solving various problems related to educational neglect and providing pedagogical and psychological advice, in order to achieve proper development of the juvenile's personality (Radulović, 2010: 94). The statutory determination of the common purpose of educational measures and the punishment of juvenile imprisonment in its own way emphasizes special prevention, where the offender is prevented from committing criminal offenses and is being educated in order to educate him/her. The purpose of correctional measures and juvenile imprisonment is determined so that these criminal sanctions affect re-education, i.e. affects the educational neglect of juveniles, whereby taking these measures achieves their sociological and pedagogical character (Srzentić, Stajić, Lazarević, 2000: 493-494).

In addition to the significant impact of the special prevention of the mentioned criminal sanctions, especially in juvenile imprisonment, there is a preventive effect on potential juvenile offenders to refrain from dangerous behavior and not commit any criminal offenses in the future. In other words, in the statutory determination of article 10 paragraph 2 ZM emphasizes particularly the operation of the general prevention of juvenile imprisonment, where you can see the difference from educational measures when it comes to determining their purpose. Thus, in addition to the goals common to both types of criminal sanctions, the punishment of juvenile imprisonment also achieves specific goals in terms of increased influence on juvenile offenders not to commit criminal acts in the future, as well as increased influence on other juveniles not to commit crimes (Perić, 2010: 87).

The legal nature of the sentence of juvenile imprisonment indicates how unique and exceptional it is, and points to its justification for the utterance and application. Namely, in addition to fulfilling the legal requirements in the specific case, justification of the sentence of juvenile imprisonment is being question, i.e. it is required by statutory provision of article 28 ZM by the court to examine all the circumstances and judge whether it is justified to impose a sentence of juvenile imprisonment. Therefore, in addition to the existence of general conditions that must be cumulatively fulfilled, a judge's conviction in each individual case is also required that it is not enough to impose an educational measure, but sentence of juvenile imprisonment is required (Miloševic, 2000: 70).

THE IMPORTANCE OF SPECIAL AND GENERAL PREVENTION IN IMPOSING A JUVENILE IMPRISONMENT

Consideration and acceptance of contemporary views that prevention is a necessary means of combating and preventing juvenile delinquency indicates increasing of its use by implementing appropriate criminal policy instruments and mechanisms (Simeunović-Patić, 2017: 309). Within the study of

particular segments of criminal policy, we are aware of the increasing importance not only of social prevention as a model of combating crime, but also of the influence, the reach of prevention in the criminal sense of the word.

Considering the legal nature and content of criminal sanctions against juveniles, the theory of juvenile criminal law has a generally accepted view pointing to significant specifics of the purpose of educational measures and punishment of juvenile imprisonment and the purpose of criminal sanctions applicable to adults. The implementation of prevention through the purpose of criminal sanctions against juveniles explains and shapes the criminal policy strategy in the field of juvenile criminal law. The preventive function in criminal law is undertaken on the basis of the normative influence of criminal law provisions which explicitly provide the purpose of punishment. Clearly set limits on the purpose of punishment allow juvenile offender to be influenced through various forms of action, so it is possible to achieve certain effects of the protective function. This is another way to express and confirm the criminal-political function of prevention, which aims to contribute to the reduction of harmful behavior of minors. Therefore, prevention is also a natural function of juvenile criminal law, and as such, it represents certain ethical postulates which impact is being made through the purpose of punishing juvenile offenders (Steng, 2008: 160).

Prevention in juvenile criminal law is primarily achieved through special prevention as the basic mechanism of achieving a protective function (Stojanović, 2011: 6-7). The character of educational measures is such that their special-preventive effect is emphasized in the form of supervision, assistance and protection in order to develop the personal responsibility of the juvenile as well as his education and proper personality development. Special prevention is the basic form of functioning in criminal justice when it comes to application of educational measures and punishment of juvenile imprisonment, because the preventive effect is achieved by directly acting on the offender. It shows the importance of preventive impact of educating a juvenile offender and providing the necessary assistance and appropriate group or individual treatments. In this context, the preventive function comes to the fore by implementing so-called assistance measures, which are primarily measures in the role of correcting and re-educating a juvenile offender and thus affecting him or her not to commit a crime again (Lazarević, Grubač, 2005: 35).

In addition to the fact that special preventive action is the primary criminal and political function in criminal sanctions for juveniles, it is necessary to point out the importance of general preventive influence in the punishment of juvenile imprisonment. Although the special preventive action is in the first place, you can also see the effects of general prevention in this case. The purpose of a protective function in juvenile criminal law is being achieved through generally preventive action by the punishment of juvenile imprisonment so it can have an impact on other juveniles not to commit criminal offenses. In fact, punishment that is not a classic punishment allows influencing potential juvenile offenders to abstain and not commit crimes. In this way, it is emphasized that the punishment of juvenile imprisonment also has its repressive character, which carries out certain punishment acts, which in a certain way makes a difference opposing to educational measures (Škulić, 2011: 287).

The general preventive effect of juvenile imprisonment is being achieved by threatening to potential perpetrators with punishment, which is defined by the provision in article 10 paragraph 2 ZM. It is impossible to deny the so-called the criminal impact of this punishment on all other juvenile offenders not to commit any criminal offenses in the future, thus proving that this is yet a punishment and has repressive impact. It can be expected that in the case of juveniles, the general preventive effect is visible because of their psycho-physical condition, in which the threat of punishment can be a decisive reason for refusing to commit a criminal offense. It is difficult to say to what extent it will affect potential juve-

niles not to commit crimes and how preventive it will be from a criminal policy perspective. The goals of general prevention and their effectiveness in the field of juvenile criminal law, are being achieved by educational influence as one of the basic concepts on which criminal sanctions for juveniles are based (Stojanović, 1991: 106). Also, the general purpose of criminal sanctions, where, within its prescribing, the purpose of criminal sanctions against juveniles is also defined and determined, that shows the existence and operation of not only general and special prevention, but also so-called positive general prevention. Namely, it is important to understand the defined provision of article 10 paragraph 2 ZM in a way that punishment should not have a deterrent effect on potential juvenile offenders, but to have as much as possible impact in the form of educational and social - pedagogical activities. This would justify the very nature of the punishment of juvenile imprisonment, which has, above all, an educational character. The basic idea underlying the prescribing of certain measures and criminal sanctions represents a special function as a primary one, therefore emphasizing the active action on a juvenile who has already committed a crime. (Radulović, 1999: 249). On the other hand, keeping in mind the repressive impact of juvenile imprisonment, it is inevitable to point out its generally preventive effect. Thus, criminal protection in the field of juvenile criminal law is mainly achieved through the special preventive effect of educational measures, as well as through the special - general effect of punishment of juvenile imprisonment, as the goals and tasks of criminal policy in general allow.

PRACTICE OF IMPOSING A JUVENILE IMPRISONMENT IN SERBIA

As part of the research on the criminal policy of courts towards juvenile offenders, we will point out the scope and dynamics of sentencing juvenile imprisonment in the period from 2006 to 2013min order to determine whether sentencing is an exception as social respond to juvenile delinquency. At first glance, the analyzed data shows that the sentence of juvenile imprisonment is rarely imposed in the practice of our courts, having in mind its participation in the structure of criminal sanctions applied to juveniles. The other data shows but uneven number of sentences of juvenile imprisonment in relation to individual years.

In the observed period, a total of 111 sentences of juvenile imprisonment were imposed, or just under 14 sentences at the annual level. The highest number was recorded in 2007, when thirty sentences of juvenile imprisonment were imposed, and the lowest number in 2012, only two. Juvenile imprisonment was most often imposed for the murder, aggravated murder, rape, theft and robbery, a lesser extent for other crimes.

In 2007, a total of thirty sentences of juvenile imprisonment were imposed, of which as many as twenty-two for committed crimes against property. The data indicate the frequency of committing a criminal offense - aggravated theft, for which 14 out of 22 sentences of juvenile imprisonment for up to two years were imposed. In the mentioned period, four sentences of juvenile imprisonment were imposed for crimes against life and body, which is significantly less than in 2006. In 2008, a total of seventeen sentences of juvenile imprisonment were imposed, which is almost half less than in the previous year. Also, there was a noticeable decrease in the number of persons sentenced to juvenile imprisonment for crimes against property, while there are slight deviations in crimes against life and body. There were four sentences of juvenile imprisonment for the crime of rape, with three sentences lasting 2 to 5 years, and one lasting up to two years. In 2009, the number of committed criminal offenses against property increased again, specifically criminal offenses of aggravated theft, for which ten out of a total of nineteen sentences of juvenile imprisonment were imposed. The following year there was a significant decline in the number of sentences of juvenile imprisonment, only five sentences, three of which

were imposed for the crime of aggravated theft, while one was imposed for the rape and unauthorized production and distribution of narcotics. Statistics for 2011 show that thirteen penalties were imposed, of which seven for crimes against property, lasting up to two years. Three sentences from two to five years were imposed for the murder and one sentence from five to ten years for the criminal offense of aggravated murder. In 2012, the least sentences of juvenile imprisonment were imposed. Only two minors were convicted for criminal acts of grievous bodily injury and robbery, lasting up to two years. In 2013, three juvenile prison sentences were imposed for aggravated theft and aggravated murder and one for the murder. Out of a total of eight sentences, three last from five to ten years (Bilten, 2015).

Based on statistical data, it is easy to conclude that the sentence of juvenile imprisonment is an exceptional criminal sanction in the practice of courts. Having in mind the number of sentences imposed and the cases in which it was imposed, it can be concluded that the sentence of juvenile imprisonment was the last reaction (*ultima ratio*) by which the courts tried to achieve the goal and purposes of punishment, then the same effects could not be achieved by applying some of the educational measures.

CONCLUSION

Based on the above theories that explain the purpose of punishment, in relation to the sentence of juvenile imprisonment, it can be seen that the justification of punishing juveniles allows the exercise of the protective function of criminal law. However, the state's right to punish, according to positive legal regulations and relevant international documents, is applied only as a last resort, which unequivocally implements the goals and various mechanisms of crime prevention policy.

In accordance with the purpose and goals of punishment, it is necessary to point out that their realization depends on the principles of fairness and proportionality. Namely, the amendments to the Criminal Code from 2019 in the provision of Art. 42 par. 4 stipulates that the purpose of punishment, in addition to special and general prevention, is to achieve fairness and proportionality between the committed act and the gravity of the criminal sanction. Undoubtedly, in this way, the legislator decided to expand the retributive character of punishment, i.e to resort to the application of a retributive measure that always restricts (to a significant extent) certain rights and freedoms of the perpetrator, achieving a social and ethical reprimand for the crime. If the mentioned provision is understood as a way and form of realizing the traditional principle of justice and proportionality, which primarily punishes the perpetrator for the committed crime in proportion to the gravity of the crime and the degree of guilt, then the question of acceptability and justification of the "amended" purpose of punishment arises. With this approach, indisputably, the legislator decided to first achieve the general purpose of punishment in terms of positive prevention, and diminishes the importance of the special preventive nature of punishment, and consequently the sentence of juvenile imprisonment.

Having in mind the special status of the juveniles in the law, the purpose and the methods of punishment, the correct reaction for serious juvenile delinquency will always be problematic. Such a sensitive and complex issue is a great challenge for every society, including ours, which is why we should always keep in mind the need to choose an adequate criminal sanction, having in mind primarily age, level of personal development, as well as the behavior of minors. After all, we should not forget the fact that in this case we are talking about young people who have not yet turned 18 years old, that they are in a special psychophysical development, i.e the period of personality formation, so the focus of social reaction would be focused on upbringing, education and strengthening personal responsibility, in exceptional cases on punishment in the traditional sense. Deprivation of liberty of an older juvenile

for a longer period of time can have undesirable consequences on his/her personality and behavior, whereby the later inclusion of the juvenile in the social community and return to the family entails certain difficulties. The amended purpose of punishment, in terms of achieving the principle of proportionality between the gravity of the crime and the guilt of the perpetrator and the fairness of punishment, can (negatively) affect the future penal policy of courts if primacy primarily be focused on the implementation of these principles.

REFERENCES

1. Atanacković, D. (1988). *Penologija*, Beograd.
2. Bojanić, I., Mrčela M., (2/2006). Svrha kažnjavanja u kontekstu šeste novele Kaznenog zakona, *Hrvatski ljetopis za kazneno pravo i praksu*, Zagreb.
3. Vuković I, (2014). Svrha kažnjavanja kao kriterijum odmeravanja kazne, *Kaznena reakcija u Srbiji IV deo*, tematska monografija, Beograd.
4. Drakić D., Drakić G., (4/2015). Sistem mera bezbednosti u našem krivičnom pravu - kroz istoriju i danas, *TEME,* XXXIX.
5. Živanović T, (1930). *Osnovi krivičnog prava Kraljevine Jugoslavije*, Beograd.
6. Jeschek, H. H, WeigendT, (1996). *Lehrbuch des Strafrechts,* Allgemeiner Teil, 5, Berlin.
7. Krivični zakonik "Službeni glasnik Republike Srbije" br. 85/2005, 88/2005 - ispr., 107/2005 - ispr., 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 i 35/2019).
8. Kostić M, (2/2011). Ličnost maloletnog delikventa-kriminološka obeležja, *TEME,* XXXV.
9. Lazarević Lj, Grubač M, (2005). *Komentar zakona o maloletnim učiniocima krivičnih dela i krivičnopravnoj zaštiti maloletnih lica, Beograd.*
10. Laubenthal, K, Baier, H, Nestler N, (2010). *Jugendstrafrecht,* 2. Auflage, Würzburg.
11. Milošević N, (3/2000). Maloletnički zatvor, *Jugoslovenska revija za kriminologiju i krivično pravo*, Beograd.
12. Novoselec P, (2007). *Opći dio kaznenog prava*, Zagreb.
13. Perić O, (2010). *Komentar zakona o maloletnim učiniocima krivičnih dela i krivičnopravnoj zaštiti maloletnih lica*, Beograd.
14. Perić O, (1979). *Maloletnički zatvor,* Beograd.
15. Platon, (1990). *Zakoni*, Beograd.
16. Radulović Lj, (1999). *Kriminalna politika,* Beograd.
17. Radulović Lj, (2010). *Maloletničko krivično pravo*, Beograd.
18. Republički zavod za statitstiku, Maloletni učinioci krivičnih dela – prijave, optuženja, osude u 2014, *Bilten,* br. 604, Beograd, 2015.
19. Rovin C, (2006). *Strafrecht,* Allgemeiner Teil, Band I, 4. München.
20. Simeunović-Patić B, (2/2017). Razvoj primarne prevencije seksulanog nasilja u svetu, *TEME,* XLI.
21. Srzentić N, Stajić A, (1970). *Krivično pravo,* Beograd.

22. Srzentić N, Stajić A, Lazarević Lj, (2000). *Krivično pravo - Opšti deo*, Beograd.
23. Stojanović, Z, (2/1994). Generalna prevencija i zaštitna funkcija krivičnog prava, *Anali Pravnog fakulteta u Beogradu*, 1, 219.
24. Stojanović Z, (2014). *Krivično pravo,* Beograd.
25. Stojanović Z, (1991). *Politika suzbijanja kriminaliteta,* Novi Sad.
26. Stojanović Z, (1/2011). Preventivna funkcija krivičnog prava, *Crimen,* Beograd.
27. Streng F, (2008). *Jugendstrafrecht,* Ninberg.
28. Škulić M, (2011). *Maloletničko krivično pravo,* Beograd.
29. Zakon o maloletnim učionicima krivičnih dela i krivičnopravnoj zaštiti malolenih lica, "Službeni glasnik Republike Srbije" br. 85/2005.

DOMESTIC VIOLENCE IN THE AGE OF COVID-19 PANDEMIC

Ana Čović, PhD[1]
Institute of Comparative Law, Belgrade, Serbia

Abstract: In the months behind us, we have witnessed a global pandemic in the world, which has resulted in the adoption of various measures that limited certain human rights. Among them is the freedom of movement. The effects of the spread of the COVID - 19 virus were felt in various spheres of social life, which changed the way of doing business, education, performing religious services and performing daily activities, redirecting them to the possibilities that the Internet and digital age have opened the door to. The consequences were numerous, and after people were given the opportunity to spend more time with their families, an increase in domestic violence was observed. An interesting question is why and in what percentage the COVID - 19 pandemic affected the increase in domestic violence and whether the restriction of human rights and freedoms significantly affected people's mental and physical health and relationships within the family household. In addition to the causes of this phenomenon, it is necessary to learn about ways to overcome it or reduce it in the future by applying appropriate measures if a similar emergency occurs again.

Keywords: COVID - 19, human rights, domestic violence, state of emergency.

INTRODUCTION

In the course of the last global-scale pandemic, we were for the first time faced with restrictions on a large number of guaranteed human rights and freedoms, during a period spanning over several months with none of the world's countries being exempt from them. The extent and degree of restrictions were different from one country to another. Apart from being dangerous for physical health, the virus also became dangerous (to the same or even larger extent) for the mental health of people who were overnight forced to accept the measures including movement restrictions and isolation, and also all the uncertainty and the feeling of helplessness that accompanied them. Therefore, in a relatively

1 anacovic999@gmail.com

brief amount of time, we began to fulfil our daily obligations and tasks via different online platforms. However, a person's need to move and be in direct contact with other people cannot be satisfied by being in the virtual world or on social networks and portals, which also significantly affects the psychological and physical health of people. Movement restrictions and assembly bans are directly related to the increased number of hours that people were spending in their homes, with their family members. Whether as a result of previously disrupted relationships, the resolution of which was being delayed due to the absence of possibilities, willingness or time, or as a result of omnipresent nervousness, anxiety, and stress – the increased number of domestic violence cases has been recorded across the whole world. Today, when we are unable to predict with certainty the future events and the epidemiological course of the disease or any potential outbreak of a new virus in the future, it is important to answer the question of when and to what extent restrictions are justified, and if refusing to apply relaxed measures (by means of which it would be possible to achieve a given goal) leads to a heightened risk of particular socially harmful behaviours, such as violence – above all in the family environment, to which we are primarily confined when movement is restricted. In the continuation of this paper, more will be said about the identified forms of domestic violence which were recorded during the pandemic in our country and in some other countries, and about the percentages and causes of its increase in the months behind us.

THE CONCEPT OF DOMESTIC VIOLENCE AND THE EXISTING LEGAL FRAMEWORK

Domestic violence is a social phenomenon with devastating consequences for the family and for the physical and emotional integrity of everyone of its members. Violence against women is present at all stages of a society's development, with different forms of physical, sexual, psychological, and economic violence being identified independently of national, religious, racial, cultural, and status identity. As a result of the recognition of this problem and its significance over the past years, several legal documents have been adopted and ratified in this field at the international and national level of states.[2]

Article 21 of the Constitution of the Republic of Serbia ("Official Gazette of the Republic of Serbia", No. 98/2006) stipulates that all citizens are equal before the Constitution and the law, so that the right to equal legal protection is enjoyed by all, without discrimination, while gender-based discrimination is not mentioned at all. This gap was filled with the adoption of the Law on the Prohibition of Discrimination, which identifies gender-based discrimination as a special form of discrimination.[3] The Family Act ("Official Gazette of the Republic of Serbia", No. 18/05) defines domestic violence as "the behaviour by which one family member endangers physical integrity, mental health or tranquility of

2 In 1993, the Declaration on the Elimination of Violence against Women (UN, 1993) was adopted, which originated from the Convention on the Elimination of All Forms of Discrimination against Women (UN, 1979; "Official Gazette of the Socialist Federal Republic of Yugoslavia – International Agreements", No. 11/1981). The Council of Europe Convention on preventing and combating violence against women and domestic violence (Istanbul Convention) is the first legally binding document on the European continent which deals with the prevention of violence against women, their protection, and the punishment of perpetrators, and therefore represents another step towards the elimination of inequality between women and men.

3 The concept of discrimination is defined as "any unwarranted discrimination or unequal treatment, that is to say, omission (exclusion, limitation or preferential treatment) in relation to individuals or groups, as well as members of their families or persons close to them, be it overt or covert, on the grounds of [...] real or presumed personal characteristics".

another family member". Apart from civil-legal protection, criminal-legal protection is also provided for (Criminal Code of the Republic of Serbia, 194).[4]

The Law on the Prevention of Domestic Violence ("Official Gazette of the Republic of Serbia", No. 94/2016) has been enforced since 1 June 2017, and it has introduced some important novelties.[5] Each reported case of domestic violence is deliberated upon at a Coordination and Cooperation Group meeting (the Group itself consisting of a representative of the Prosecution, a representative of the police, and a representative of the Centre for Social Work), where the individual plan for protection and support is adopted (Articles 25 and 26). The plan may provide for the initiation of criminal proceedings, misdemeanour proceedings or proceedings for protection measures (the length of which may be up to a year or longer). According to the data of the Republic Public Prosecutor, during March 2020, the number of extended urgent measures fell by around 30% in comparison with the previous month, and the number of newly reported cases of domestic violence as deliberated upon at the Coordination and Cooperation Group meetings fell by 50%, which could be a consequence of the fact that there was a 40% decrease in the number of meetings held by the Coordination and Cooperation Group, and that there was a 60% decrease in the number of made individual plans for protection and support. Six basic public prosecutor's offices in Serbia did not hold a single meeting of the Coordination and Cooperation Group during March although the state of emergency was introduced in the second half

4 For all forms of domestic violence specified in the Criminal Code, ex officio prosecution is provided for – criminal proceedings are initiated and conducted by the Attorney General (also for psychological abuse – endangering or harming one's mental integrity). In this manner, the state makes a clear statement or conveys a clear message that domestic violence is a serious, socially harmful behaviour, which as such will not be tolerated. For its basic form, a fine is prescribed or a maximum one-year prison sentence. When the perpetration of the act includes a weapon, a dangerous tool or a tool capable of inflicting a severe corporal injury or grave health impairment, the perpetrator will be punished with three months to three years in prison. If the act from paragraphs 1 and 2 of this article results in a severe corporal injury or permanent and grave health impairment of a family member, or the act is committed against a minor, the perpetrator will be punished with one to eight years of imprisonment. If the act from paragraphs 1 and 2 of this article results in the death of a family member, the perpetrator will be punished with three to twelve years in prison. Whoever breaks the measures of protection from domestic violence, determined for him/her by the court on the basis of the law, will be punished with a fine or with a six-month prison sentence. The criminal sanctions that can be imposed for domestic violence include not only the provided for fine and prison sentence but also the imposition of probation, and when nothing else but a fine is in question then it is possible to impose only judicial admonitions. If the court has established insanity, it is also possible to impose a security measure of compulsory medical treatment and confinement in a medical institution. When a prison sentence or probation is imposed, the court may impose, even without a motion from the prosecutor, a security measure of compulsory treatment of alcohol- and drug-addicts.

5 The police on the spot are obliged to notify the competent police officer about every case of domestic violence and immediate danger of its taking place (Article 14), and if the police officers fail to do so, they are breaking the law. The police patrol has the right, either of its own accord or at the behest of the competent police officer, to bring the possible perpetrator of violence to the police station for the purpose of conducting proceedings (Article 14), and he/she can be detained for eight hours in the police station, where he/she will make a statement (acting as the possible perpetrator), all the necessary information will be collected, and the risk of immediate danger of violence will be assessed (Article 15). When the competent police officer issues an urgent measure order, he/she can order that the perpetrator of violence should be temporarily removed from the flat/house in the following 48 hours; that the perpetrator should be temporarily forbidden to contact the victim and approach them (Article 17). The Attorney General may propose the extension of the urgent measure by another 30 days, and if such a decision is made, then he/she must file a motion to the court within 24 hours (Article 18). The court decides on the motion within 24 hours, without the presence of the perpetrator and based on the submitted documentation (Article 19). The police will file misdemeanour charges, and the Magistrates' Court (may) punish the perpetrator in a summary trial with up to 60 days in prison (Article 36).

of the month, whereas the First Basic Public Prosecutor's Office in Belgrade and the Basic Public Prosecutor's Office in Kragujevac held 12 meetings each (data from the Autonomous Women's Center).

Especially worrying are data on the number of children victims which show that the first time children experience violence is precisely in their families (Čović, 2014).[6] During April, UN women experts for human rights made an appeal to the countries to strengthen their protection measures, warning that, during the COVID-19 pandemic, children are more susceptible to violence, human trafficking, sexual violence and exploitation. They made an appeal to the governments to ensure that the services of child protection and the services of the Interior are at disposal and available to all children, including free-of-charge SOS telephones and SMS services as being available for 24 hours a day. Although there are still no measurable data on violence against children under the circumstances of the pandemic in Serbia, it is noticeable that the counselling psycho-social online services for children that would be available 24 hours a day have not yet been established, and also via the media and the Internet, children within families were exposed to both harmful and disturbing information, such as those pieces of information that they are "dangerous transmitters of the virus" (Eraković, 2020). As far as education is concerned, poor children who live in unhygienic settlements without electricity, computers and smart phones, without television and the Internet, cannot have access to online learning during this pandemic. Problems also appeared in families where there are more children than there are devices via which it is possible to attend lessons and communicate with teachers, and also if parents do not have the capacity to help their children with learning (Eraković, 2020).

The consequences of violence could be different dissociative states; anxiety; fits of panic; sleeping and eating disorders; depression; abuse of alcohol, pills, and drugs; attempted suicide and self-harm; sexual dysfunction and spontaneous abortions (Čović, 2013). It is clear then why, in case of restrictions on the freedom of movement, there is a risk of increased frequency of violence when the victim and the perpetrator share a family household. Other than that, as a result of the epidemic and a general atmosphere of fear in society, when even going to the shop is proclaimed as risky behaviour, there is smaller likelihood that the victim will address the competent bodies asking them for support.

The most frequently identified victims of violence are women and children, although the number of men who have experienced some form of violence in the family environment is not negligible either. However, over the course of the last pandemic and extremely restrictive measures which included restrictions on the freedom of movement for persons over 65 years of age, the public also began to talk more about violence against the old population, which these persons suffer at the hands of their closest housemates. No form of violence should be tolerated, and this does not refer only to physical and sexual violence as the most frequently talked about forms but also to psychological and economic violence as being rather widespread.

6 In the field of the protection of children against violence at the international level, of importance are the 1989 UN Convention on the Rights of the Child ("Official Gazette of the Socialist Federal Republic of Yugoslavia – International Agreements", No. 15/1990 and "Official Gazette of the Federal Republic of Yugoslavia", Nos. 4/96 and 2/97) and the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse ("Official Gazette of the Republic of Serbia" – International Agreements, No. 1/2010), while at the national level protection from the physical, psychological, economic, and any other form of exploitation or abuse of children is guaranteed by Article 64 of the Constitution of the Republic of Serbia. The right of a child to a proper and complete development with the character of a general principle which pervades the application of all other rights is prescribed by Article 62 of the Family Act. The legislation in this field was enhanced in 2013, with the adoption of the Law on Special Measures for Preventing the Perpetration of Criminal Offences against the Sexual Freedom of Minors ("Official Gazette of the Republic of Serbia", No. 32/2013), which regulates the keeping of a special record for persons convicted of criminal offences against the sexual freedom of minors, with the undertaking of special measures.

RESTRICTIONS ON THE FREEDOM OF MOVEMENT DURING THE COVID-19 PANDEMIC

Governments are not allowed to interfere with or restrict guaranteed human rights if they are unable to prove that such interference is provided by the law, that it is undertaken for the purpose of a legitimate goal (for example, public health protection), and that it is necessary and proportionate to the achievement of that goal (Čović, 2020).[7]

Article 18 of the Constitution of the Republic of Serbia prescribes that the human and minority rights guaranteed by the Constitution are enforced directly, while the law can prescribe only the manner of their exercise when this is expressly provided for by the Constitution or when this is necessary due to the nature of an individual right, in which cases it is by all means forbidden to affect its content. Restrictions on these rights are permitted by the law, in the cases and to the extent provided for by the Constitution, without encroachment upon their essence, and the attained level of human and minority rights must not be reduced (Article 20 of the Constitution of the Republic of Serbia). In the same article it is stated that all state bodies, and especially courts, are obliged in these situations to see that there is proportionality between right restriction and its purpose, or in other words, to ascertain whether it was possible to achieve the same purpose with a relaxed restriction. Derogations from guaranteed rights are permitted during the state of emergency or war to the extent deemed necessary, and they cease upon ending of the state of emergency or war (Article 202 of the Constitution of the Republic of Serbia). Article 200 also prescribes the conditions and procedure for the proclamation and cessation of the state of emergency. On 15 March 2020, the President of the Republic, the President of the National Assembly, and the Prime Minister made a Decision on the proclamation of the state of emergency, which was effective until 6 May 2020, when it was abolished by a National Assembly Decision.

Article 53 of the Law on the Protection of Citizens from Infectious Diseases ("Official Gazette of the Republic of Serbia", Nos. 15/2016 and 68/2020) provides that the Minister of Health may, at the proposal of the Commission and the Institute, order the prohibition or restriction of movement for citizens in the area affected by a particular infectious disease. Based on that, on 10 March 2020, the Government of the Republic of Serbia made a decision by which COVID-19 was proclaimed an infectious disease. The Direction on measures in the state of emergency ("Official Gazette of the Republic of Serbia", No. 31/2020-3, dated 16 March 2020) restricted and prohibited the movement of people with this virus and persons suspected of infection; it prohibited outdoor assemblies and restricted indoor assemblies. The Order on restricting and prohibiting the movement of persons in the territory of the Republic of Serbia ("Official Gazette of the Republic of Serbia", Nos. 34/2020, 39/2020, 40/2020, 46/2020, and 50/2020) introduced a movement ban in a period longer than 24 hours for all persons in the territory of the state, which raised the question of the justifiability of a measure that was not a restriction on the right to movement but its total abolishment.

PERCEIVED CHALLENGES: AN INCREASE IN DOMESTIC VIOLENCE DURING THE PANDEMIC

Data on domestic violence during the state of emergency in the Republic of Serbia are still insufficiently analyzed, and according to available reports, it is concluded that there was an increase in recorded cases although, at the same time, there is mention of a smaller number of cases reported to the competent bodies and institutions. The victims of domestic violence during the state of emergency asked for help on a more frequent basis from the non-governmental sector and from organizations for the pro-

tection of women's rights. These organizations were quick to adapt to the new circumstances, which had as a result their timely reaction in terms of providing support and by that very fact greater trust on the part of victims. The victims who reported violence to the competent institutions believe that they did not receive adequate protection because the aggressors were warned just verbally. According to the data from the Autonomous Women's Centre, during the first month of the emergency state the centre provided 430 services as follows – 148 SOS telephone calls by 127 women; 108 legal SOS telephone calls by 88 women; 113 exchanged email, Viber, WhatsApp, and FB messages; 52 online consultations for 36 female victims of violence, and 9 written submissions. It is estimated that the number of women who asked for help increased by three times, primarily due to the unavailability of competent bodies and institutions, even though the SOS telephone was at disposal only in the morning shift. Women most frequently reported different forms of psychological violence and also economic violence, especially in the form of refusing to provide alimony, and although the number of reported cases of physical violence was the smallest, it is concluded that the reason for this was the inability or fear of reporting the aggressor during the curfew when the victim was sharing her living space with him (Autonomous Women's Centre, 2020). The same public announcement states that a large number of calls dealt with the issues arising from one parent's inability to see his/her children because of the other parent during the state of emergency, or keeping children by the other parent contrary to the court ruling. Many women and their children are becoming ever more frequently faced with the issues of material existence, which is not a priority in the operation of centres for social work.[8]

From the competent state institutions and the police there were appeals for reporting violence regardless of the state of emergency, and it was pointed out that female victims of violence running away from the aggressor or asking for support would not be penalized if they left their homes and violated the movement ban. Despite this, there was a recorded case of a woman being taken before the on-duty magistrate and penalized with a 50,000-dinar fine for leaving her house to report domestic violence (Đurić, 2020). Moreover, insisting that the victims of violence must have a previous negative COVID-19 test before being admitted to a safe house increases the risk of extended exposure to violence and the emergence of bigger harmful consequences. Bearing in mind that testing is not carried out at night and that one has to wait for the results for 24–48 hours, it would be necessary to provide particular premises in safe houses where women would stay until the moment of receiving their results after being tested.

The Third Basic Public Prosecutor's Office in Belgrade as being competent for the municipalities of New Belgrade, Zemun, and Surčin, announced the results of its operation in the state of emergency, during which the actions of the prosecutor's office were restricted to urgent and detention cases, and also to criminal offences relating to the state of emergency. There were seventy-five agreements concluded with accused persons on the confession of criminal offences, of which the largest number of agreements (59) were for the criminal offence of refusing to act in accordance with health regulations. During the state of emergency, 42 criminal complaints were filed with this prosecutor's office for therminal offence of domestic violence, of which two accused persons were sentenced to probation.[9] The

8 The EU delegation in Serbia has allocated 100,000 euros for supporting the 14,000 most seriously threatened women in Serbia, and the power to decide who will receive that support was left to the Red Cross of Serbia, which neither has nor should be allowed to have any data on the women who are victims of domestic violence, on single mothers, and the like – as it has been pointed out by the Autonomous Women's Centre.

9 In the period from January to June, 14 women died as a result of domestic violence, which is five times as high as in the same period last year, as pointed out by Vesna Stanojević, the coordinator of the Safe House. The measure of removing the perpetrator from the apartment was imposed in 45% of cases, and a similar percentage of cases had the imposition of both urgent measures – removal from the apartment and the prohibition of contacting or approaching the victim. The prosecutor's offices suggested that as many as 97.3%

United Nations Development Programme organization states that support was provided to 20 public prosecutors from eight prosecutorial districts in Serbia so that they could organize online meetings for conducting trials over the newly reported and ongoing cases of domestic violence, with the aim of accomplishing continuity and faster operation during the pandemic.[10]

The harm that the pandemic has done to human rights, freedoms, economic stability, democratic governance, economy, and the natural environment is enormous, and "the fear manipulated by propaganda time and again defeats knowledge and evidence, as history has shown on countless occasions" (Burrowes, 2020). During the COVID-19 pandemic, the "Stay at home" motto has had serious consequences and a large impact on those adults and children who already live with someone who abuses or controls them, and restrictive measures will also probably be "in the hands of those who abuse the strategy of control, surveillance, and coercion" (Bradbury – Jones, 2020: 2048). Experience throughout the world shows that domestic violence (including the abuse of children and old persons) increases during and after great catastrophes or crises, and an article published in *The Guardian* magazine (2020) reports that the increasing numbers of domestic violence cases are present throughout the world, so it is mentioned that there has been a 40–50% increase in Brazil, an increase of around 20% in one of Spain's regions in the first days of isolation, an increase of around 30% in Cyprus in the week following this country's confirmation of its first case of virus infection, and a 25% increase in Great Britain in the first seven days following the government's announcement of more severe social distancing measures (Bradbury – Jones, 2020: 2047). Reports from China point to a dramatic increase in domestic violence, and the police station in the Chinese province of Hubei recorded a double increase in reports on domestic violence in February 2020 during the COVID-19 quarantine (John, N, Casey, SE, Carino, G, McGovern, T, 2020: 66). In Spain, women were exempt from locking in the event of their having to leave a violent home, and they were allowed to use the code "Mask 19" to warn pharmacy shops about their situation (Nigam, 2020).

The World Health Organization also expressed concern over the mental health and psycho-social consequences of the pandemic, emphasizing that self-isolation and quarantine have affected the usual activities, routines, people's life-span and resulted in increasing loneliness, anxiety, depression, insomnia, harmful consumption of alcohol and drugs, self-harm or suicidal behaviour, and increasing domestic violence (Kumar, Navar, 2020). The author Loival (2020) states that a study by the Indian Psychiatric Society has shown a 20% increase in mental illnesses since the outbreak of coronavirus in India (Kumar, Navar, 2020).

The experience of the Ebola epidemic in Africa shows that epidemics worsen socio-economic inequalities and bring the vulnerable groups of women into an even greater risk of violence, which increases even after the crisis, due to rising unemployment and the loss of income, and this makes escaping very

of police urgent measures should be extended to 30 days, which most often was adopted by the courts. Violent offences were repeated by 6,002 perpetrators or almost every third perpetrator under the urgent measures which, by the way, were violated by 1,809 of them. In 85.3% of cases, the perpetrators were men, and in 74% of cases the victims were women, while 5% of the imposed urgent measures included the protection of children. Children are both the witnesses and victims of domestic violence. Violent offences are repeated because the imposed measures are not rigorous enough in a sense that the aggressors do not take them seriously. At the meetings of the Coordination and Cooperation Group, 51,911 cases of domestic violence were deliberated upon, which is a 25% increase in comparison with 2019. According to the data of the Autonomous Women's Centre, 18,648 individual plans for the protection and support of victims were made, which is a 42% increase in comparison with 2019. The victims rarely ever participated in these meetings, just 1% or 194 victims, which is a 50% decrease in comparison with the previous year – as it was stated by this non-governmental organization, with a remark that based on last year's aggregate data there was a considerable increase in the workload of the employed specialized professionals in the police, prosecutor's office, and centres for social work (Dekić, 2020).

10 More on: https://www.rs.undp.org/content/serbia/sr/home.html.

difficult (Ndedi, 2020). The financial impact of COVID-19 will also affect the long-term capability of local women's organizations, and in many countries women have no access to mobile phones, computers or the Internet, so that they cannot access those services or they cannot use them safely at home because the perpetrator and other family members can keep a close eye on them (Ndedi, 2020).

A special problem is the constant surveillance of the social media, the Internet, and mobile phones, which can limit the ability of victims to seek for support online, while stress and other factors of domestic violence, such as unemployment, reduced incomes, limited social support, and alcohol abuse increase as a consequence, that is, result of the pandemic (Campbell, 2020). So, a large increase in the percentage of alcohol sale was noticed throughout the United States – by 50% in March only (Piquero, Riddell, Bishopp, *et al,* 2020). Furthermore, reports on an ever-increasing sale of arms and ammunition in the United States during the crisis show a clear connection between the availability of arms and lethal cases of domestic violence (Campbell, 2020). The police are reluctant to intervene and detain a perpetrator during the COVID-19 pandemic, and reception centres for victims of domestic violence are hard to make decisions and reject new clients unless they have proof of negative testing, in order to avoid the spread of virus among the existing clients. In Oregon (USA), telephone lines for domestic violence are used more when COVID-19 spreads over the state, and the persons using them are worried because they do not know whether they will have the opportunity to obtain or extend court restraining orders due to diminished access to court and police services (John, N, Casey, SE, Carino, G, McGovern, T, 2020: 66). To many, during the isolation, the house has become a place of "the re-demonstration of power, feminization of unpaid labour, violence, and reproduction of the patriarchy" (Nigam, 2020).

It has been noted that during the pandemic women are more involved in housework, childcare and care of adults for maintaining the family, community, and health system, but they are invisible and insufficiently paid, which brings about a rise in their duties, in both the private and public sector, their greater exposure and susceptibility to diseases, given that they perform three quarters of unpaid care throughout the world, including the prevention of diseases in the household and care of ill relatives (John, N, Casey, SE, Carino, G, McGovern, T, 2020: 66). It should be mentioned that there is not a single country in the world where men have an equal share in unpaid care. There are opinions that "the rapacious capitalist model, often presented as being commonsensical and with no alternatives, does not respond well to the global health crisis, whereas the socialist models do" (Mezzadra, Stieri, 2020).

During the emergency circumstances caused by the pandemic, the heightened risk was also recognized by the national services for the provision of support to victims, so that in the United States the National Domestic Violence Hotline offers the services of conversation via the Internet or by sending messages in order to make it easier for the victims to ask for support while being at home with the aggressors; in Ecuador, a local organization dedicated to achieving gender equality and preventing domestic violence adapted its business operations to the outbreak of COVID-19 and began to offer counselling services via telephone; in Italy, the National Network of Domestic Violence Shelters kept its support services for emergency cases open, as well as Skype (John, N, Casey, SE, Carino, G, McGovern, T, 2020: 67).

The countries must continue to ensure the enforcement of laws and the protection of women, children, old people, and handicapped persons from violence and abuse, with ensuring the continuity of support services (COVID–19 and Human Rights – We are all in this together, 2020: 15). In these challenging times, it is necessary to recognize the opportunity to improve the understanding of how to provide the first psychological aid and mental health protection at the state level, given the fact that the global COVID-19 pandemic must be recognized as a pandemic that will soon be followed by mental illnesses, and also to take the steps that are necessary for the attenuation of consequences (Galea S, Merchant RM, Lurie N, 2020: 818).

The laws protecting women must be enforced and the institutions (the police, courts, prosecution offices, and social security services) must be trained how to react, protect, and refer the victims to the relevant services (Ndedi, 2020). The United Nations Organization has adopted particular recommendations such as the enlargement of investments in online services and civil society organizations, the establishment of an alert system in emergency situations, the creation of safe ways for women to ask for support, the avoidance of releasing the prisoners convicted of violence against women in any form, and the intensification of campaigns for raising the awareness of the public, especially those that are intended for men and boys (Nigam, 2020).

CONCLUSION

The Republic of Serbia has ratified all the greatly important conventions in the field of protection from domestic violence, while at the national level legislation has been improved by adopting new laws, and by amending the existing laws and the by-laws adopted on their basis. Nevertheless, we are witnesses to the fact that legislation is often not enough to put an end to domestic violence.[11] The situation becomes even more complex in times of emergency situations, emergency states, pandemics, and health risks because, according to the data and studies that are presently available to us, the victims of domestic violence are at an increased safety risk, with a reduced possibility of receiving appropriate support and protection on the part of competent bodies. The things that are noticed are insufficiently developed procedures for monitoring and controlling former convicts for violence against women and girls, and an adequate assessment of security risk. That is why before anything it is necessary to consider their possible negative effects and the possibility of achieving the same goal with more relaxed and in terms of health better-quality measures when introducing greatly significant restrictions, such as the prohibition of leaving the house in a period of several days (which is not a restriction but an abolishment of the freedom of movement).

It is necessary for all of us together to develop not only the care of our own health and the health of our families but also a broader social awareness of the possibilities and means available to us, so we could timely react and report any similar violence in our environment. The decision of the Ministry of Justice to penalize domestic violence, even during the state of emergency, as a kind of behaviour which demands a prompt reaction is good, and all the experiences acquired during the pandemic and the state of emergency need to be taken into consideration when creating some kind of a future strategy for reacting in the same or similar situations. Apart from telephone lines, online platforms, and panic alarms, which are installed in the apartments of victims in certain countries, the thing that can also be expected in the future is a wider use of particular mobile applications created for the purpose of preventive action and protection from domestic violence, as well as closer cooperation between state bodies and non-governmental organizations.

11 Some of the causes are difficulties in proving a family household, an extramarital affair, and emotional and sexual relationships and acts, given that there are a small number of witnesses or just one witness – the victim. The victim often refuses to testify. A small number of proceedings are conducted and ended on a private complaint because the victim and the perpetrator most often live together over the course of the proceedings, so that blackmails and threats are frequent. Moreover, in Centres for Social Work there are no records of abused children, and when it is impossible for a child to remain in the family, a question arises where to place the child, which confirms that victims lack appropriate financial support and accommodation, without a long administrative procedure. (Čović, 2013).

REFERENCES

1. Bradbury – Jones, C. (2020). The Pandemic Paradox: the Consequences of COVID 19 on Domestic Violence. *Journal of Clinical Nursing*, Volume 29, Issue 13-14: 2047 – 2049, https://doi.org/10.1111/jocn.15296
2. Burrowes, R. (2020, April 13). The Elite's COVID 19 Coup against a Terrified Humanity: Resisting Powerfully, Global Research. Available at https://www.globalresearch.ca/elite-covid-19-coup-against-terrified-humanity-resisting-powerfully/5709479
3. Campbell, A. (2020). An Increasing Risk of Family Violence during the Covid- 19 Pandemic: Strengthening Community Collaborations to Save Lives. *Forensic Science International: Reports*. Volume 2. Available at https://doi.org/10.1016/j.fsir.2020.100089
4. Čović, A. (2013). The Importance of Ratification of the Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence. *Foreign Legal Life*. No. 3/2013. p. 279-292.
5. Čović, A. (2014). Violence against Children - Manifestations and Measures of Protection. *Violence in Serbia - Causes, Forms, Consequences and Social Reactions*. p. 368-382.
6. Čović, A. (2020). The Right to Privacy and Protection of Personal Data in the Age of Covid – 19 Pandemic. *Sociological Review*. Vol. LIV, no. 3/2020. [forthcoming]
7. COVID – 19 and Human Rights – We are All in This Together. (2020). Available at https://www.un.org/victimsofterrorism/sites/www.un.org.victimsofterrorism/files/un_-_human_rights_and_covid_april_2020.pdf
8. Galea S, Merchant RM, Lurie N. (2020). The Mental Health Consequences of COVID-19 and Physical Distancing: The Need for Prevention and Early Intervention. JAMA Intern Med. American Medical Association. Volume 180(6):817–818. Available at doi:10.1001/jamainternmed.2020.1562
9. John, N, Casey, SE, Carino, G, McGovern, T. (2020). Lessons Never Learned: Crisis and Gender-Based Violence. *Developing World Bioethics*. Volume 20, Issue 2: 65– 68. Available at https://doi.org/10.1111/dewb.12261
10. Kumar A. & Nayar R. K. (2020). COVID 19 and Its Mental Health Consequences, *Journal of Mental Health*. Available at https://doi.org/10.1080/09638237.2020.1757052
11. Mezzadra, S, Stieri, M. (2020). What Happens to Freedom of Movement During a Pandemic? Open Democracy. Available at https://www.opendemocracy.net/en/can-europe-make-it/what-happens-freedom-movement-during-pandemic/
12. Ndedi, A. (April 14, 2020). Framework in Ending Violence against Women and Girls with the Advent of the COVID-19 from an African Perspective. Available at SSRN: https://ssrn.com/abstract=3575288 or http://dx.doi.org/10.2139/ssrn.3575288
13. Nigam S. (2020). COVID-19, Lockdown and Violence against Women in Homes. Available at SSRN: https://ssrn.com/abstract=3587399 or http://dx.doi.org/10.2139/ssrn.3587399
14. Piquero, A.R., Riddell, J.R., Bishopp, S.A. *et al.* (2020). Staying Home, Staying Safe? A Short-Term Analysis of COVID-19 on Dallas Domestic Violence. *American Journal of Criminal Justice*. Available at https://doi.org/10.1007/s12103-020-09531-7

LIST OF REGULATIONS AND ACTS

1. Constitution of the Republic of Serbia, (*Official Gazette of RS* no. 98/2006).
2. Convention on the Elimination of All Forms of Discrimination against Women, UN, 1979 (*Official Gazette of the SFRY - International Agreements*, No. 11/1981).
3. Convention on the Rights of the Child, UN, 1989 *(Official Gazette of the SFRY - International Agreements*, No. 15/1990 and *Official Gazette of the FRY*, No. 4/96 and 2/97).
4. Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence, Istanbul, 11 May 2011.
5. Criminal Code, *Official Gazette of RS*, no. 85/2005, 88/2005 - corrected, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019.
6. Decree on emergency measures (*Official Gazette of RS*, No. 31 / 2020-3 of March 16, 2020).
7. Family Law, *Official Gazette of RS*, no. 18/05.
8. Law on Protection of the Population from Infectious Diseases (*Official Gazette of RS,* no. 15/2016 and 68/2020).
9. Law on Prevention of Domestic Violence (*Official Gazette of RS*, No. 94/2016).
10. Law on Ratification of the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse (*Official Gazette of the RS - International Agreements*, No. 1/2010).
11. Law on Special Measures for Preventing the Execution of Criminal Offenses against Sexual Freedom against Minors (*Official Gazette of the RS*, no. 32/2013).
12. Order on Restriction and Prohibition of Movement of Persons on the Territory of the Republic of Serbia (*Official Gazette of RS,* No. 34/2020, 39/2020, 40/2020, 46/2020 and 50/2020).

INTERNET SOURCES

1. Autonomous Women's Centre. (2020, April 16). "Press Release: Protection and Support for Women Victims of Violence during the First Month of the State of Emergency". Available at https://www.womenngo.org.rs/vesti/1576-saopstenje-za-javnost-zastita-i-podrska-zenama-zrtvama-nasilja-tokom-prvih-mesec-dana-vanrednog-stanja
2. Dekić, D. (2020, July 8). "The Number of Killed Women as a Result of Domestic Violence Is on the Increase". Available at https://www.vesti-online.com/raste-broj-zena-stradalih-u-porodicnom-nasilju/
3. Eraković, I. (2020, Jun 23). "Children at the Time of Covid - 19 or How to Prevent the Excluded from Becoming Even More Excluded". Available at http://socijalnoukljucivanje.gov.rs/rs/deca-u-doba-covid-19-ili-kako-da-iskljuceni-ne-budu-jos-iskljuceniji/).
4. Đurić, M. (2020, April 29). "An Increase in Violence in the State of Emergency: Penalized Because She Went Out to Report the Abuser". Available at http://rs.n1info.com/Vesti/a594297/Porast-nasilja-u-vanrednom-stanju-kaznjena-jer-je-izasla-da-prijavi-nasilnika.html

SALARY SYSTEM OF THE POLICE OFFICERS IN MONTENEGRO

Aleksandra Rabrenović, PhD[1]
Institute of Comparative Law, Belgrade, Serbia

Abstract: The objective of the paper is to analyse the pay and benefit system of the police officers in Montenegro. The paper assesses the salary system against the standards laid out in the SIGMA/OECD Principles of Public Administration (2014) – legal regulation, fairness, transparency and competitiveness. The author concludes that in spite of relatively well-defined legal framework, the fairness of the salary system is not ensured, due to an absence of job evaluation methodology, which would provide criteria on how to classify an individual job to a certain rank. The salary levels of the police officers are quite competitive to the levels in the civil service and also comparable to those in the general labour market. However, in the absence of a more detailed review of the data on salary levels in the private sector, it is difficult to properly assess the external competitiveness of the system, which should be the subject of additional research.

Keywords: salary system, remuneration, police officers, Montenegro

INTRODUCTION

The systems of salaries and remuneration of civil servants have always attracted the attention of both practitioners and legal theorists. Hegel argued that civil servants should be adequately paid for their work, in order to create a professional and competent administration, which will be able to effectively perform public affairs above political interests (Hegel & Knox 1957: 294). Bentham, on the other hand, in accordance with the utilitarian philosophy of the state and law, cared more about the costs of public administration, emphasized the importance of honorary work and considered ways to minimize the costs set aside for salaries in public administration (Benthman, 1962). Discussions about the salary systems continue to this day through these views of the two great philosophers.

1 a.rabrenovic@iup.rs

One of the key arguments for the existence of an appropriate system of salaries for civil servants is that low salaries pose a high risk of developing corruption. Thus, for example, an analysis of individual salary levels conducted in Ukraine in 2006 showed that civil servants, through corrupt practices and bribery, on average only compensated for the difference between the earnings they could earn in the private sector and the salary levels they received in the public sector (Gorodnichenko & Sabirianova Peter, 2006). This shows the importance of the competitiveness of the public sector employees' salaries with the employees in the private sector.

The contemporary literature, however, increasingly emphasizes that the risk of corruption is not only in the average level but also in the absence of consistency and fairness of the salary system. Thus, for example, a survey conducted in 2011 in the state administration of China, in which the dramatic increase in corruption occurred simultaneously with a large increase in the salaries of civil servants, showed that the increase in the total level of salaries is no guarantee for reducing corruption (Gong & Wu, 2012). In the similar vein, the research conducted in Ghana in 2015, showed that doubling of the police officers' salaries, instead of decreasing petty corruption, significantly raised the police efforts to collect bribes and increased the bribes value (Foltz & Opoku-Agyemang, 2015).

Despite the importance of the topic, there is a scarcity of the academic research regarding police officers' salaries in general. A valuable contribution to the broader topic of salaries in the public sector was given by a comparative study conducted in 2012 in Europe and North America, led by Brans and Peters (2012). This research is a "continuation" of an earlier study on the salaries of officials, which was conducted in 1994 (Hood & Peters, 1994). Both studies, however, focus on the salaries of high-ranking public officials, but do not cover the police officers positions. Meyer-Sahling also dealt with the topic of civil servants' salaries, as part of two studies on the development of civil service systems in Central and Eastern Europe and Southeast Europe, which were conducted under the auspices of Sigma (Mayer - Sahling, 2019; 2012), but also did not focus on the police.

Salaries of the police officers in Montenegro have, up to now, not been subject of a special research. The topic of salaries of civil servants in the countries in the region was recently dealt with from the legal aspect by Zorica Vukašinović Radojičić (2013) and Rabrenovic (2019), but neither of them paid separate attention to the police salary systems. The salary system of civil servants of Montenegro was analysed only within SIGMA/OECD monitoring reports, but again without special emphasis on the police (SIGMA/OECD, 2017a).

The aim of this paper is to shed a light on the salary system of the police officers of Montenegro, which would be assessed against the European principles set out in the SIGMA/OECD Principles of Public Administration (2014). For this reason, the analysis starts with the review of the principle 6 on public servants' salaries of the chapter on Human Resources Management and Public Service of the SIGMA/OECD principles, which serve as a benchmark for assessing the quality and fairness of the police officers' salary system. The central part of the paper examines the classification system of the police officers and the salary structure. Finally, the paper examines the competitiveness of the police officers' salaries with the civil service and the general labour market.

SIGMA/OECD PRINCIPLES OF PUBLIC ADMINISTRATION - PUBLIC SERVANTS SALARIES/REMUNERATION

Due to national specificities, the area of human resource management, which includes public servants' salaries, is normally excluded from the scope of international conventions or the EU *acquis commu-*

nautaire. It may, however, be argued that this area is governed by *soft acquis*, comprising shared standards of the EU member states and affecting indirectly the development of the national law (Keune, 2009). Though not legally binding, these standards have significant practical effects on the aspiring countries, given that the European Commission assesses their progress against such standards.

To provide a more detailed elaboration of the Commission's human resource management requirements, SIGMA[2] drew up a document entitled "Principles of Public Administration" (2014), which focuses on several public administration areas, one of them being the public service and human resource management. The basic standards in this area, which also includes the public servants' salaries (remuneration) are defined in a rather detailed manner in line with the good European practices in the human resource management area. SIGMA has also developed Methodological framework for the Principles of Public Administration (2017), which outlines the methodology for assessing the European standards and contains the indicators, which measure the development progress.

The basic SIGMA principle regarding public servants' remuneration is a requirement that all key salary system elements be established by the law. Legal regulation is important for ensuring the stability, impartiality and integrity of the work of public servants. SIGMA recommends that the legal regulation of the civil servants' salary system includes: a classification based on job classification, an overall list of civil servants' salary supplements and other benefits (e.g. family members' allowances, education, sickness benefits, maternity leave or injuries at work), the relationship between the basic salary and the variable part of the salary, etc. (SIGMA/OECD, 2014: 51).

The second key principle is the fairness of the salary system. It assumes that equal pay should be given for equal work. This means that the level of salary of a particular job should correspond to the level of responsibility, complexity and importance of the job in the public administration system. In order to implement this principle, each job should be subject to job evaluation (in SIGMA's terminology – *job classification*).

Finally, key principles that SIGMA promotes are the principles of transparency and competitiveness of the salary system. The transparency should be ensured by reducing the degree of discretion in determining the level of salary of a civil servant, as the existence of a large number of salary supplements provides a basis for excessive managers' discretionary (SIGMA/OECD, 2014: 51). The salary system should also be competitive with other parts of the public sector and also in relation to the private sector, so that the public service would be able to attract and retain staff with the appropriate knowledge, skills and motivation to do the job (SIGMA/OECD, 2014: 51).

ASSESSMENT OF THE MONTENEGRIN POLICE OFFICERS' SALARY SYSTEM – LEGAL REGULATION AND FAIRNESS

The classification of the positions of the police officers in Montenegro is established by Article 88a of the Law on Internal Affairs (Official Gazette, Nos. 44/12, 36/13, 1/2015, 87/2019), which is in line with the SIGMA Principles. The Law includes detailed classification of posts, which comprises two

2 Having recognized the importance of well-regulated and organized state administration for compliance with membership requirements in all sector areas, in 1992 EU and OECD founded SIGMA - *Support for Improvement in Governance and Management*. This programme aims at supporting public administration reform activities of (potential) EU candidate countries. SIGMA, largely financed through EU PHARE, represents one of the main European Commission's instruments for promoting the development of public administration capacity in Central and Eastern Europe, and providing technical assistance to candidate countries.

separate, but closely related systems. The first system (level 1) applies to posts requiring police work experience/police education, while the second (level 2) applies to the ranks which do not require police education/experience.

The ranks of the police officers (which require police education/work experience) include four groups of jobs, which are mainly classified in accordance with the educational requirements (see table 1). The first two groups of jobs/ranks require university education and from 1 to 10 years of work experience in the police. The third group of jobs requires college education, which includes graduates of the Police Academy, who obtain college education after their graduate from the Academy. Finally, the fourth group of jobs requires high school education and from 1 to 5 years of police-related experience.

Table 1. Ranks of the police officers which require work experience in the police - minimum education and years in service requirements (level 1)

Group of jobs	Rank	Education and years in service requirements
I	Chief police inspector	University degree and 10 years of police work experience
I	Higher police inspector I class	University degree and 8 years of police work experience
I	Higher police inspector	University degree and 6 years of police work experience
II	Independent police inspector	University degree and 4 years of police work experience
II	Police inspector I class	University degree and 3 years of police work experience
II	Police inspector	University degree and 2 years of police work experience
II	Junior police inspector	University degree, induction period completed
III	Higher police surgeon I class	College degree (Police academy), five years of work exp.
III	Higher police surgeon	College degree (Police academy), three years of work exp.
III	Police surgeon	College degree (Police academy), induction period completed
IV	Senior Police Officer I class	High school education, five years of police work experience
IV	Senior Police Officer	High school education, three years of police work exp.
IV	Police Officer	High school education, induction period completed

Source: Article 88a of the Law on Internal Affairs.

Although the ranks of the police officers are determined by the law, there are many inconsistences in how they are assigned to the police officers in practice. The key problem is that individual jobs are described in the Rulebook on Internal Organisation and Systematisation and are linked to ranks without transparent criteria, which may result in the situation where jobs which have higher levels of complexity and responsibility are linked to lower ranks and *vice versa*. This goes against the SIGMA standards, which require that the pay system is fair and based on job classification methodology.

The introduction of the job classification methodology requires well-defined job descriptions, which would provide the basis for fair classification of posts into ranks (Rabrenovic, Vlajkovic & Ahmetovic, 2016). The current job descriptions, presented in the Rulebook on Internal Organisation and Systematisation of Posts of the Police Administration (2019), include both specific and generic information about the positions, and do not provide sufficient level of information which would be necessary for fair classification of posts. Over the past year, the Police Administration has recognised these deficiencies and started revising the job descriptions of the police officers, which should be published in a special catalogue of the police officers' positions, which is expected to be finalised by the end of 2020.

If we take a look at the level 2 ranks of the police officers, which include the posts that do not require the police work experience, we can see that it includes only the posts requiring university education (Table 2). All level 2 jobs require university education and between two and ten years of work experience.

Table 2. Ranks of the police officers which do not require police education/work experience – minimum education and years in service requirements (level 2)

	Rank	Education and years in service requirements
I	Chief police advisor	University degree and 10 years of work experience
I	Higher police advisor I class	University degree and 8 years of work experience
I	Higher police advisor	University degree and 6 years of work experience
II	Independent police advisor	University degree and 4 years of work experience
II	Police advisor	University degree and 2 years of work experience

Source: Article 88a of the Law on Internal Affairs

If we, however, analyse the number of people who hold these ranks, we can see that it is rather low, which questions the need for this special kind of police ranks. For example, in 2018, only 0.7 % of all police officers (28 people) held the rank of the level 2 classification (Government of Montenegro, Human Resources Management Strategy in the Police Administration, 2019-2024). Although the number of police officers at the level 2 classification may be higher at the moment, the question of the necessity of this separate job classification still remains valid.

The salary principles of all public sector employees, including the police officers, are also governed by the Law, which is in line with SIGMA standards. The key piece of legislation regulating the public servants' salaries is the Law on Salaries of Public Sector Employees (Official Gazette Nos. 16/2016, 83/2016, 21/2017, 42/2017, 12/2018, Const. Court Decision 42/2018 and 34/2019). The Law was adopted for the purpose of increasing transparency and harmonising wages for similar jobs throughout the public sector, along with motivating employees to perform better at work (SIGMA/OECD, 2017a). The Law stipulates coefficients for calculating the base salary for all civil service positions, judges and prosecutors, but, interestingly, not for the police officers. The only exceptions are the positions of the Police Director and the Assistant Police Director, whose coefficients are determined by the Law.

The levels of salaries of the police officers are governed by the Decree of the Groups of Jobs and Coefficients for the Salaries of the Police Officers (Decree on the Group of Jobs and Coefficients for Salaries of the Police Officers, Official Gazette No. 16/2016). The Decree stipulates the coefficients of both the 1st and 2nd level of ranks of the police officers.

SALARY STRUCTURE, TRANSPARENCY AND COMPETITIVENESS OF THE POLICE OFFICERS' SALARY SYSTEM

The salary of all public sector employees, including the police officers, comprises of four key elements: the basic salary; separate part of salary; allowance to the basic salary and variable part of the salary. The basic salary of the police officers is calculated by multiplying the coefficient stipulated in the Decree and the coefficient value, which is determined by the decision of the Government of Montenegro (Decision on the Value of the Coefficients for the Year of 2020, Official Gazette No. 37/2020). The

separate part of the salary includes meals and vacation allowance, which amounts to 70% of the value of the coefficient determined by the Government (Article 13 of the Law on Salaries of Public Sector Employees). The salary allowance category includes the following: allowance for working during night and state holidays and overtime work; allowance for some specific jobs; special allowance; years in service allowance; and readiness allowance (Article 15 of the Law on Salaries of Public Sector Employees). Years in service allowance is determined by the Branch Collective Agreement for the area of public administration and justice (Official Gazette No. 18/15) and amounts to 0.5% of the basic salary per each year in service up to 10 years of experience; 0.75% of the basic salary from 10 to 20 years of experience; and 1% of the basic salary per year after 20 years in service. Finally, the variable part of the salary is paid based on the employee performance.

It is relatively easy to calculate the gross salary levels of the police officers (without allowances and bonuses) which are presented in the Table 3. The table shows that the coefficients of the ranks of the police officers which require police education/experience (e.g. chief police inspector) are equal to the coefficients of the police officers who do not require police education/experience (e.g. chief police advisor) and so are their salary levels.

Table 3. Gross salary levels (basic salary + separate part of salary) of the police officers, without allowances and bonuses

Police officers ranks	Coefficient	Coefficient value (EUR) - gross	Gross basic salary (EUR)	Separate part of salary -meals and holiday allowance (EUR)	Gross basic and separate part of salary (EUR) without allowances and bonuses
Police Administration Director	16.43	90	1710	63	**1542**
Police Director Assistant	13.83	90	1440	63	**1308**
Chief police inspector Chief police advisor	10.87	90	978	63	**1041**
Higher police insp. I class Higher police adv. I class	9.83	90	885	63	**948**
Higher police inspector Higher police advisor	9.57	90	861	63	**924**
Independent police inspector Independent police advisor	9.3	90	837	63	**900**
Police inspector I class Police advisor I class	8.64	90	778	63	**841**
Police inspector Police advisor	8.1	90	729	63	**792**
Junior police inspector	7.84	90	706	63	**769**
Higher police surgeon I class	7.31	90	658	63	**721**
Higher police surgeon	6.78	90	610	63	**673**
Senior police officer I class	6.05	90	545	63	**608**
Senior police officer	5.93	90	534	63	**597**
Police officer	5.84	90	526	63	**589**

The levels of the police officers' salaries, however, are not accessible to the wider public, as there are no data related to the salary levels available at the Police Administration website. Furthermore, criteria and procedures to award the variable pay (bonuses) are also not sufficiently transparent. The Government Decision on the Variable Part of the Salary (Official Gazette No. 32/16) sets forth only that the person entitled to make the decision on the variable pay will decide on the fulfilment of conditions and on the amount in each case. This results in a high level of managerial discretion in affecting the total reward of public sector employees (SIGMA/OECD, 2017a: 68).

There, however, appear to be relatively few jobs in the Police Administration eligible for special allowance and variable pay. According to the Government's Special Allowance Decision (Official Gazette Nos. 061/16, 065/17), special allowance, amounting up to 45 per cent of the basic pay, may be granted to police officers working in the police unit formed under the Law on the Special State Prosecutor's Office and those working in the Special Antiterrorist Unit, Special (anti-riot) Unit and the Antiterrorist Inspection Group; in the case of the last three units it may go up to 10 per cent of the salary. The Government's Variable Pay Decision sets out that variable portion of salary, amounting to 50 per cent of the previous year's average salary in Montenegro and paid quarterly or semi-annually, may be granted for exceptional results and quality of work. In the Police Administration, variable salary components range from 30 to 50 per cent of the average salary and, in most cases, are paid once in a year.

Finally, it is interesting to assess "internal competitiveness" of the police officers' salaries - compare the salary levels between the police officers and the civil servants in Montenegro. Although it is difficult to make a direct comparison of jobs in the police and in the civil service, as the police work engages higher level of responsibilities especially regarding carrying and handling of weapons, it is still useful to see the differences, which are presented in the table 4 below.

Table 4. Comparison of levels of salaries of the police officers and civil servants

Police officers ranks	Gross basic and separate part of salary (EUR) without allowances and bonuses	Civil servants ranks	Gross basic and separate part of salary (EUR) without allowances and bonuses	Share of civil servants' salary levels *vs.* police officers' salary levels
Police Director	1542	General Secretary in the Ministry	1463	95%
Police Director Assistant	1308	General Director in the Ministry	1463	112%
Chief police inspector Chief police advisor	1041	Independent advisor I	729	70%
Higher police inspector I class Higher police advisor I class	948	Independent advisor II	711	75%
Higher police inspector Higher police advisor	924	Independent advisor III	693	75%
Independent police inspector Independent police advisor	900	Higher advisor I	648	72%
Police inspector I class Police advisor I cl.	841	Higher advisor II	612	73%

Police inspector Police advisor	792	Higher advisor III	594	75%
Junior police inspector	769	Advisor I	558	73%
Higher police surgeon I class	721	Advisor II	522	72%
Higher police surgeon	673	Advisor III	495	74%
Senior police officer I class	608	Independent clerk	432	71%
Senior police officer	597	Higher clerk	405	68%
Police officer	589	Clark	378	64%

The comparison shows that police officers' salary levels are around 30 per cent higher than the salaries of civil servants, with only one exception. The exception is the salary of police director assistant, which is 12 per cent lower than the comparator post of the general director in the ministry.

Higher salary levels of the police officers are certainly an important factor for the Police Administration to attract staff from other parts of the civil service, especially given that the level 2 of the police officers classification does not require any police education/experience. Anecdotal evidence shows that the Police Administration has indeed attracted a number of staff from the Ministry of Interior, during the process of the dissolution of the Ministry of Interior which occurred in 2019, when the Police Administration became an independent Government body.

When the salaries of the police officers are compared to the salaries of the general labour market, the level of their competitiveness, on average, appears to be good. However, due to the scarcity of data and analysis on private sector wages, comparison between salaries in the public sector and salaries in the general labour market can only be made based on the average gross monthly salaries, without controlling for the variables of qualification or level of responsibility (SIGMA/OECD, 2017a: 68). As the average salary in the average labour market in June 2020 was 787 (MONSTAT, 2020), while in the police it was 906 EUR, it may be argued that, on average, police officers' salaries are competitive to those in the general labour market.

In spite of the general external competitiveness of the police officers' salaries, the police may have a problem to attract personnel for carrying out complex technical jobs. This is especially relevant in the case of jobs that the labour market values higher than the public authorities (for example, engineers specialised in IT, telecommunications, electrical engineering, electronic engineering experts, etc.). Outflow of these qualified staff could be a major challenge for the police organisation, particularly from the aspect of its development needs in the future and the ever-growing complexity of the police work.

CONCLUSION

The key conclusion of this analysis is that the current legal framework on salaries of the police officers in Montenegro is generally in line with the European principles. The main salary system principles and elements, including the salary classification, the complete list of variable elements of salary and the relation between the fixed and variable salary, are established in law to ensure coherence.

The salary system, however, does suffer from two key weaknesses. The first one is the absence of transparent criteria, which would provide a basis for assigning an individual job to a proper rank (i.e. job evaluation methodology) and weigh the differences in complexity and responsibilities of a variety of the police jobs. The second is the absence of sufficient level of transparency. Although the amount of allowances and discretionary payments is not high, the data on the police salary levels are still not accessible to the wider public, which has an adverse effect on ensuring the transparency principle.

The findings of the paper show that the salary levels of the police officers are quite competitive to the levels in the civil service and also comparable to the general labour market. This should provide the police quite a solid ground to attract and retain quality personnel. However, in the absence of a more detailed analysis of salary levels in the private sector it is difficult to talk about actual external competitiveness of the salary levels, especially for complex technical positions which are deficient at the labour market. For this reason, it would be very useful to conduct a further research on comparing the salary levels in the police and the private sector, in order to ensure that the Montenegrin police service is able to attract and retain the best personnel that would be able to handle ever increasing police challenges of the 21st century.

REFERENCES

Books and articles

1. Bentham, J. (1962). *The Works of Jeremy Bentham*, Volume One. New York: Russel & Russel.
2. Brans, M. & Peters, B.G. (2012). *Rewards for High Public Office in Europe and North America*. London: Routheledge Research in Comparative Politics.
3. Foltc, J. D. & Opoku-Agyemang K.A. (2015). Do higher salaries lower petty corruption? A Policy Experiment on West Africa's High Ways. London: *ICG international Growth Center*.
4. Gong, T. & Wu, A. (2012). Does Increased Civil Service Pay Deter Corruption? Evidence from China, *Review of Public Personnel Administration*, 32/2012, 192–204.
5. Gorodnichenko, Y. & Sabirianova Peter, K. (2006). Public Sector Pay and Corruption: Measuring Bribery from Micro Data. *IZA Discussion Paper No.1987*, *Research Paper Series,* 06–05/2006.
6. Hegel, G. W. F. & Knox, T. M. (1957). *Hegel's Philosophy of right*. Oxford: Clarendon Press.
7. Hood, C. & Peters, B. G. (1994). *The Rewards at the Top: A Comparative Study of High Public Office*. London: Sage.
8. Keune, M. (2009). EU Enlargement and Social Standards – Exporting the European Social Model?, In J. Orbie, L. Tortell (Eds.), *The European Union and the Social Dimension of Globalisation, How the EU Influences the World.* London: Routhledge.
9. Meyer – Sahling, J-H. (2009). Sustainability of Civil Service Reforms in Central and Eastern Europe Five Years after EU Accession. *SIGMA Papers*, No. 44, Paris: OECD Publishing.
10. Meyer – Sahling, J-H. (2012). Civil Service Professionalism in the Western Balkans. *SIGMA paper,* No. 48. Paris: OECD Publishing.
11. Rabrenović, A. (2019). *Evropski sistemi plata i nagrađivanja državnih službenika*. Beograd: Institut za uporedno pravo.

12. Rabrenović, A., Vlajković, V. & Ahmetović, D. (2016). Analytical Job Evaluation. In Virant G. *et al* (Eds), *Human Resource Management in the Civil Service,* Sarajevo: TT concept, 73–86.

13. SIGMA/OECD (2014). *Principles of Public Administration*. Paris: OECD publishing.

14. SIGMA/OECD (2017). *Methodological Framework for the Principles of Public Administration*. Paris: OECD publishing.

15. SIGMA/OECD (2017a). *Monitoring Report Montenegro, 2017*. Paris: OECD publishing.

16. Vukašinović Radojičić, Z. (2013). *Evropski službenički sistemi*. Beograd: Kriminalističko-policijska akademija.

Documents downloaded from the internet

17. MONSTAT, Statistics Office, Average wage for June 2020, downloaded on 1 August 2020: https://www.monstat.org/cg/novosti.php?id=3350.

Policy documents and legal regulations

18. Government of Montenegro, Human Resources Management Strategy in the Police Administration for 2021-2024.

19. Law on Internal Affairs, Official Gazette of Montenegro Nos. 44/12, 36/13, 1/2015, 87/2019.

20. Law on Salaries of Public Sector Employees, Official Gazette of Montenegro Nos. 16/2016, 83/2016, 21/2017, 42/2017, 12/2018, Const. Court Decision 42/2018 and 34/2019.

21. Decree on the Group of Jobs and Coefficients for Salaries of the Police Officers, Official Gazette of Montenegro No. 16/2016.

22. Government of Montenegro, Decision on the Value of the Coefficients for the Year of 2020, Official Gazette of Montenegro No. 37/2020.

23. Government of Montenegro, Decision on the Variable Part of the Salary, Official Gazette of Montenegro No. 32/16.

24. Government of Montenegro, Decision on Special Allowance, Official Gazette of Montenegro No. 061/16, 065/17.

25. Police Administration, Rulebook on Internal Organisation and Systematisation of Positions of the Police Administration, April 2019.

26. Branch Collective Agreement for the Area of Public Administration and Justice, Official Gazette of Montenegro No. 18/15.

TOPIC V

FORENSIC LINGUISTICS AND LANGUAGE FOR SPECIFIC PURPOSES

THE IMPORTANCE OF SPEECH PAUSES FOR PSYCHOTHERAPEUTIC AND FORENSIC OBSERVATIONS

Svetlana Zdravković, PhD[1]
College of Social Work, Belgrade; Institute of Mental Health, Belgrade;
College for Communications, Belgrade, Serbia

Slobodan T. Jovičić, PhD[2]
School of Electrical Engineering, University of Belgrade;
Institute "Life Activities Advancement Centre", Belgrade, Serbia

Abstract: During the psychotherapeutic process, the pauses could "tell" a lot about a patient's personality, problems and experiences. The length and the quality of pauses could be connected with intrapsychic conflicts which a patient tries to "hide" and with the transference too. Looked at from the perspective of the work on dreams and history, pauses could be very useful for the psychotherapist's understanding of the patient. Theoretical concepts are interwoven with the examples from clinical practice. In forensic view, pauses in speech are analysed on a phonetic-linguistic basis. The paper presents the classification of pauses with special reference to *filled pauses*. In these pauses the silence can be filled with a neutral voice /ə:/ or a voice combination /ə:m/. Several examples will indicate their intra-speaker stability as well as inter-speaker variability. Experiments have shown that a certain set of acoustic-phonetic features makes these pauses important forensic markers.

Keywords: pauses in speech, filled pauses, psychotherapy, forensic markers.

INTRODUCTION

Research into the phenomenon of speech pause is primarily related to the development of the theory of speech production (Crystal, 2008). As speech production is influenced by many factors such as sociolinguistic profile of the speaker, cognitive load, psychological status, stress, situational context,

1 svetlana.zdravkovic@imh.org.rs
2 jovicic@etf.rs

content, goal and intentions in speech communication, a pause as an element of speech can play a very different role. About importance of a pause in speech communication Mark Twain said: “The right word may be effective, but no word was ever as effective as a rightly timed pause”.

In usual communication the speaker may use pauses to enhance the message delivery. He may use a pause to emphasize that the information coming next is important, or to give the audience time to process what he has just said. There are several powerful ways to use the pause to maximum communication effect. For example, the pause before someone starts speaking, the pause to signal that something important is coming, the pause after saying something important, the pause when moving to a new topic, the pause for emphasizing a key point, the pause to get your audience to reflect on an issue, the pause before answering questions, and so on.

The pauses exist in all human languages and cultures, but the meaning of pauses vary between cultures and languages. For instance, Kendall (2009) examined the impact of different factors on pause length and showed that region, gender and ethnicity have significant influences on pause duration. In dialogs in Swedish, Megyesi and Gustafson-Capková (2002) found that pauses in the linguistic context occur mainly at turn taking (28%), but also between phrases, e.g. in front of noun phrases (16%), adverb phrases (10%), conjunctions (10%) and prepositional phrases (9%).

Cognitive aspects of pauses were investigated by Kircher, Brammer, Levelt, Bartels and McGuire (2004) using of functional magnetic resonance imaging (fMRI). It seems that pauses relate to language planning on various levels, and that different types of pauses may be connected to different types of cognitive activities. On the other hand, different types of pauses were investigated in the context of mental condition of a speaker, e.g. schizophrenics make pauses around 10 % more often and around 10 % longer (Rapcan et al., 2010).

The information on pause properties in speech is individualized between speakers and influenced by situational context and linguistic and cognitive tasks. As such, it is meaningful for creating a speaker’s psycho-social profile. Pauses in psychotherapy could tell a lot about patient’s psychological situation. They could be seen as a kind of diagnostic and prognostic signs. It is not a rare situation that for some people, depending on the quality and intensity of their psychological disorder and/or personality traits, pauses have a special meaning. Making space between words could be perceived (consciously and/or unconsciously) as dangerous. It could enable a control to be loosened or lost and a lot of unwanted things to be said or shown during the session.

A pause in speech is obviously a specific entity that has its cognitive source, psychological modulation and a verbal realization. The observation of this entity could be perceptive (subjective, psychotherapeutic) and objective (acoustics, forensic). This two-dimensionality does not exclude a mutual interaction of these two kinds of observations. On the contrary, joined together they could describe the individuality of a person in a more comprehensive way. From the forensic point of view, pauses in speech could be important forensic markers.

The aim of this paper is to describe the importance of speech pauses, as specific speech-linguistic manifestations, looked at from the psychotherapeutic and forensic aspects and to point out still not enough used potential in their integral characterization of the personality.

TYPES OF PAUSES IN CONTINUOUS SPEECH

There is no consensus on the categorization of speech pauses (Künzel, 1997; Rose, 2002). But, several types of pauses can be recognized based on their form and function. What is mutual for all types of pauses is that they do not affect sentence meaning but perturb utterance fluency.

Silent pauses - Silences occur in conversation for a number of reasons, for example for breathing, thinking, word-searching and turn taking management. Silence can be defined as "complete absence of sound" or "the fact or state of abstaining from speech", whereas a pause is defined as "a temporary stop in action or speech" (New Oxford American Dictionary). So, when a pause is filled with silence we have *silent pauses.*

Filled pauses - Filler sounds are spoken in conversation by one participant to signal to others that he or she has paused to think, but is not yet finished speaking. Different languages have different characteristic filler sounds. The most common filler sounds in English, as well as in Serbian, are / :/ and / :m/. Possible filler pauses could be realized as prolongation of segments. For example, in Serbian word / *primedba*/ the filled pause could be by prolongation of /i/, /pri:::medba/, or of /m/, /prim:::edba/, or of /d/, /primed:::ba/.

Juncture pauses – Juncture pauses enhance the syntactic and semantic structure of the speech flow and primarily occur between intonation phrases. The sentence usually consists a noun phrase (NF) and a verb phrase (VF). Each phrase might be signalled by a separate intonation phrase and the first juncture pause occurs between these two intonation phrases, while the second pause occurs at the end of the sentence. Usually the juncture pauses are not filled.

Hesitation pauses - When the speaker's brain needs to make cognitive planning in speech process, it usually holds up speech production. This kind of pauses is called hesitation pauses. They can be silent, filled, prolongation or combination of these.

Respiration pauses - In the breathing process the speakers make pauses. Sometimes breath could be too low, similar to a silent pause, and sometimes strong like filled pause.

Turn pauses - In normal conversation speakers can use pauses to indicate that they finished their talk and that their collocutor can respond. This kind of pauses is culture-specific in their duration. Sometimes they can be negative pauses, in the sense that one speaker starts to speak before the other has finished. Such overlapping speech is forensically difficult to analyse.

THE MEANING OF PAUSES IN PSYCHOTHERAPEUTIC PROCESS

Being an introverted intuitive type of a person, Jung (1977) naturally valued and nurtured (besides having a great knowledge of) his patients to have a break while talking and gave them enough time and space to turn inwards – toward their inner world.

Going into the desert (in the inner world) is, for Jung, *sine qua non*, for knowing oneself. "The desert is within you. The desert calls you and draws you back, and if you were fettered to the world of this time with iron, the call of the desert would break all chains. Truly, I prepare you for solitude" (Jung, 2009a). This beautiful quote tells us a lot about how not only valuable but necessary it is to make space, pauses, and brakes from the external world for our psyche. In order to get in contact with our souls, we need to turn the attention inward.

During the psychotherapeutic process, pauses in speech could be seen as:

Manifestations of many important issues which a person is trying to handle and digest.

They are an excellent source of information for the psychotherapist about the patient.

THE MOST IMPORTANT FUNCTIONS OF PAUSES FOR THE PATIENT

1. Making breaks often gives a person the necessary and valuable time to acknowledge and digest the issues that he/she just brought up, what the psychotherapist said or the material that was constellated in the interactive field between them.

2. Surprising insights could evoke a kind of a shock that needs a bit of silence to be recovered from.

3. A newly realized idea about oneself and relationships with others need a pause also in order to stay long enough in the field of the consciousness and to receive a respect they deserve.

4. Very intense feelings that a person is not able to contain at the moment could evoke a blockage and the unconscious closure that does not allow for the difficult material to get out into the "daily light".

5. Getting close to the complex, in the Jungian meaning of the notion (Jung, 1981), not rarely evoke a resistance that could be manifested in long pauses and difficulties to talk about the material in question.

6. When too much psychological energy is being invested in a certain psychological image, feeling, sensation of idea, the channel for expressing it could be too narrow for the flow to burst out and that, paradoxically, can block the flow of the speech for a certain period of time.

7. While taking a pause in speech, a patient could get into contact with his transference feelings (Marshak, 1998) that he otherwise would try to overlook.

8. Before starting to talk about dreams or being engaged in active imagination (Zdravković, Jovičić & Gudurić, 2019), a patient usually makes a pause before entering into another channel of communication.

9. A person in psychotherapy often makes pauses in order to feel one better and to grasp more deeply the issues that are important at that moment. "From endless blue plains you sink into black depths; luminous fish draws you, marvellous branches twine around you from above. You slip through columns and twisting, wavering, dark-leaved plants, and the sea takes you up again in the bright green water to white sandy coasts, and a wave foams you ashore and swallows you back again ..." (Jung, 2009b).

POSSIBLE FUNCTIONS OF PAUSES FOR THE PSYCHOTHERAPIST

1. The timing of the pauses in speech could tell a psychotherapist a lot about the issues that are psychologically important for the person (material connected with the images of Anima, Animus, Shadow, Persona, Ego, Self, etc.) (Papadopoulos, 2006).

2. During the pauses, nonverbal communication could be more visible and even amplified.

3. Psychotherapist could also notice that some patient (more often with a personality disorder on the borderline level of functioning, and of course, psychotic) finds it very hard to express himself symbolically – through words and images.

4. Sometimes, the psychotherapist could notice and sense that the silence during pauses is so dense that it could be "cut with a knife". Staying with that experience for a certain time could make the image to take another channel of communication (Mindell, 1990) that could push, till then, a blocked process of individuation.

5. Based on the quality and frequency of the pauses, the psychotherapist could also form a good enough impression about the amount of distress a patient is facing at that moment.

6. By making pauses in conversation in a relaxed way, a psychotherapist is letting a patient know that it is alright to be silent from time to time and that not speaking could be nurturing and useful experience.

7. Paying attention to the pauses a patient is making, a psychotherapist could get in touch with the vulnerabilities of a patient and could better respect them.

8. Respecting and being with a patient during breaks in speech could get the psychotherapist himself in better contact with his countertransference feelings which are a very useful way of understanding the patient and also himself.

It is not such a rare situation that a synchronicity (Main, 2007) could appear during the pause with intense transference feelings. The example: a patient was avoiding very much to make a brake and to allow himself to stay with his analyst in silence. Once he told the analyst that it is usually very hard for him to be silent and looked at her; but then, he decided to try to do that. The silence was very dense. The analyst could see and feel that the patient was very anxious and nervous, because of the experience he was having, but could not talk about it. Suddenly, there was a loud bang on the street and a big iron bar fell down and made a noise. It was very loud, and since nothing similar ever happened, it was a kind of a shock for him. He experienced that event as something meaningful and somehow connected with the intense feelings that were accumulated inside him. The pressure inside was so intense that this kind of energy burst out and was manifested in the external event. It really felt like synchronicity.

While making a pause long enough, a patient could start noticing sensations in his/her body that could evoke the strong feelings such as anxiety, sadness, anger, emptiness, excitement, happiness, etc. (Rajković, Jovičić, Grozdić, Zdravković & Subotić, 2018). These experiences are something that a person was trying to avoid during life before coming to psychotherapy. Pauses in speech, during psychotherapeutic process, could get the patient in contact with the very thing he/she was trying not to see, hear, feel, notice – the suffering.

The feeling of being exposed, of being vulnerable, and even showing the suffering in front of the other, and hence, being open to different influences by the therapist (and whatever he might represent in the experience of a person) is something often hard to bear.

But beyond everything else, at least when we talk about psychotherapy, it is of a crucial significance to bear in mind that each person is a world *per se*. Every symbolic image, every psychological situation that looks the same from the external point of view, have to be seen through the perspective of that particular individual. The same "rule" needs to be applied when we are talking about pauses in speech during psychotherapeutic process. The same length of the pause or tempo of its occurrence could have a different of even completely opposed meaning for two persons. On the other hand, the similar qual-

ity and intensity of distress could be expressed in one person by continuous talking and in the other by long and frequent breaks.

While following a patient's experiences and reactions mostly by qualitative methodology, the forensic approach is much more based on the quantitatively based data. The significance and meaning of the pauses that are being observed in forensics is also different from those in psychotherapy since the purposes of their analysis are not the same. But, there exists one important connection between these two views on speech pauses. Psychological effects on speech cited above in Zdravković and Jovičić (2018) have also repercussions on pauses in speech production, which is important for interpretation of the results in forensic analysis of speech recordings.

It is often a case that within the pauses in speech, different psychological states and emotions could be recognized. Some of them are a sense of insecurity, indecisiveness, anxiety, fear, a psychological pressure, a distress, a need to detach from the emotions and to avoid telling the truth, even speech-linguistic "crutch" words, etc. This, as each psycho-emotional variation, reflects upon acoustic features within a speech signal. In this sense, the acoustic features in speech pauses could "tell" a lot about individual's characteristics and thus become valuable forensic markers.

The example given in following section with the filled pause /ə:/ will demonstrate this connection.

FORENSIC INTERPRETATION OF FILLED PAUSES

Filled pauses are most commonly produced as central vowels / , , , æ/ with or without a final nasal /n/ or /m/. The most frequent forms of filled pauses are /ə:/ and /ə:m/, in literature represented orthographically as *uh* and *um*. In our consideration we will use notations /ə:/ and /ə:m/. Voice /ə/ (notice the difference between voice /ə/ and the filled pause /ə:/) is also known as *schwa* (neutral voice).

ORIGIN AND REALIZATION OF FILLED PAUSES

To understand filled pauses, let us first call for Levelt's model of speech production (Levelt, Roelofs & Meyer, 1999). Levelt's model consists of three stages: the conceptualizer, the formulator and the articulator. In the conceptualizer stage the intention of the speaker is converted into lexical concepts, in the formulator stage the speaker needs to access the mental lexicon to retrieve the correct words and prepare them through stages of morphological, phonological and phonetic encoding, and in the articulator stage the speaker articulates the necessary sounds. When an utterance is halted in production, because of a problem in one of the three stages, dysfluency occurs manifested as a silent pause, filled pause or lengthening some utterance constituents. There are two views on the origin of filled pauses (Sleebos, 2018). Firstly, filled pauses are the audible representation of dysfluency caused somewhere in Levelt's model and they are assumed as a symptom of a cognitive process. Secondly, filled pauses signal either a minor or major delay in speech production, so they can be accepted as a signal of a cognitive process. In both views filled pauses are directly connected to the cognitive process.

In forensic voice comparison filled pauses offer a number of potential advantages over other segments in speech recordings. For most speakers the filled pauses occur quite frequently in comparison to other speech segments (vowels and consonants). For instance, the average frequency of filled pauses is 3.7 per minute (Tschäpe, Trouvain, Bauer & Jessen, 2005), or the filled pauses occurred on average every

22 syllables in a corpus of spontaneous French (Grosjean & Deschamps, 1973). The filled pauses are typically longer than vowels and they are more stable over time (and easier to measure acoustically). Jessen (2008) emphasized that the filled pauses are usually produced unconsciously because a speaker has relatively little conscious control over them. As a consequence of that a kind of automatism exists in filled pauses production.

As an example of filled pauses, Figure 1 shows typical realization of filled pauses /ə:/ and /ə:m/ in a Serbian short sentence "gde on" realized as "ə: de on ə:m". All three sounds, two /ə:/ and nasal /m/, show very stable formant contours (the contours of spectral concentrates) F1 and F2. However, formant F2 in /ə:/ is evidently higher than in /ə:m/. The voice /ə/ in filled pause /ə:/ is produced before vowel /e/ (plosive /d/ interrupts these two voices, Figure 1, spectrogram) and we hypothesized that the effect of coarticulation (mutual influence of neighbouring voices) causes the increase of formant F2 in /ə:/, so the production of filled pause /ə:/ is moved to production of vowel /e/ (see explanation for Figure 5).

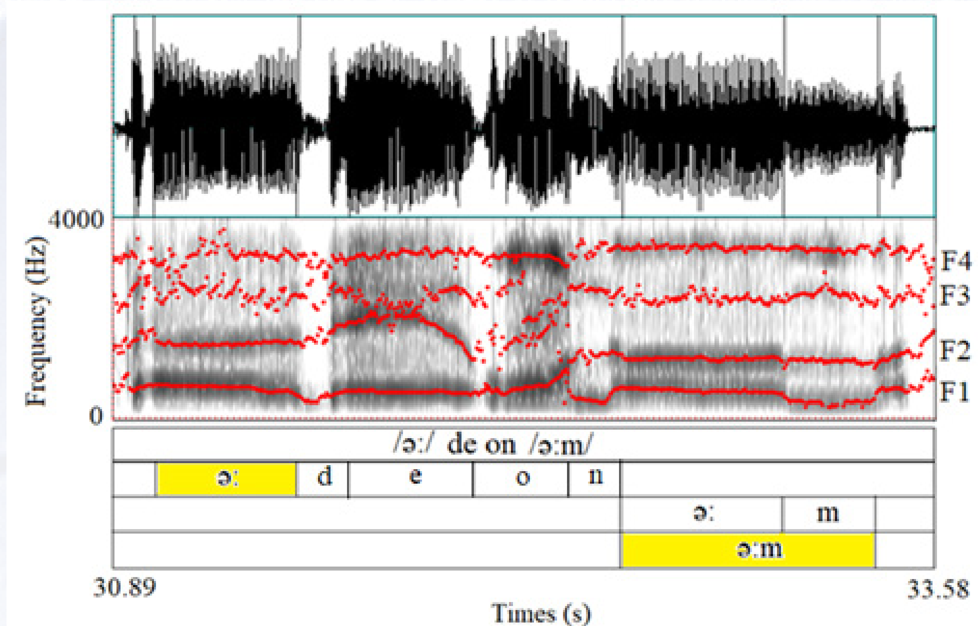


Figure 1. Typical realization of filled pauses /ə:/ and /ə:m/ in Serbian (upper part of figure: waveform of speech signal, middle part: spectrogram of speech signal with formant contours, lower part: transcription of speech signal).

EXPERIMENTAL EVIDENCE

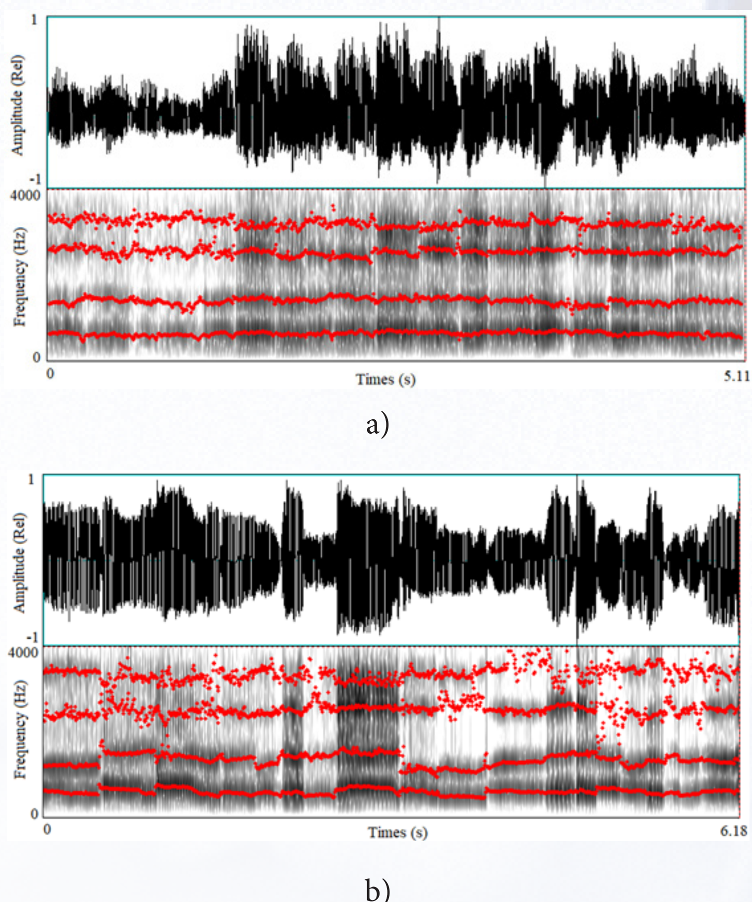
In this section we will demonstrate the typical features of filled pauses in a real forensic case. The case had one suspected recording (the voice of suspected/known person) and ten questioned recordings (the voice of unknown person). Because the Serbian filled pause /ə:/ is most often in use than /ə:m/, we analysed in several details of filled pause /ə:/.

METHODOLOGY

The questioned recordings were obtained from the court and the suspected recording was made in an interview where a suspected person spoke in a declarative style. The recordings were analysed by Praat software (Boersma & Weenink, 2018). All filled pauses /ə:/ from suspected voice were selected and connected together in one recording. Also, all filled pauses /ə:/ from ten questioned recordings and questioned voices were selected and connected together in another recording. Using Praat software, we analysed formants F1 to F4, long term average spectrum (LTAS), fundamental frequency F0 and distribution of F0.

RESULTS

Figure 2a shows waveform and spectrogram of the selected filled pauses /ə:/ from suspected recording and Figure 2b shows the filled pauses /ə:/ selected from all questioned recordings. In suspected recording all formants in the filled pauses /ə:/, except F4, are very stable, which is shown in Figure 2a. This is the consequence of declarative style in suspected speech, the style without emotions. On the other hand, in the questioned recording all formants in filled pauses /ə:/ have clear variability. This is a consequence of different style of speaking of the questioned person from very calm to very emotional (Jovičić & Zdravković, 2019).



b)

Figure 2. Waveforms and spectrum of extracted and connected filled pauses /ə:/ in a) suspected recording, and b) questioned recordings.

But *long term average spectrum* (LTAS, Rose, 2002), for both recordings in Figure 2, shows very similar position of all four formants on frequency scale, rounded spectral concentrates in Figure 3. It is obvious that mathematical averaging in this case extracts most likely values of formants in spite of their variability. It appears that spectral characteristics of filled pauses /ə:/ are robust to speaking style.

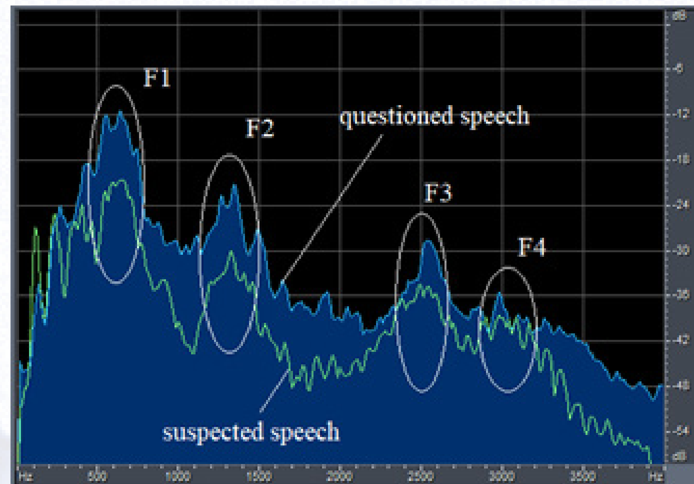
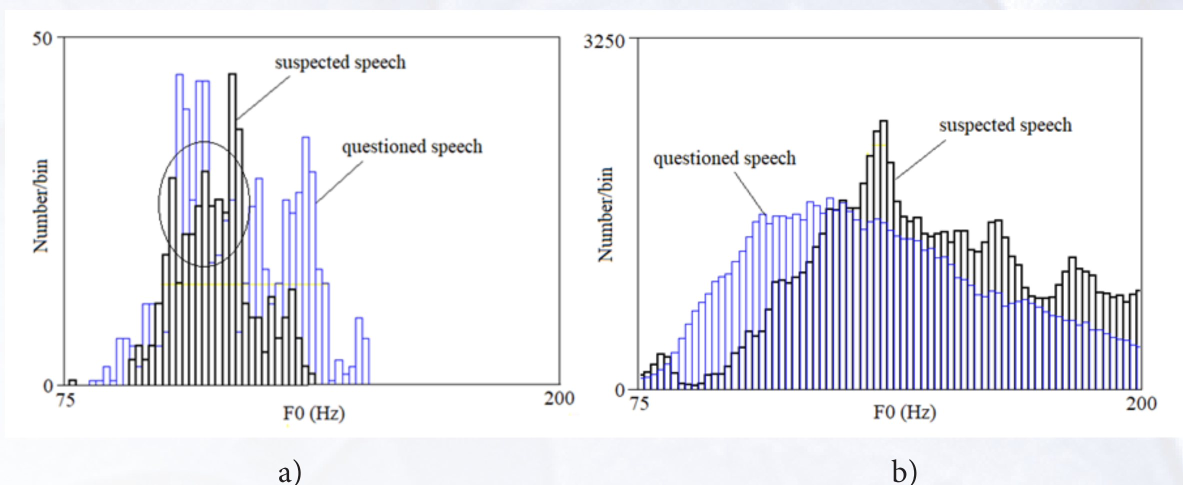


Figure 3. Long term average spectrum of connected filled pauses /ə:/ in suspected and questioned recordings.

Distributions of fundamental frequency F0 in suspected and questioned filled pauses /ə:/ are shown in Figure 4a. Both histograms have concentrate of highest bins (rounded in Figure 4a) at similar position on F0 scale. Figure 4b shows F0 distributions of complete suspected and questioned recordings including all voiced segments. Histograms have different distributions indicating different speaking style events of the same person in question. That is the difference between filled pauses /ə:/ and all other voices in both recordings.



a) b)

Figure 4. F0 distribution for a) suspected and questioned filled pauses /ə:/, and b) all suspected and questioned recordings.

These results support the previous viewpoint that the filled pause /ə:/ has good potential for forensic voice comparison.

Finally, to support the view about contextual variability of formants in filled pauses /ə:/, noted in Figure 1, we analysed the position of voice /ə/ in articulatory space illustrated by scatter diagram F1-F2 in Figure 5. Scatter diagram presents the distribution of Serbian vowels /a, e, i, o, u/ (Jovičić, 1999) with included formants F1 and F2 of neutral voice /ə/ from the suspected recording (Figure 2a). Voice /ə/ is absolutely in the gap between vowels /e/, /a/ and /o/, so it is real *schwa*. However, depending of coarticulation with the following vowel or word in continuous speech, the voice /ə/ could gravitate to one of three vowels and have its tone. The results in Figure 2b with different positions of formants F1 and F2 support this standpoint.

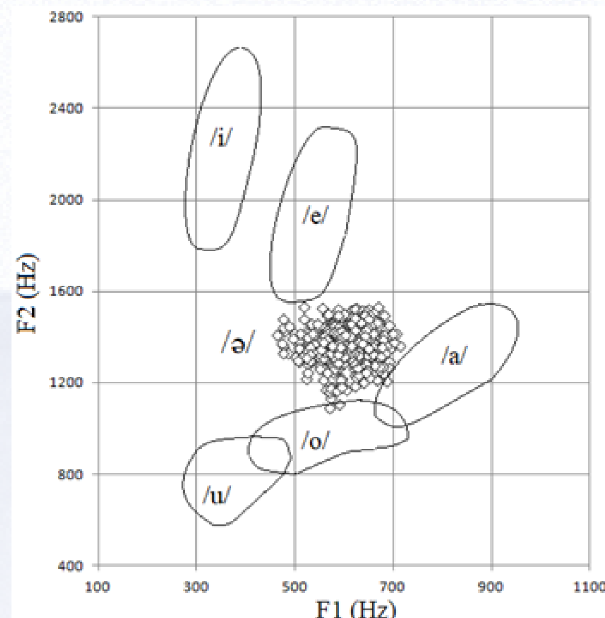


Figure 5. F1-F2 scatter diagram of the Serbian vowels and schwa /ə/ for the suspected voice.

CONCLUSION

In this paper we discussed the speech pauses as individual features interesting for psychotherapeutic processes and forensic voice comparison. Pauses in speech during psychotherapeutic process are very important if observed from the point of view of a patient as well as from the point of view of the analyst. It is possible to define different types and different functions of making breaks during speech. The authors think that the importance of discussing and analysing pauses could be more emphasized, since they could enable psychotherapists to recognize even in this way a lot of valuable issues their patients are facing. But beyond everything else, at least when we talk about psychotherapy, it is of crucial significance to bear in mind that each person is a world *per se*. Every symbolic image, every psychological situation that looks the same from the external point of view, have to be seen through the perspective of that particular individual. The same "rule" needs to be applied when we talk about pauses in speech during psychotherapeutic process. The same length of a pause or tempo of its occurrence could have a different or even completely opposed meaning for two persons. On the other hand, the similar quality and intensity of distress could be expressed in one person by continuous talking and in the other by long and frequent breaks. The pauses during psychotherapy are seen and analysed as often having a deep meaning that describes psychological situation of a patient, his motivations, his symptomatology, the dynamic and structure of his personality, the redistribution of his libido. On the

other hand, pauses is forensics have different objectives that could be measured with great precision and punctuality.

From the forensic point of view a filled pause /ə:/ has important characteristics that can be used as forensic markers. Someone uses the filled pause /ə:/ very often in his verbal expression by force of habit or it is caused by psychological circumstances. Experimental evidence in a real forensic case indicate stable features of /ə:/ in comparison to other voices during speech communication. The analysis of four formants F1 to F4 and fundamental frequency F0 in suspected and questioned filled pauses /ə:/ indicates their important similarity event speaking style in suspected and questioned voices was very different.

Further investigation will be interesting in intraspeaker and interspeaker variability in production a filled pauses /ə:/, as well as other types of pauses. Besides that, a special focus has to be made upon the integration of the psychological and instrumental-acoustic forensic observations.

Acknowledgements: This study was supported by grants OI 178027 and OI 178002 from the Ministry of Education, Science and Technological Development of the Republic of Serbia.

REFERENCES

1. Boersma, P., Weenink, D. (2018). Praat: Doing phonetics by computer [Computer program]. Version 6.0.40. Retrieved on September 17 from http://www.fon.hum.uva.nl/praat/.

2. Crystal, D. (2008). *Dictionary of Linguistics and Phonetics.* 6th ed. Blackwell.

3. Grosjean, F., Deschamps, A. (1973). Analyse des variables temporelles du français spontané. *Phonetica*, 28(3-4), 191-226.

4. Jessen, M. (2008). Forensic phonetics. Language and Linguistics Compass, 2: 671-711.

5. Jovičić, S. T. (1999). *Govorna komunikacija: fiziologija, psihoakustika i percepcija*. Nauka, Beograd.

6. Jovičić, S. T., Zdravković, S. (2019). Effect of stress on verbal expression: physiology, psychology and practical implications. *The International Conference "Languages and cultures in time and space 8"*, Novi Sad.

7. Jung, C. G. (1977). *Psychological types*. Routledge & Kegan Paul, London and Henley, 661-665.

8. Jung, C. G. (1981). *The Structure and Dynamic of the Psyche*. Routledge & Kegan Paul, London and Helney,194-219.

9. Jung, C. G. (2009a). *The Red Book*. Liber Novus, W. W. Norton & Company, New York and London, 230.

10. Jung, C. G. (2009b). *The Red Book*. Liber Novus, W. W. Norton & Company, New York and London, 267.

11. Kendall, T. (2009). *Speech Rate, Pause, and Linguistic Variation: An Examination Through the Sociolinguistic Archive and Analysis Project*. PhD thesis, Duke University.

12. Kircher, T. T., Brammer, M. J., Levelt, W., Bartels, M., and McGuire, P. K. (2004). Pausing for thought: engagement of left temporal cortex during pauses in speech. *NeuroImage*, 21(1), 84– 90.

13. Künzel, H. J. (1997). Some general phonetic and forensic aspects of speaking tempo. *Forensic Linguistics*, 4(1), 48-83.

14. Levelt, W. J., Roelofs, A., Meyer, A. S. (1999). A theory of lexical access in speech production. *Behavioral and brain sciences*, 22(1), 1-38.

15. Main, R. (2007). *Revelations of Chance*. State University of New York Press, Albany.

16. Marshak, M. D. (1998). Patient and Analyst: Transference and Countertransference in Contemporary Jungian Analysis, Routledge, London and New York, 55-85.

17. Megyesi, B., Gustafson-Capková, S. (2002). Production and perception of pauses and their linguistic context in read and spontaneous speech in Swedish. *7th International Conference on Spoken Language Processing, ICSLP2002 - INTERSPEECH 2002*, Denver, Colorado, USA, September 16-20, 2002

18. New Oxford American Dictionary, Third edition.

19. Papadopoulos, R. (2006). *The Handbook of Jungian Psychology*. Routledge, London and New York, 94-175.

20. Rapcan, V., D'Arcy, S., Yeap, S., Afzal, N., Thakore, J., Reilly, R. B. (2010). Acoustic and temporal analysis of speech: a potential biomarker for schizophrenia. *Medical Engineering & Physics*, 32, 1074–1079.

21. Rajković, M., Jovičić, S. T., Grozdić, Đ. T., Zdravković, S., Subotić, M. (2018). A note on acoustic features in pitch contours for discrimination of happiness and anger. *Acta Acustica United with Acustica*, 2018, 104, 369–372.

22. Rose, P. (2002). *Forensic speaker identification*. Taylor and Francis, London and New York.

23. Sleebos, Y. M. A. (2018). Filled pauses in first and second language users: how speaker-specific is u(h)m across languages? MA Thesis, Leiden University.

24. Tschäpe, N., Trouvain, J., Bauer, D., Jessen, M. (2005). Idiosyncratic patterns of filled pauses. Paper presented at *the Annual Conference of the International Association for Forensic Phonetics and Acoustics*. Marrakesh, Morocco.

25. Zdravković, S., Jovičić, S. T. (2018). Stress and emotions in voice and speech: A forensic view. *International scientific conference "Archibald Reiss days", Thematic conference proceedings of international significance*, Belgrade, 1, 477-489.

26. Zdravković, S., Jovičić, S. T., Gudurić, S. (2019). The voice and speech quality correlates of psychological observations in Jungian active imagination experiment. *Journal of Psycholinguistic Research*, 48(4), 859-876.

SEMANTIC ANALYSIS OF *CYBERSTALKING* AND ITS MACEDONIAN LEXICAL EQUIVALENTS

Vesna Trajkovska, PhD[1]
Faculty of Security, Skopje, University "St. Kliment Ohridski", Bitola, North Macedonia
Saše Gerasimoski, PhD[2]
Faculty of Security, Skopje, University "St. Kliment Ohridski", Bitola, North Macedonia

Abstract: The development of new technologies and the growth of Internet users have opened various possibilities for the occurrence of certain types of behaviors in the cyber world, which may be socially inappropriate and unacceptable, or may even be considered criminal offences. The increase in this type of behavior has been fuelled by the mass use of the social media. They enable direct interaction among users, thus increasing the likelihood of them becoming victims in the virtual space.

The emergence of new practices in the cyber world is accompanied by the need for their appropriate lexical representations in different languages. This paper will focus on *cyberstalking* which falls within the category of newly developed concepts which require lexicalization in many languages, including Macedonian. The authors will provide semantic analysis of the English term *cyberstalking*, its origin and contexts of use, and will discuss its appropriate lexical equivalents in Macedonian which would reflect its semantic peculiarities.

Keywords: *cyberstalking, English, Macedonian, translation, meaning*

INTRODUCTION

Our lives today are remarkably different from the lives of the previous generations, and that is not a surprise at all, if we ignore the very fact that the generations in question are not the ones that lived hundred or more years, but only a few decades ago. The world has transformed at such a rapid pace, with some social and technological changes happening so fast, that humanity cannot develop adequate

1 trajkovska_vesna@yahoo.com
2 sasegerasimoski@gmail.com

ways of adaptation. The society in which we live, dubbed by many scholars as globalized, postmodern or even risk society, undergoes transformation that was hard to imagine and predict. Speaking from security point of view, this society could be most appropriately described as Ulrich Beck alluded, as risk society (Bek, 2001). That is a society which constantly produces new and more risks with every passing day, a society where risks are more and more difficult to define and predict, and a society that manufactures risks everywhere in the world, most of them being latent and hard to pinpoint.

In such uncertain, precarious societal environment, technological risks, threats and endangerments are amongst the most worrisome ones. Technology that was supposed to help people and ease their lives, has turned against the society, has alienated from man and has become a kind of adversary force, and most of social scientists knew of that fact long before risk society was acknowledged. However, what most of the scholars did not know and could not have known was the character of these technological risks. Namely, their character is mostly latent, hard to define, even not risky and dangerous at first glance. That is because of the sheer fact that modern, and, later postmodern world, has not recognized them as being dangerous. On the contrary, it disguised them into something desirable and good, making it almost impossible to define them in their essence.

One of the few social scientists that warned the humankind of this detrimental process was Erich From. Even more than half a century ago, he boldly stated that "our civilization offers many opportunities which intentionally help people not to be aware of their loneliness" (Фром, 2011: 81). What he said was to a great extent prophetic. He said that our civilization intentionally made people lonely, and at the same time developed many ways of overcoming that state of loneliness, usually through technology. And that is what Internet and contemporary virtual, cyber era are actually doing to people. Since they are virtual, they are more superficial connections than deep relations, and as such, they are presented to people as fun, desirable, socially acceptable through many tempting and seductive ways, as Zygmunt Bauman rightly noted (Бауман, 2013: 91). They created intimidated and insecure human beings that are easy to manipulate by the cyber era inventions, most notably seen in the so called social networks such as Facebook, Twitter, Instagram, etc. Some scholars referred to all these manifestations of societal pathology related to cyber era as Internetmania or Internet addictions, due to their association with Internet (Арнаудовски и Велкова, 2017: 634; Griffiths, 2000: 537). In actual fact, *cyberstalking* could be regarded as a sophisticated form of victimization (Герасимоски, Бачановиќ, Аслимоски, 2019: 193).

In this paper, we shall focus on one of the phenomena within the wide sociopathological concept of Internetmania or Internet addiction. Namely, we shall elaborate *cyberstalking* as a relatively new, widespread and very detrimental sociopathological phenomenon which often turns into crime. But, primarily and mostly, our focus in this paper will be on elucidating the linguistic aspects of the notion of *cyberstalking* viewed as a sociopathological phenomenon. Therefore, the main interest and goal of the paper in the lines to follow will be to analyze the meaning and translational equivalents of the term *cyberstalking* comparatively, in English and Macedonian.

SOCIOPATHOLOGICAL AND SEMANTIC ASPECTS OF *CYBERSTALKING*

It is unusually difficult to differentiate clearly whether cyberstalking as a sort of Internet addiction is a sociopathological phenomenon or a criminal act. That is because the differentiation and definition of *cyberstalking* is primarily dependent on the very complex and tangled relationships between the cy-

berstalker as offender and the person who is the target of cyberstalking as a victim. In most of the cases it is very hard to define and prove whether one person is the stalker and the other one is being stalked, since it primarily hinges upon the mutual consent or refusal of interpersonal Internet communication, although, in some cases, there should not be any consent from the potential victim. However, in most cases, as long as two people communicate on their own will, it is extremely difficult to find elements of cyber harassment and stalking, let alone proving it as a sociopatholgical phenomenon or crime. Therefore, before defining *cyberstalking* as sociopathological phenomenon and crime, we must point out the difference between them. Also, we must mention that some authors equate the terms *cyberstalking* and *cyberbullying*, since they both refer to maltreatment of a person by means of cyber communication (Rohini, Lovish, Shivam & Poonam, 2019: 367). Some authors consider cyberstalking within the so called cyberviolence or digital violence (Кузмановић, Лајовић, Грујић и Меденица, 2016).

In sociology and social pathology cyberstalking as a form of Internet addiction is most appropriately described and explained within the interactionist theories which view the relationship between a potential offender and a potential victim of cyberstalking as dynamic, open and in most cases reciprocal. It means that the stalker is not an absolute culprit, and the stalked one is not an absolute victim, thus overcoming the traditional and obsolete black and white picture of offender-victim relationship (Nikolić-Ristanović i Konstantinović-Vilić, 2018: 443). Cyberstalking is a very complex, open and two-sided process. Characteristic of cyberstalking is that most of the victims did not know each other previously, but established the stalker-stalked relation simply by means of virtual communication.

Cyberstalking could be seen as a form of societal deviance, but in which case it will be considered as sociopathological phenomenon and in which case as crime mostly depends on the societal standards that are being violated. Thus, if the societal standards that are being violated are informal societal norms and values (moral, religious, customary etc.), then we speak about cyberstalking as a sociopathological phenomenon, while, if the societal standards that are being violated imply breaking the formal societal norms (laws), then we speak about cyberstalking as a crime. For cyberstalking to be defined as a sociopathological phenomenon, a distortion of normal interpersonal communication in virtual space has to take place. It means that distorted societal communication should be a communication of offender and victim, or, one party should take any kind of action, open or covert, towards abuse, intimidation, stalking, haunting, disturbing, harassment, threat and alike towards the other party. In other words, the potential offender (the stalker) should try to use some predispositions, features or actions of the other side (the stalked) to make it become real victim. This is especially important for children and women, since practice so far has shown that usually they are victims of cyberstalking. The most common form of cyberstalking proved to be sending disturbing e-messages from a cyberstalker to a cyberstalked person (Vujović, 2012: 49).

In general, there is a serious lack of scientific research on cyberstalking phenomenon. That is why there is very little known about cyberstalking, but what is accepted is that cyberstalking behaviors can vary from a non-threatening e-mail to a potentially deadly encounter between the stalker and the targeted victim (Pitarro, 2007: 181). The very anonymity of cyber communication makes preventing, detecting and proving of cyberstalking pretty challenging. It is the anonymity of the stalker that complexes the situation and threatens the victim to a greater extent, thus making it more vulnerable (Shambhavee, 2019: 350). Also, cyberstalking as a sociopathological phenomenon can mean different kinds of intimidation, stalking, threat and harassment, which can vary between verbal, psychological, sexual and even lead to physical ones. The offenders use social media platforms, e-mail, chat rooms, instant messaging, or any other online media to harass the victim (Bhasin & Mehta, 2018: 1). Usually, the stalkers are found to be unstable, amoral and ill-socialized persons, persons who lack self-respect,

alienated persons, or persons who have difficulties in establishing normal face-to-face human communication. In general, they are considered as sociopaths and in some cases even as psychopaths.

ON THE MACEDONIAN LEXICAL EQUIVALENTS OF *CYBERSTALKING*

The elaboration presented in the sections above makes it clear that *cyberstalking* is a complex phenomenon whose semantic boundaries cannot easily be determined. Morphologically speaking, *cyberstalking* is comprised of the prefix *cyber-* and the noun *stalking*. The prefix *cyber-*, derived from *cybernetics*, is used as a combining word that is attached to many nouns in English, meaning "computers, computing"[3] or more specifically "electronic communication networks, especially the internet"[4]. As far as *stalking* is concerned, in general English dictionaries it is usually defined as "the act or crime of pursuing or following someone persistently or threateningly"[5]. When joined together, they actually refer to the activities carried out by the act of stalking, but by means of computers, or via electronic communication networks, i.e. in the virtual world. This dictionary definition suggests that stalking can either be considered an activity that is not perceived as illegal, or an activity that may be incriminated in some countries, which corresponds to our explanation of the difficulties in distinguishing the (il)legality of the activities carried out by the stalker.

The concept of *stalking* in the "traditional" sense has found its way to the lexical corpora of various languages other than English, but the newly coined form *cyberstalking* has not achieved the same level of lexicalization. To our knowledge, Macedonian is one of the languages lacking an official translational equivalent of *cyberstalking*. As far as *stalking* is concerned, in Zoze Murgoski's English-Macedonian Dictionary, it is classified as a legal term and is translated as "*скришно следење (на жена – потенцијална жртва на силување/убиство)* (*skrišno sledenje (na žena – potencijalna žrtva na siluvanje/ubistvo)*)" (Мургоски, 2001:1336). Instead of a single lexical equivalent, the quoted dictionary uses a descriptive translation of *stalking* which is literally translated into English as *covert monitoring (of a woman – a possible victim of rape/murder)*. What makes this translation interesting is the emphasis on women as possible victims of rape or murder, which comes as the additional explanation of the expression. This is probably due to the assumption that women are most likely to become victims of such acts. However, men can also appear as victims of stalking, though not as frequently as women.

So far *stalking* and *cyberstalking* have not been incriminated in the Macedonian Penal Code, but it is interesting to note that our country is bound to incriminate *stalking*, both in real world and in cyberspace based on the Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence from 2011, known as the Istanbul Convention. One can easily notice that in this document, too, the emphasis is on women as possible victims. Although the Macedonian Penal Code has not yet recognized *stalking/cyberstalking* as a separate crime, in legal context the Macedonian official equivalent for *stalking* was introduced in 2014 in the Law on Protection of Victims of Domestic Violence. In this Law, the notion of *stalking* is translated as *демнење* (*demnenje*) and is defined in Article 4, as "intentional conduct of repeatedly engaging in threatening conduct directed at another person, causing her or him to fear for her or his safety" (Закон за спречување и заштита од семејно насилство, 2011). This definition is copied from the definition of *stalking* in the text of the

3 https://www.collinsdictionary.com/dictionary/english/cyber

4 https://www.oxfordlearnersdictionaries.com/definition/english/cyber?q=cyber

5 https://www.collinsdictionary.com/dictionary/english/stalking

Convention[6], but what caught our attention was the fact that the Macedonian lawmaker introduced a single lexical equivalent – *демнење (demnenje)* instead of a descriptive expression. In our opinion, this was a good lexical choice, taking into consideration the semantic features of *демнење* (*demnenje*) in Macedonian and the actions carried out by stalkers, online or in the real world. Etymologically, the Macedonian equivalent *демнење* (*demnenje*) is derived from the verb *демне* (*demne*), which is primarily defined as "wait and observe from ambush" (Конески et al., 2003:425), or "wait in ambush; sneak, especially with bad intentions" (Мургоски, 2011:227). Obviously, these definitions of Macedonian *демне* (*demne*) and the action of *демнење* (*demnenje*) to a great degree overlap semantically with the general English definition of *stalking*. It contains the key semantic features of monitoring/ following somebody and the bad intention hidden behind that act.

As far as the compound form *cyberstalking* is concerned, it would be logical to expect that in choosing the appropriate official translation, the Macedonian lawmakers and translators will follow the analogy with *stalking*. The only difference would be the addition of the Macedonian equivalent of the prefix *cyber* – in a prepositive position. This prefix was already introduced into the Macedonian lexical corpus several decades ago as *кибер-* (*kiber-*), like in the noun *кибернетика* (*kibernetika*) which is the Macedonian lexical counterpart of *cybernetics*. However, with the development of the Internet and the mass use of computers especially among the younger population, *кибер-* (*kiber-*) is gradually being replaced by the anglicism *сајбер* (*sajber*), not only in colloquial use, but in formal documents as well. Thus, in official documents issued by Macedonian institutions one may easily come across expressions such as *сајбер безбедност* (*sajber bezbednost*) for *cybersecurity*, *сајбер закана* (*sajber zakana*) for *cyberthreat*, *сајбер простор* (*sajber prostor*) for *cyberspace, сајбер напад* (*sajber napad*) for *cyberattack*, *сајбер криминал* (*sajber kriminal*) for *cybercrime* etc[7]. All these examples show that the English prefix *cyber-* is usually translated into Macedonian as a separate word with adjectival function. They also show that even in cases with already established lexical solutions where *cyber-* is translated differently, in more recent texts it is not uncommon to encounter the newly imported form *сајбер* (*sajber*). To illustrate this, we will take the example with *cybercrime*, where *cyber-* is officially translated with the adjective *компјутерски* (*kompjuterski*) in the expression *компјутерски криминал* (*kompjuterski kriminal*) as the Macedonian equivalent of *cybercrime*[8]*, but in the quoted document we found it as сајбер криминал* (*sajber kriminal*). Therefore, taking into account the existence of the already accepted form *kiber-*, but also the widespread use of *sajber* in recent years, we can agree that both forms, *кибер демнење* (*kiber demnenje*) or *сајбер демнење* (*sajber demnenje*) can be taken into consideration as acceptable Macedonian equivalents of *cyberstalking*.

Although the notion of *cyberstalking* as a form of stalking has not been introduced in official legal texts, scholars and experts in the fields related to this notion use certain lexical solutions when discussing this phenomenon. Thus, for instance, in the textbook on Social Pathology that is used at the Faculty of Security in Skopje, the authors used the term *сајбер демнење* (*демнење преку компјутер*) (*sajber demnenje* (*demnenje preku kompjuter*)) (Герасимоски, Бачановиќ & Аслимоски, 2019: 193)

6 For more information on the insertion of stalking in the quoted law, see in Ристеска, М. & Цеков, А. (2019). Анализа на потребите од усогласување на кривичниот законик со истанбулската конвенција во Република Северна Македонија

7 These terms were extracted from the National Cybersecurity Strategy (2018-2022) of the Ministry of Information Society and Administration, available at: https://mioa.gov.mk/sites/default/files/pbl_files/documents/strategies/ns_sajber_bezbednost_2018-2022.pdf

8 For many years there has been a separate sector within the Macedonian Ministry of Interior called *Sector for Cybercrime and Digital Forensics* whose official name in Macedonian is *Сектор за компјутерски криминал и дигитална форензика* (*Sektor za kompjuterski kriminal i digitalna forenzika)*. Source: Organogram of the Ministry of Interior, available at: https://mvr.gov.mk/page/organogram

defined as "covert monitoring of potential victims, most commonly via Internet or social networks, accompanied by harassment and even real endangerment of the victim" (ibid). On the other hand, in a paper addressing this issue we came across the expression *виртуелно демнење* (*virtuelno demnenje*) (Тупанчевски & Деаноска, 2018). The same expression was also used in the Guide to Gender-Based Violence Terminology for Journalists and Media Workers (Димушевска, Саит & Доковска, 2016:17) when explaining *cyberstalking* as a type of stalking, specifically focusing on stalking using the social media. This option can also be considered acceptable, since the adjective *виртуелно* (*virtuelno*) is used as a counterpart of the English adjective *virtual*, meaning "of, pertaining to, or taking place in cyberspace or in virtual reality"[9] and the cyberspace is actually the "space" where cyberstalking activities take place. This meaning of *виртуелен* (*virtuelen*) is also included in Zoze Murgoski's Interpretative Dictionary of Contemporary Macedonian Language, where, within the context of computers *виртуелен* (*virtuelen*) is defined as something "which does not exist physically as such, rather, has been software-designed to appear or function so" (Мургоски, 2011: 137).

Finally, when discussing the appropriate equivalent of *cyber-* we may also take into consideration adopting the approach of "domesticating" this anglicism, i.e. replacing it with a word of Slavic origin. This can be achieved by choosing the Macedonian root noun *мрежа* (*mreža*), as a counterpart of the English noun *web* which is contained in the abbreviation *WWW* (World Wide Web), often referred to simply as *web*. The same noun is used as an equivalent of the English word *net*, which is the shortened form of *Internet*. Therefore, the derived adjectival form *мрежно* (*mrežno*) can also be used when coining the official Macedonian translation of *cyberstalking*. In other words, we might translate *cyberstalking* as *мрежно демнење*, thus avoiding the importation of a foreignism in the Macedonian equivalent of the English *cyberstalking*. The choice of *мрежен* (*мрежen*) could also be interesting from another perspective. The Macedonian noun *мрежа* (*mreža*) in one of its meanings is used when referring to *network,* and *cyberstalking* is usually carried out online, most typically via social networks. Therefore, taking into consideration the fact that the expression *social network* is typically translated into Macedonian as *социјална мрежа* (*socijalna mreža*), choosing the expression *мрежно демнење* (*mrežno demnenje*) could also be viewed as an acceptable translational equivalent.

CONCLUSION

The semantic analysis provided in the paper confirmed the authors' claim regarding the complexity of the term *cyberstalking* as a hyponym of *stalking*, denoting specific types of sociopathological or criminal behaviours through the medium of the Internet.

Cyberstalking has not been officially translated into Macedonian, but the examples presented in the paper show that it can be encountered in texts written by scholars and experts dealing with that issue, not necessarily lexicalized identically.

The Macedonian lexical counterparts of *cyberstalking* presented in the paper may serve as possible lexical solutions when deciding on its official translation and inclusion into the Macedonian lexicon. Both the hybrid form consisting of an Anglicism and a Macedonian word, or the widely spread one presented in the paper, cover the semantic features of the concept of cyberstalking and can be chosen as official equivalents, in accordance with the approach that will be adopted when addressing the issue of its lexicalization into Macedonian.

9 https://www.collinsdictionary.com/dictionary/english/virtual

REFERENCES

1. Арнаудовски, Љ. & Велкова, Т. (2017). *Социјална патологија*. Штип: 2-ри Август

2. Бауман, З. (2013). *Флуидна љубов: за трошноста на човековите врски*. Скопје: Слово.

3. Bek, U. (2001). *Rizično društvo*. Beograd: Filip Višnjič.

4. Bhasin, D. & Aryan, M. (2018). Cyber Stalking: New Age Terror. *International Journal of Law Management & Humanities*, 2(1), 1-9.

5. Vujović, Tatjana (2012), "Zavisnost od Interneta i interpersonalno nasilje u sajber prostoru", *Sociološka luča*, God. 6(1), 43-50.

6. Герасимоски, С., Бачановиќ, О. & Аслимоски, П. (2019). *Социјална патологија*. Скопје: Факултет за безбедност.

7. Griffiths, M. (2000). Excessive Internet Use: Implications for Sexual Behavior. *Cyber Psychology & Behavior*, 3(4), 537-552.

8. Димушевска, Е., Саит, З. & Доковска, Н. (2016). *Водич во терминологијата за родово базирано насилство за новинари и медиумски работници*.Скопје:Национална мрежа против насилст во врз жените и семејно насилство - Глас против насилство. Downloaded August 9, 2020 http://www.glasprotivnasilstvo.org.mk/wp-content/uploads/2018/03/Recnik-za-novinari.pdf

9. Закон за превенција, спречување и заштита од семејно насилство, Службен весник на РМ, 138/2014

10. Конески, К. et al. (2003). *Толковен речник на македонскиот јазик, Том I*. Скопје: Институт за македонски јазик

11. Кузмановић, Д., Лајовић, Б., Грујић, С. & Меденица, Г. (2016). *Дигитално насиље: превенција и реаговање*. Београд: Министарство просвете, науке и технолошког развоја Републике Србије и Педагошко друштво Србије.

12. Мургоски, З. (2001). *Голем англиско-македонски речник второ проширено и преработено издание)*. Скопје: автор.

13. Мургоски, З. (2011). *Толковен речник на современиот македонски јазик (второ проширено и преработено издание)*. Скопје: автор.

14. Национална стратегија за сајбер безбедност на Република Македонија 2018-2022 Downloaded August 9, 2020 https://mioa.gov.mk/sites/default/files/pbl_files/documents/strategies/ns_sajber_bezbednost_2018-2022.pdf

15. Nikolić-Ristanović, V. & Konstantinović-Vilić, S. (2018). *Kriminologija*. Beograd: Izdavačko-grafičko preduzeće „Prometej".

16. Pitarro, Michael L. (2007), "Cyber Stalking: An Analysis of Online Harassment and Intimidation", *International Journal of Cyber Criminology*, Vol. 1, No. 2, pp: 180-197

17. Ристеска, М. & Цеков, А. (2019). *Анализа на потребите од усогласување на кривичниот законик со истанбулската конвенција во Република Северна Македонија*. Скопје: Центар за истражување и креирање политики & Македонско женско лоби, Downloaded August 9, 2020 http://www.crpm.org.mk/wp-content/uploads/2019/07/Gap_Analysis_MK_PRINT.pdf

18. Rohini, C., Lovish, K., Shivam, J. & Poonam, R. (2019). Cyber Stalking: Technological Form of Sexual Harassment. *International Journal on Emerging Technologies*, 10(4), 367-373.

19. Фром, Е. (2011). *Уметноста на љубовта*. Скопје: Ѓурѓа.

20. Shambhavee, H. M. (2019). Cyber-Stalking: Threat to People or Bane to Technology. *International Journal on Trend in Scientific Research and Development*, 3(2), 350-355.

21. Тупанчески, Н. & Деаноска, А. (2018). За потребата од инкриминирање на демнењето како облик на кривичното дело Загрозување на сигурноста. *Ohrid School of Law 2018 – Reforms in the Law: Step Forward to Rule of Law 7, 4-th International Scientific Conference 10-13 May 2018 Ohrid*. (103-115). Скопје: Институт за правно-економски истражувања и едукација Јуридика Прима. Downloaded August 9, 2020 http://www.iuridicaprima.mk/content/files/Zbornik_7_final_so_korica.pdf

22. https://mvr.gov.mk/page/organogram (August 7, 2020)

23. https://www.collinsdictionary.com/dictionary/english/cyber (August 7, 2020)

24. https://www.collinsdictionary.com/dictionary/english/stalking (August 7, 2020)

25. https://www.collinsdictionary.com/dictionary/english/virtual (August 7, 2020)

26. https://www.oxfordlearnersdictionaries.com/definition/english/cyber?q=cyber (August 7, 2020)

TOPIC VI

INFORMATICS AND APPLIED MATHEMATICS IN FORENSIC, CYBERCRIME AND SECURITY SCIENCES

ESTABLISHING FORENSIC EVIDENCE VALUE THROUGH THE BAYESIAN FRAMEWORK AND THE LIKELIHOOD RATIO

Jovana Vujošević, MSc
Božidar Banović, PhD[1]
Faculty of Security Studies, University of Belgrade, Serbia

Abstract: Forensic science refers to the utilization of scientific methods in a lawful setting. Recent events have raised worries about applied techniques in forensic evidence analyses, specifically in which ways forensic scientific evidence is interpreted and presented in the court. Reports have recognized issues as the means of deficiency in numerous jurisdictions in regard to the amount of evidence requiring processing, insufficient standardization across laboratory facilities and professionals, and inquiries concerning the analysis, understanding and presentation of evidence. Questions have arisen about the main scientific foundation for forensic exam assessments on evidence types. Statistics has appeared as a crucial discipline for assisting the forensic community in addressing these difficulties. The essential standard components of statistical analysis represent study design, data collection and further analysis, statistical interpretation, outlining and reporting final results. This article explores the important role of forensic evidence, the diversity of forensic fields, current achievements and their limitations, and the expected commitments of more thorough statistical methods, particularly Bayesian approaches and the likelihood ratio in the analyses, interpretations, and forensic evidence report.

Keywords: Bayes factor, likelihood ratio, forensic evidence, DNA, probability, court.

INTRODUCTION

This article aims to explore the role of statisticians in forensic science reform and portray recent research efforts that have been applied. Statisticians have been involved in forensic and legal evidence since the mid-19th century. In Europe, both Francis Galton and Adolphe Quetelet put forth the idea of uniqueness regarding the fingerprints. The contribution of statistics in forensics, for the most part, stayed limited until the usage of genetics and likelihood ratios in evaluating the strength of evidence - a possible match between DNA from a crime scene and a suspect (Pierson & Kafadar, 2016).

1 banovicb@fb.bg.ac.rs

Various models have been suggested to evaluate and demonstrate the proposition value of forensic evidence. However, the statistical performance of inferences in forensic science includes a layer of difficulty that most scientific researchers and court officials are not equipped to handle (Neumann & Ausdemore, 2020).

For proper evidence assessment, you have to study probabilities of the evidence under two different propositions. These propositions are normally given by the prosecution and the defence. There are advanced statistical methods for doing this, which are constructed on likelihood ratios or Bayes factors. Estimations dependent on them may in some cases be forthright. However, there can appear some non-standard issues that need to be considered.

The likelihood ratio (LR) is utilized to assess the strength of the evidence and a reference specimen, whether they originate from common or different sources (Meuwly, Ramos & Haraksim, 2017).

Since each case represents a unique set of settings and findings, it is hard to think of a standard structure for assessment. The forensic science association has recognised the hierarchy of propositions (Evett, Jackson & Lambert, 2000). The higher the propositions are within the hierarchy, against which the researchers are capable to evaluate their outcomes, the more valuable the testimony will be to the court of law (Biedermann et al, 2016). We study a template for Bayesian Network construction that permits adequate adaptability to address most cases, but enough cohesion and structure that the information flow in the Bayesian Network is promptly perceived. We featured seven stages that can be utilized to construct a Bayesian Network inside this structure and validate how they can be applied, using a case example (Taylor, Biedermann., Hicks & Champod, 2018b).

IMPORTANCE OF STATISTICS IN FORENSIC SCIENCES

Whether forensic examinations in a specific area are reliable does not indicate whether they are valid or correct. If a forensic examiner determines that a latent fingerprint print at the crime scene comes from the same source as a test impression made by the suspect, we have to know how precise that conclusion is for making an educated judgment about the weight of evidence (Stern, 2017).

The question *"what to validate?"* centres around the validation methods and criteria, while the question *"how to validate?"* manages the implementation of the validation protocol.

After the validation protocol and report are proposed, they can be implemented to the forensics - creating and validating likelihood ratio methods for the assessment of the evidence strength at source level following these propositions (Meuwly et al., 2017):

H_1/Hp: The trace and reference originate from the same source;

H_2/Hd: The trace and reference originate from different sources.

The field of forensic science, similar to other areas involving human findings, has the potential to be compromised by selective perceptions and other factors which can impact how data is gathered, examined and findings are connected. Statisticians can monitor a group that study selective perceptions and a group that tries to establish what information should esteem important for a specific task (Stern, 2017).

At crime laboratories, quality maintenance of forensic examinations requires a quality affirmation program that incorporates reanalysis of evidence and verification of analyses conclusions. Statistical

methods through designing a quality affirmation program can improve the proficiency of laboratory operations while simultaneously guaranteeing the precision of conclusions.

Several studies show a difficulty that court members can have in comprehending statistical ideas like the likelihood ratio and Bayes factor. Statisticians are creating ways to deal with introducing quantitative evaluations of evidence and within the design and analysis of courtroom, studies to assess the effectiveness of alternative approaches (Stern, 2017).

A final aim is to help forensic scientists in their quest of reliable and accurate analyses of forensic evidence.

BAYESIAN NETWORKS

If every single proposition is valid, the statistician allocates the probability of the forensic evidence to develop a likelihood ratio (LR).

This is performed in Bayesian Networks which are truly significant tools to pre-assess cases, because they are organized in an unprejudiced way, assessing every single possible result, consequently permitting the probabilities to be appointed without prior knowledge of results (Gill et al., 2020).

Bayesian Networks can also indicate how a lack of data and information could impact a particular case. Taylor, Kokshoorn & Biedermann (2018a) stated: "If there is a paucity of data used to assign a probability to which the LR is particularly sensitive, then this may indicate that the opinion of the scientists requires careful investigation of its robustness". These issues ought to be accounted for before being heard in court.

The benefit of Bayesian Networks is that they can be utilized to assess complex outcomes that would be very difficult to assess by deriving formulae (Gill et al., 2020). A set of input probabilities are utilized to transmit an output that is established upon the propositions stating prosecution and defence views respectively. The output probabilities provide data about the probabilities of the forensic evidence results (e.g. quantity and profile with given characteristics) adapted on alternate activities (Taylor et al., 2018b).

Bayesian networks with a graphical approach of demonstrating and directing complex probability evaluations bring numerous ways how it can be constructed (Biedermann & Taroni, 2012). One concern of this is that there is a wide range of methods of probabilistically assessing the same set of findings. It ought to be noted, nonetheless, that different BN architectures may reflect different assumptions and underlying assessments, which may prompt contrasts in allocated values of evidence. Therefore, with further analyses, we can determine how the assessment of robust strength of evidence (in regards to a likelihood ratio) is to probability assignments underlying the nodes of the BN (Taylor, Hicks & Champod, 2016).

Upon facing new evidence, scientists calculate their weight of evidence as a personal likelihood ratio. Following Bayes rule, they will multiply their previous (prior) odds by their respective LR to obtain their restructured (posterior) odds reflecting their re-examined degrees of belief concerning the case being referred to (Lund & Iyer, 2017).

We are familiar with the work that focuses on the construction of Bayesian Networks in the law field. There is, however, limited research on the integration of biological forensic results into a BN that reflects on propositions regarding activities (Gill et al., 2020).

STATISTICAL DNA ISSUES

The significance of the DNA evidence concerning an activity has to be studied according to highlights other than its profile, for example, the amount of DNA, level of degradation and its complexity (as numerous contributors). The outcomes of one or multiple DNA profiles must then be considered in light of the tendency for DNA to transfer and carry onto objects, through potentially multiple intermediaries. It is the probability of the results given each of the opposing actions – one would portray a certain component of the wrongdoing, and the other would identify with a means of innocent acquisition which is then delivered to the court (Gill et al., 2020).

It is necessary to assess evidence within a coherent structure that is provided by the 'hierarchy of propositions'. In that manner, the court will not estimate the value of evidence of the DNA profile regarding its source to the 'activity' that led to the DNA transfer (Buckleton et al., 2014).

At the point when forensic experts are evaluators, they assign a likelihood ratio that is characterized as the ratio of two probabilities:

- The probability of the results assumed that one proposition is true with the conditioning information;
- The probability of the results assumed that the other proposition is true with the conditioning information.

Clarifying the presence of DNA is more suited to the role of *investigators* – which happens before a defendant being put forward for prosecution. It is necessary to establish whether the results have higher probability within one particular activity level proposition over the other and in which quantity, to assist the court with addressing the case on which they are working on.

Concerning the case date, only the relevant case circumstances are vital for the *evaluation of results*: for instance, relevant information regarding the alleged activities, the timing, and the individual's things in the bag, what the suspect stated regarding the crime incident. A case of biased information, that is not required nor needed, would be that an eyewitness has identified the suspect (Gill et al., 2020).

There are many options for the use of verbal scale, but we have chosen the published ones by ENFSI (2015): neutral support (LR= 1); limited support (LR= 2–10); moderate support (LR= 10–100); moderately strong support (LR= 100–1000); strong support (LR= 1000–10000); very strong support (LR= 10.000–1.000.000) and extremely strong support (LR> 1.000.000). To avoid the misunderstanding and due to difficulties in describing the large numbers with words in a meaningful way, verbal scale finishes with the option of LR being greater than one million.

For instance: My LR is in the order of 70. In other words, the results are much more probable (in the order of 70 times) if the proposition that 'A' is true than if the alternative 'B' is true. Agreeing with ENFSI, these results indicate moderate support for the first proposition "A" over the alternative "B" (Gill et al., 2020).

Therefore, the higher the likelihood ratio, the stronger the evidence will be in support of the hypothesis that the source of the evidence-DNA sample and the suspect are the matching person (Weir, 2007).

Hp: the perpetrator left the bloodstain (views of prosecution in a criminal trial)

Hd: some other person left the bloodstain (views of defence in a criminal trial)

It will be quite useful if the prior odds are accessible on the hypothesis that the two DNA profiles derive from the same source. Prior odds represent the odds that the two pieces of DNA evidence derive from

the same individual based on information other than the DNA. While, when the DNA information is incorporated in the analysis, we can calculate the posterior odds (NRC, 1996a).

$$Posterior\ odds = \frac{\Pr(Hp|E)}{\Pr(Hd|E)}$$

Bayes' theorem:

$$\frac{\Pr(Hp|E)}{\Pr(Hd|E)} = \frac{\Pr(E|Hp)}{\Pr(E|Hd)} \times \frac{\Pr(Hp)}{\Pr(Hd)}$$

POSTERIOR ODDS = LR × PRIOR ODDS

For calculating the probability, we should obtain prior probability and Bayes' theorem.

It is necessary to present the posterior probabilities corresponding to a prior range. A prior probability could be influenced by subjective evaluation of the examined evidence. Likewise, there is no need for non-DNA evidence to be presented first. It might be perplexing for a court to hear prior odds assigned by one professional, then receive information about a likelihood ratio from a different expert, continuing with more non-DNA evidence. Due to all this, we consider it best, if Bayes' theorem is used, to show posterior probabilities for a range of priors (NRC, 1996a).

This method of presentation is defined as "variable-prior-odds". During this process, statisticians do not apply their prior odds or focus on court members formed prior odds for substitution into Bayes' rule. The results are presented with a table or graph indicating how the posterior odds change as a function of the prior odds (NRC, 1996b).

While focusing on the question of uniqueness, we have determined two approaches – the first, as enquire for the probability that a given profile is unique and the second, a more complex that deals with the probability that no two profiles are identical. The first approach is expected to be inquired much more often in forensic involvement.

Due to the continuously increasing number of available loci for forensic DNA analysis, we can imagine an option of how the individual's profile could be unique (excluding identical twins and close family members). Assuming that, in a population of unrelated people (N), a particular DNA profile has its probability (P). Before a suspect is profiled, this probability for a *particular* profile, which has been observed within evidence, is not unique for most NP (NRC, 1996a).

BAYESIAN NETWORK CONSTRUCTION WITH FOCUS ON ACTIVITY LEVEL PROPORTIONS

We have chosen seven stages that depict the overall procedure of Bayesian Network construction while assessing forensic biological results taking into consideration of opposing propositions regarding activities:

1 - Outline the principle proposition node

2 - Outline activity node(s)

3 - Collect similar findings

4 - Outline findings node(s)

5 - Outline transfer and persistence node(s)

6 - Outline root nodes(s)

7 - Check for complete support within the Bayesian Network (Taylor et al, 2018b)

An example: A 20-year-old female (X), who lived with her biological mother (M) and father (F) stayed for a weekend at her elder brother's (Y) house. A girl phoned the police and stated that her sibling has harmed her in the genital region, over her clothes. Police arrived immediately. Her underwear was taken as evidence and a reference from the girl as well. The police then arrested the brother and took his DNA as a reference sample. The following information was gathered:

- The prosecution: The brother harmed her in the genital region, over her clothes.
- The defence: Girl was staying at the brother's home, but no harm was done.

1 - Outline the principle proposition node

- Y harmed X in the genital region, over her clothes.
- X was staying at the Y's home, but no harm was done.

2 - Outline activity node(s)

In this particular situation, the third person that we will need to consider is required because DNA evidence is Y-STR and Y is the son of F, therefore they share a Y-STR profile. As X generally lives with F, it might be that the male DNA discovered on the clothing of X comes from F (Fig. 1).

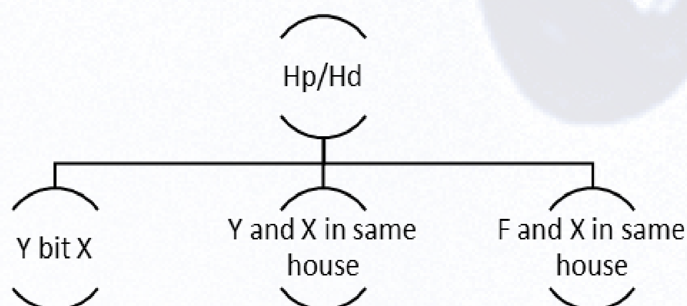


Figure 1: *Bayesian Network after the initial two steps of construction.*

3 - Collect similar findings

In our case, the findings were combined of the two tape lifts of the exterior surface of the underwear. In both cases, the results were that high levels of X's DNA were present. On one of the tape lifts, low levels of male DNA were detected and the subsequent Y-chromosome profiling generated a Y-STR profile.

4 - Outline findings node(s)

From this particular case, there are two results, the first is a positive RSID result for saliva which was gathered from the exterior surface of the crotch and underwear and the second is a low level of a male DNA found, which matched Y-STR (short tandem repeat) DNA profile with Y. Because Y and F are closely related, they are expected to have the same Y-STR profile which further defined the result as 'Family YSTR profile'.

5 - Outline transfer and persistence node(s)

All three activities can lead to the detection of the family Y-STR profile on the exterior surface of X's underwear and for better clarity, we could add a node to gather the two sources of Y's DNA before the YSTR findings node. Only the activity of biting would lead to the presence of Y's saliva on X's underwear and so only one path from this activity node to the RSID node can be presented.

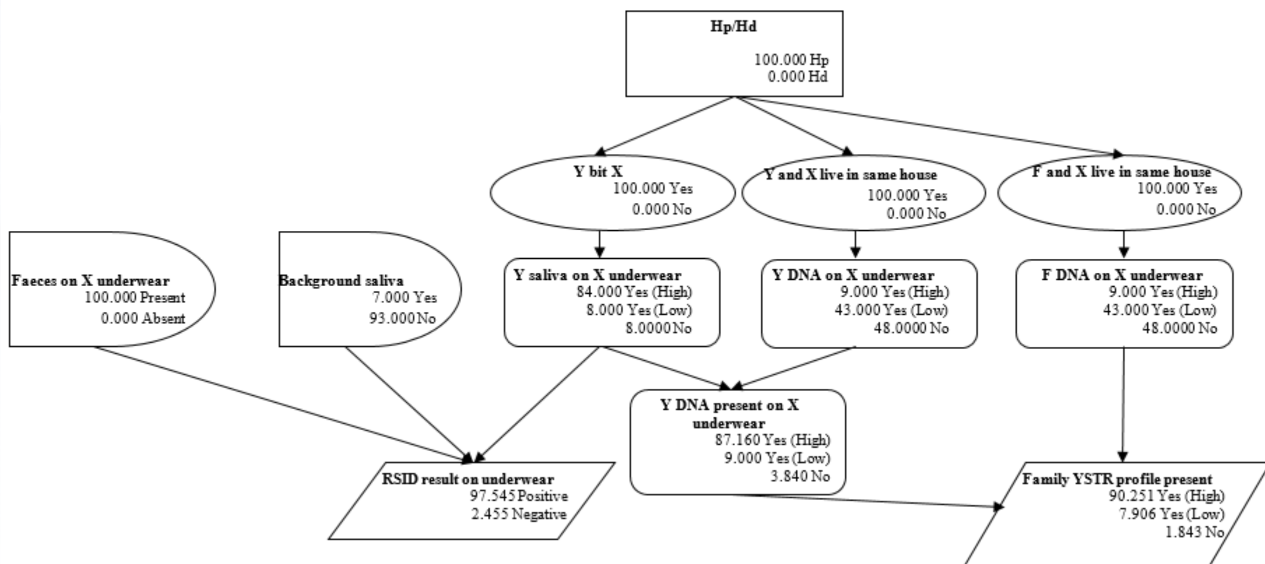
6 - Outline root nodes(s)

For instance, we could include in nodes the possibility of contamination, or coincidentally matching background DNA to the YSTR results node. Conversely taking into consideration that the alternate possibility of the DNA source is F, the rarity of contamination in this case or the profile frequency in contrast to most of the other transfer and persistence probabilities and knowing the fact that defence and prosecution are accepting the result to have arrived either Y (by innocent means or not) or F, the further nodes will contribute little to the BN and have an immaterial impact on the strength of the results (LR). We can include two root nodes, which will focus on the effect that the presence of faeces and general background levels of saliva on underwear can have within an analysis.

7 - Check for complete support within the Bayesian Network

All results ought to be recognisable under either proposition. This usually means that there will be two opposing activities that can proceed to the same finding.

From our BN construction, it is obvious that numerous routes indicate the presence of the family YSTR on the underpants of X, while some align with defence statement other support criminal activity. On one side, the RSID test node follows the route that confirms criminal activity, while on the other two sides there are two root nodes which represent two other routes (Fig. 2). This implies that the BN will not result at all probability being present on one of the states in the propositional node when findings nodes are instantiated.



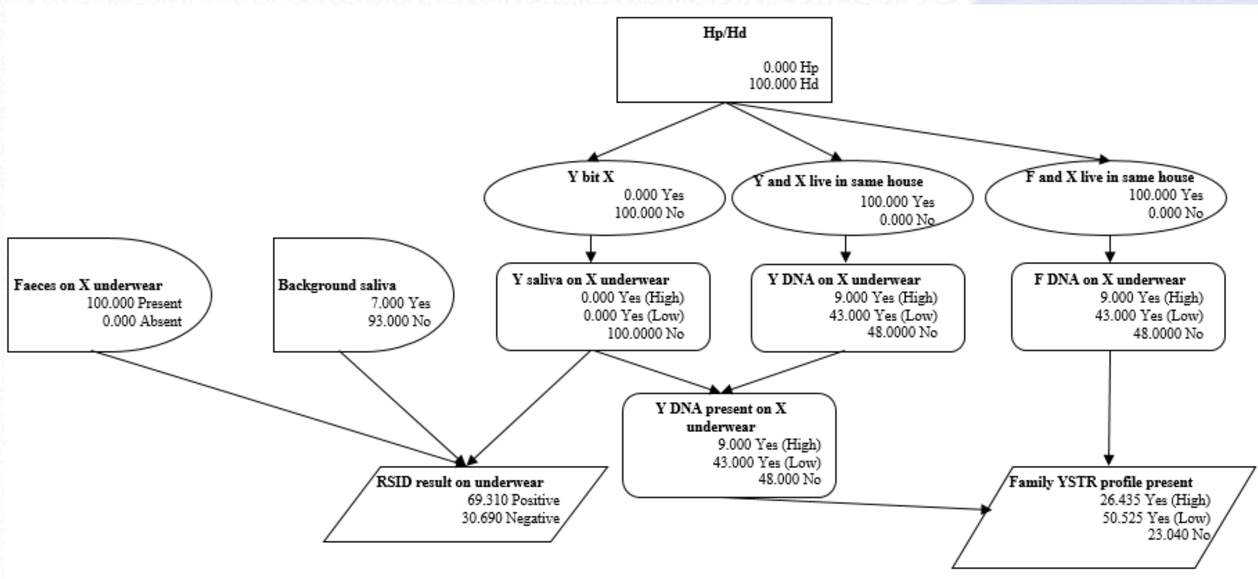


Figure 2: *BN with Hp (upper) and then Hd (lower) instantiated in proposition node - values rely upon the probabilities entered into conditional probability tables.*

$$\frac{\Pr(Hp|E,I)}{\Pr(Hd|E,I)} = \frac{\Pr(E|Hp,I)}{\Pr(E|Hd,I)} \times \frac{\Pr(Hp|I)}{\Pr(Hd|I)}$$

I illustrates case information and has been incorporated to underline its significance for activity level propositions.

When appointing probabilities to the propositional node it is often practised to arrange values equally (0.5 for both Hp and Hd). Therefore, the formula is simplified as (Taylor et al, 2018b):

$$\frac{\Pr(Hp|E,I)}{\Pr(Hd|E,I)} = \frac{\Pr(E|Hp,I)}{\Pr(E|Hd,I)}$$

as the ratio of the prior probabilities is one. A reminder that this is just with regards to the BN, as it is being applied by scientists and does not concern the probabilities doled out to the propositions by the court. Scientists look for the likelihood ratio, which is the principal term in the equation above. Considering the link between likelihood ratio and posterior odds, there are two ways of acquiring the numerical estimate of the likelihood ratio. One is to determine the ratio of the probabilities related to the findings in case (results node) when the proposition node is instantiated first in the Hp and then in the Hd.

In this manner, we gather probabilities of the evidence concerning each proposition and therefore one can estimate the likelihood ratio. BN construction with numerous results nodes may require an additional node with role to combine the findings (Fig. 3).

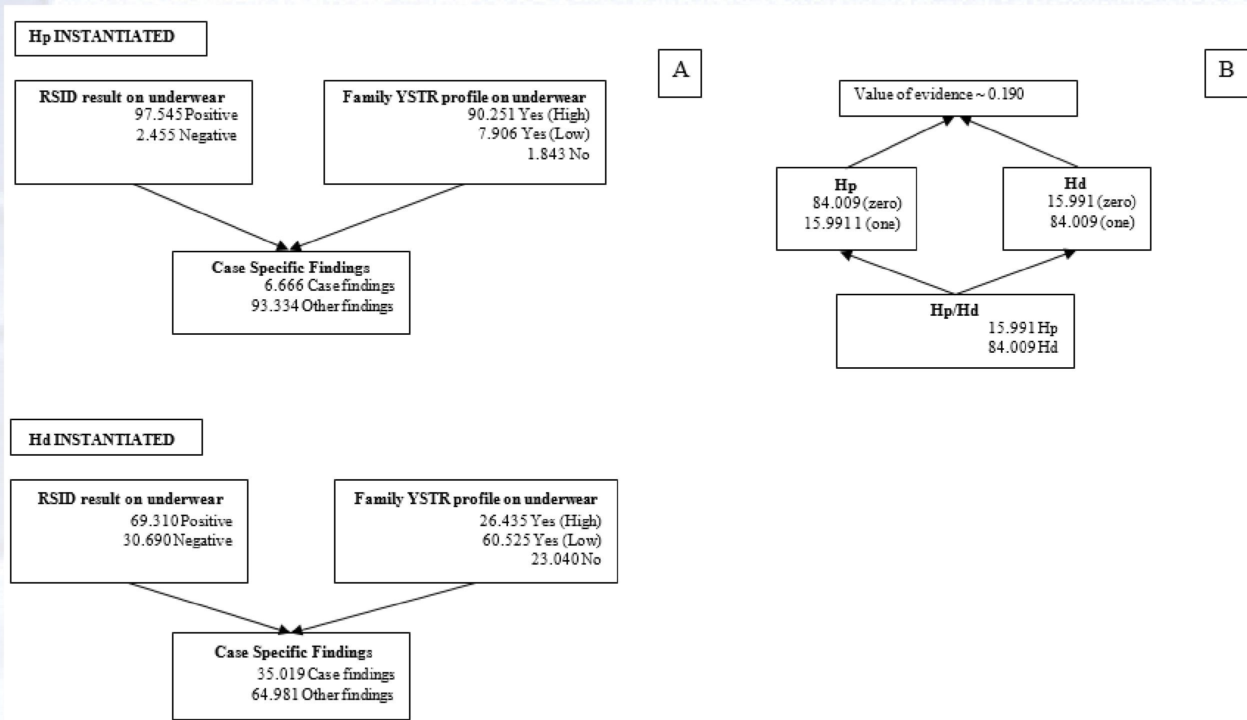


Figure 3: *Two available methods for assessing the strength of the evidence, using the BN from Fig 2*

a) Estimating LR (results node) - presenting the lower results nodes of the BN and the new specific results node;

b) Estimating the posterior odds (function node) – presenting the proposition node of the BN and the function node).

The value was calculated in the first case as 6.666/35.019 (~0.19) and in the second case 15.991/84.009 ~0.19). Thus, the final results are about five times more probable concerning defence over prosecution proposition.

DISCUSSION

Activity level assessments, standard formulae and associated BN structures do not exist within most current casework evaluations, which further challenges the custom case BN construction.

What should be required is that all statisticians preserve *justified* BN constructions. In other words – a thorough inspection of all structural component of a BN. Practically, this sort of system review can be strengthened by built-in functions of BN software that indicate graphical illustrations of dependencies and independencies among BN variables (Taylor et al, 2018b).

As we have concluded, there are no true or false probabilities, it gets pertinent to question about how particular probability values are allocated, and regarding which bases – so that an expert review can be conducted and open conversations about likelihood ratio assessment are welcomed.

We have to point out the necessity in observing the limitations of the information which are utilized to assign probabilities, the conditions under which the information was created.

The method of construction is adaptable enough that numerous cases with various circumstances can be assessed along these lines, yet standard enough that a statistician considering the BN (or beginning to consider how to develop a BN for a case) ought to advance quickly through architecture and comprehend the flow of information.

The statistician must remain in full control of the construction and application of the BN, as BNs ought to be built on a case per case basis to guarantee coherence and correct observation of the case features. BNs are expert support system tools, not proposed to substitute experts but to help them in their critical thinking.

We purposely picked the above-mentioned example as it features the significance of assessing cases considering action level proposition, instead of simply source level propositions. Regardless of whether the report proceeded to detail the potential reasons for false positives (or coincidental matches) for the findings, on the off chance that it did not put those in the framework of activities, one can perceive how the results would appear to a judge to firmly support the prosecution version of events over the defence version. Such a distinction can extremely affect the outcome of a trial.

CONCLUSION

When the source of the DNA is evident, biological results should be evaluated concerning activity level propositions. The premise of the estimation of the value of these outcomes must be stated in the report and justified. Undeniably, probabilities used to define likelihood ratios are dependent on data, knowledge and case information. Stating the limitations regarding case information and data to conclude probabilities is crucial. There are numerous obscure factors related to casework, as there are in the criminal trial or life as a whole. An admonition in the statement will strengthen the point that assessment is firmly conditioned upon the case-information that has been stated.

The utilization of Bayesian Networks as an exploratory instrument can detect data on how variables can impact on the value of the evidence. On the off chance that there is an absence of data that prevents evaluating the value of the results concerning activity level propositions, and on the off chance that transfer and background levels strongly impact on the case, then the court must be informed about this results (Gill et al., 2020).

In regards to the fairness and essentially to guarantee that the results have been evaluated in a robust way, there needs to be open access to data for both prosecution and defence scientists.

Furthermore, we believe the forensic science community will proceed with the LR as one potential, not normative or ideal tool in their communication with court members. We expect such perspectives will expand the priority concerning the development tools for presentations that follow the strict guidelines of scientific validity by concentrating on experimental or reproducible results, whilst helping the court members with an interpretation of the evidence (Lund & Iyer, 2017).

We have presented an example for BN construction that permits flexibility across cases, yet enough commonality and structure that the information flow in the BN is promptly perceived. Even though we have allocated this particular method, we need to stress that it is by no means the only manner in which BNs can be constructed. We share further the approach with the goal that others can benefit, and expand on what it has been presented (Taylor et al., 2018b).

One can argue that the proposed Bayesian Network construction is seemingly more detailed than necessary, and possibly influencing on the efficiency of the BN, stepping from the standard BNs construction, by utilizing them not similarly as methods for allocating and computing probabilities, but as graphical methods for explaining the assessment to other people. The utilization of such network structures makes it plausible, initially, to perceive what considerations have been made in the assessment of results.

REFERENCES

1. Biedermann, A., Taroni F. (2012) Bayesian networks for evaluating forensic DNA profiling evidence: a review and guide to literature. *Forensic Sci. Int. Genet.,* 6(2), 147-157.
2. Biedermann, A., C. Champod, Jackson, G., Gill, P., Taylor, D., Butler, J., Morling, N., Hicks, T., Vuille, J., Taroni, F. (2016) Evaluation of forensic DNA traces when propositions of interest relate to activities: analysis and discussion of recurrent concerns. *Front. Genet.*, 7, 215-220.
3. Buckleton, J., Bright, J.A., Taylor, D., Evett, I., Hicks, T., Jackson, G., Curran, J.M. (2014) Helping formulate propositions in forensic DNA analysis, *Sci. Justic*e, 54(4), 258-261.
4. ENFSI (2015) ENFSI Guideline for Evaluative Reporting in Forensic Science: Strengthening the Evaluation of Forensic Results across Europe (STEOFRAE)
5. https://www.unil.ch/esc/files/live/sites/esc/files/Fichiers%202015/ENFSI%20Guideline%20Evaluative%20Reporting
6. Evett, I.W., Jackson, G., Lambert J.A. (2000). More on the hierarchy of propositions: exploring the distinction between explanations and propositions. *Sci. Justice*, 40(1), 3-10.
7. Gill, P., Hicks, T., Butler, J. M., Connolly, E., Gusmão, L., Kokshoorn, B., Morling, N.,Van Oorschot, R., Parson, W., Prinz, M., Schneider, P. M., Sijen, T., Taylor, D. (2020). DNA commission of the International society for forensic genetics: Assessing the value of forensic biological evidence - Guidelines highlighting the importance of propositions. Part II: Evaluation of biological traces considering activity level propositions. Forensic Science International: Genetics, 44, 102186.
8. Lund, S.P., Iyer, H. (2017) Likelihood Ratio as Weight of Forensic Evidence: A Closer Look. *Journal of Research of National Institute of Standards and Technology*, 22(27), 2017.
9. Meuwly, D., Ramos, D., Haraksim, R. (2017). A guideline for the validation of likelihood ratio methods used for forensic evidence evaluation. *Forensic Science International*, 276, 142-153.
10. National Resource Council (NRC) (1996a). Statistical Issues. In: N. Grossblatt (Ed.), *The Evaluation of Forensic DNA Evidence.* (2nd ed., pp. 125-165), Washington DC, USA: National Academy Press.
11. National Resource Council (NRC) (1996b). DNA Evidence in the Legal System. In: N. Grossblatt (Ed.), *The Evaluation of Forensic DNA Evidence.*. (2nd ed., pp. 166-211), Washington DC, USA: National Academy Press.
12. Neumann, C. & Ausdemore, M. (2020). Defence against the modern arts: the curse of statistics—Part II, 'Score-based likelihood ratios'. Law, Probability and Risk, 19(1), 21-42.
13. Pierson S. and Kafadar K. (2016). Statisticians and Forensic Science: A Perfect Match, *CHANCE*, 29(1), 4-8.

14. Stern, H. (2017). Statistical Issues in Forensic Science. *Annual Review of Statistics and Its Application*, 4(1), 225-244.

15. Taylor, D., Hicks, T., Champod, C. (2016) Using sensitivity analyses in Bayesian Networks to highlight the impact of data paucity and direct future analyses: a contribution to the debate on measuring and reporting the precision of likelihood ratios. *Sci. Justice*, 56(5), 402-410.

16. Taylor, D., Kokshoorn, B., Biedermann, A. (2018a) Evaluation of forensic genetics findings given activity level propositions: a review. *Forensic Sci. Int. Genet.,* 36, 34-49.

17. Taylor, D., Biedermann, A., Hicks, T., Champod, C. (2018b). A template for constructing Bayesian networks in forensic biology cases when considering activity level propositions. Forensic Science International: Genetics, 33, 136-146.

18. Weir, B. (2007). The rarity of DNA profiles. Annals of Applied Statistics, 1(2): 358–370.

AN APPROACH TO HUMAN ACTIVITY CLUSTERING USING INERTIAL MEASUREMENT DATA

Milan Gnjatović, PhD[1]
Vojkan Nikolić, PhD
Dušan Joksimović, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Nemanja Maček, PhD
School of Electrical and Computer Engineering of Applied Studies, Belgrade, Serbia
Faculty of Computer Science, Megatrend University, Belgrade, Serbia

Nebojša Budimirović
Preschool Teacher Training College, Šabac, Serbia

Abstract: This paper reports on a pilot study of an approach to human activity clustering using inertial measurement data. At the signal level, we particularly consider the angular velocity and instantaneous acceleration data obtained from a three-axis inertial measurement unit placed on the right arm of the human subject. At the methodology level, the approach consists of three components: symbol-based modeling of spatiotemporal signals, *an adaptation of the* Levenshtein distance, and a graph-based clustering algorithm. A prototype system implementing the proposed approach is evaluated on recordings of six human subjects involved in four task-oriented activities with significant intercluster similarity. The clustering results are assessed using the Rand index (RI=0.921), the precision rate (P=1), the recall rate (R=0.636), and the balanced F-measure (F=0.778).

Keywords: human activity clustering, inertial measurement data, adapted Levenshtein distance, graph-based clustering.

INTRODUCTION

Automatic human activity recognition is regarded as an important and challenging task in security, military and police applications. For an overview of research in the field, the reader may consult Jo-

1 milan.gnjatovic@kpu.edu.rs

banputra, Bavishi, and Doshi (2019), Hussain, Sheng and Zhang (2019), and Avci, Bosch, Marin-Perianu, Marin-Perianu and Havinga (2010). One line of research in the field concerns the processing of external sensor data (e.g. videos) which is computationally expensive and of limited pervasiveness. The second research line concerns the processing of wearable sensor data (e.g. inertial measurement sensor data) which is less computationally demanding and more appropriate for tactical scenarios. This contribution follows the latter research line.

This paper introduces a pilot study on human activity clustering based on inertial data. At the methodology level, the proposed approach integrates three methodological aspects: (i) symbol-based modeling of spatiotemporal signals, (ii) *an adaptation of the* Levenshtein distance, and (iii) a graph-based clustering algorithm. The first two aspects build upon the method for on-line signature authentication introduced by Schimke, Vielhauer and Dittmann (2004). The third aspect is inspired by the method for digital image segmentation introduced by Felzenszwalb and Huttenlocher (2004).

In addition, the approach is introduced with sufficient detail to allow for a computational implementation. A prototype system implementing the proposed approach is evaluated on recordings of human subjects involved in four task-oriented activities with significant intercluster similarity, selected from the Carnegie Mellon University Multimodal Activity (CMU-MMAC) Database (De la Torre et al. 2009).

THE APPROACH

Symbol-based Modeling of Spatiotemporal Signals

Let a be an activity captured by a set of n parameters $\{p_1, p_2, \ldots, p_n\}$ sampled at $k \geq 2$ equidistant time points, i.e.:

$$p = \begin{pmatrix} p[1,1] & p[1,2] & \cdots & p[1,n] \\ p[2,1] & p[2,2] & \cdots & p[2,n] \\ \ldots & \ldots & \ldots & \ldots \\ p[k,1] & p[k,2] & \cdots & p[k,n] \end{pmatrix} \quad (1)$$

where $p[i,j]$ represents the value of parameter p_j at time point t_i. In addition, let S be a set containing $2n+1$ symbols:

$$S = \{s_1^{\max}, s_1^{\min}, s_2^{\max}, s_2^{\min}, \ldots, s_n^{\max}, s_n^{\min}, \varepsilon\} \quad (2)$$

where ε is the empty symbol. Matrix p is first mapped into an intermediate sequence of strings over set S, calculated as (cf. Schimke et al., 2004):

$$\begin{pmatrix} f(p[1,1]) \oplus f(p[1,2]) \oplus \ldots \oplus f(p[1,n]) \\ f(p[2,1]) \oplus f(p[2,2]) \oplus \ldots \oplus f(p[2,n]) \\ \ldots \\ f(p[k,1]) \oplus f(p[k,2]) \oplus \ldots \oplus f(p[k,n]) \end{pmatrix} = (S_1, S_2, \ldots, S_k)^T \quad (3)$$

where $\oplus$ stands for symbol concatenation, and:

$$f(p[i,j]) = \begin{cases} s_j^{\max}, f & e_{\max}(p,i,j) = \mathrm{T}, \\ s_j^{\min}, f & e_{\min}(p,i,j) = \mathrm{T}, \\ \varepsilon, & otherwise, \end{cases} \tag{4}$$

$$\mathrm{e}_{\max}(\mathrm{p,i\ j}) = \begin{cases} p[i,j] > p[i+1,j]) & f\ \ i = 1, \\ p[i,j] > p[i-1,j]) & f\ \ i = n, \\ (p[i-1,j] < p[i,j]) \wedge (p[i,j] > p[i+1,j]) & f\ \ 1 < i < n, \end{cases} \tag{5}$$

$$\mathrm{e}_{\min}(\mathrm{p,i\ j}) = \begin{cases} p[i,j] < p[i+1,j]) & f\ \ i = 1, \\ p[i,j] < p[i-1,j]) & f\ \ i = n, \\ (p[i-1,j] > p[i,j]) \wedge (p[i,j] < p[i+1,j]) & f\ \ 1 < i < n. \end{cases} \tag{6}$$

It is easy to show that the following holds:

$$(\forall p,i,j)\ \neg(e_{\max}(p,i,j) \wedge e_{\min}(p,i,j)) \tag{7}$$

The final sequence of strings that represents activity a is obtained by omitting all empty strings from sequence (3):

$$a = \left(S_1, S_2, \ldots, S_{\hat{k}}\right)^T, \tag{8}$$

where $\hat{k} \leq k$.

Adapted Levenshtein Distance

The widely acknowledged Levenshtein distance (Jurafsky and Martin, 2009; Levenshtein, 1966) between two strings S_a and S_b is defined as the minimum number of single-character editing operations (deletion, insertion and substitution) needed to transform one string into the other, and can be calculated as:

$$\lambda(S_a, S_b) = D(|S_a|, |S_b|) \tag{9}$$

where:

$$\begin{aligned} &(\forall\ 0 \leq i \leq |S_a|)\ D(i,0) = i, \\ &(\forall\ 0 \leq j \leq |S_b|)\ D(0,j) = j, \end{aligned} \tag{10}$$

and

$$(\forall\ 1 \leq i \leq |S_a|, 1 \leq j \leq |S_b|)\ D(i,j) = \min \begin{Bmatrix} D(i-1,j)+1, \\ D(i,j-1)+1, \\ D(i-1,j-1) + \begin{cases} 1, f & S_a(i-1) \neq S_b(j-1) \\ 0, f & S_a(i-1) = S_b(j-1) \end{cases} \end{Bmatrix} \tag{11}$$

The adapted Levenshtein distance used in this approach quantifies the similarity between two sequences of strings, i.e. two activities (cf. Eq. (8)). We build upon the work of Schimke et al. (2004) and consider the *weighted string editing* operations:

The cost of insertion or deletion of a string is equal to its length.

The cost of substitution of one string by another is equal to the standard Levenshtein distance (i.e. λ, cf. Eq. (9)-(11)) between them.

The adapted Levenshtein distance between two activities, i.e. two sequences of strings, a_1 and a_2 is defined as:

$$\hat{\lambda}(a_1,a_2)=\frac{\hat{D}(|a_1|,|a_2|)}{|a_1|+|a_2|}, \tag{12}$$

where:

$$\begin{aligned}&\hat{D}(0,0)=0,\\&(\forall\, 1\le i\le |a_1|)\ \hat{D}(i,0)=\hat{D}(i-1,0)+|a_1(i-1)|,\\&(\forall\, 1\le j\le |a_2|)\ \hat{D}(0,j)=\hat{D}(0,j-1)+|a_2(j-1)|,\end{aligned} \tag{13}$$

and

$$(\forall\, 1\le i\le |a_1|, 1\le j<|a_2|)\ \hat{D}(i,j)=\min\left\{\begin{matrix}\hat{D}(i-1,j)+|a_1(i-1)|,\\ \hat{D}(i,j-1)+|a_2(j-1)|,\\ \hat{D}(i-1,j-1)+\lambda(a_1(i-1), a_2(j-1))\end{matrix}\right\}. \tag{14}$$

Graph-based Clustering

Let $A=(a_1,a_2,\ldots a_m)$ be a sequence of m activities that need to be clustered. The graph-based clustering algorithm used in this approach is inspired by the image segmentation algorithm introduced by Felzenszwalb and Huttenlocher (2004), and can be described through the following steps.

In the starting clustering, each activity a_i is assigned to its own cluster $c(a_i)$, i.e.:

$$(\forall\, 1\le i\le m)\ c(a_i)=i. \tag{15}$$

Let $\wp(A)=((a_{i_1},a_{j_1}),(a_{i_2},a_{j_2}),\ldots,(a_{i_w},a_{j_w}))$, where $w=\frac{m(m-1)}{2}$ be a sequence of all unordered pairs of activities in A ordered by non-decreasing adapted Levenshtein distance between the activities contained in each pair.

The ordered sequence $\wp(A)$ is iterated through as follows. For a given pair (a_i,a_j), if activities a_i and a_j are assigned to different clusters and the adapted Levenshtein distance between them is *less than a given threshold*[2] *value* τ, *the corresponding clusters are merged. This step can be written in pseudocode as:*

2 The threshold value is an input real-number parameter whose selection will be discussed in other paper.

$$
\begin{array}{l}
(for\ 1 \le q \le w) \\
\quad f\ (\ \hat{\lambda}(a_{i_q}, a_{j_q}) < \tau) \wedge (c(a_{i_q}) \ne c(a_{j_q}))) \\
\quad\quad (for\ 1 \le r \le m) \\
\quad\quad\quad f\ \ (c(a_r) = c(a_{j_q})\ \ c(a_r) \leftarrow c(a_{i_q})
\end{array}
\quad (16
$$

When the loop given above is finished, the final clustering is determined by values $c(a_i)$ for $1 \le i \le m$.

EVALUATION

Database

To evaluate the introduced approach in a realistic setting, we resort to the Carnegie Mellon University Multimodal Activity (CMU-MMAC) Database (De la Torre et al. 2009). It contains recordings of human subjects cooking different recipes in a kitchen environment. One of the modalities contained in this database is captured with three-axis inertial measurement units (MicroStrain's 3DM-GX1) containing an accelerometer, gyroscope, and magnetometer which allow for measuring absolute orientation, angular velocity and instantaneous acceleration. The signals are gyro-stabilized and recorded at the rate of 60 Hz.

We selected six human subjects (S50, S51, S52, S53, S54, S55) each of which was recorded while cooking four different recipes (brownies, scrambled eggs, pizza and sandwich). One of these twenty-four subject-activity pairs (i.e. subject S52 preparing brownies) contained errors and was excluded. All the selected subjects are right-handed, so we decided to consider the inertial measurement signals obtained from the inertial measurement unit placed on their right arms. At the signal level, we particularly consider the instantaneous acceleration and angular velocity in the three axes (i.e. six parameters in total, cf. the first six columns of Table 1). As an illustration, the parameter values sampled in five successive time points representing a very small fragment of subject-activity pair (S50, Brownie) are given in Table 1. The list of subject-activity pairs is given in the first column of Table 2. Each subject-activity pair is considered as an activity captured by a set of six parameters, cf. Eq. (1).

Table 1 *Illustration of the input inertial measurement data.*

Acceleration			Angular velocity			Count	System time
a_x	a_y	a_z	Roll	Pitch	Yaw		
0.406751	0.820338	-0.414228	0.098211	0.003138	0.135864	2824	16:39:56:000
0.415082	0.833796	-0.417432	0.102291	0	0.146533	2825	16:39:56:008
0.419355	0.842555	-0.415937	0.107938	0.023533	0.149984	2826	16:39:56:016
0.421491	0.846828	-0.406537	0.121431	0.030436	0.132727	2827	16:39:56:024
0.4232	0.843196	-0.396924	0.139002	0.034515	0.144964	2828	16:39:56:032

PREPROCESSING

The selected data are preprocessed in two respects. First, parts of the input data that are not relevant for the activity performed by the subjects were excluded from the consideration. The start and end system times of the activity-relevant segments for each subject-activity pair are given in Table 2. And second, for the purpose of efficiency, the data are further automatically down-sampled to 1 Hz.

Table 2 *Subject-activity pairs and activity-relevant segments.*

Subject, activity	Start Count	Start system time	End Count	End system time
S50, Brownie	2824	16:39:56:000	51077	16:46:22:000
S50, Eggs	2953	15:42:40:000	36453	15:47:08:000
S50, Pizza	3312	15:24:22:000	61074	15:32:04:000
S50, Sandwich	3059	16:27:46:000	24934	16:30:41:000
S51, Brownie	3113	10:39:47:000	45112	10:45:23:000
S51, Eggs	6874	10:01:16:000	34500	10:04:57:000
S51, Pizza	4151	09:32:28:005	64901	09:40:34:005
S51, Sandwich	5056	10:25:04:003	21804	10:27:18:003
S52, Eggs	2627	15:01:01:000	28752	15:04:30:000
S52, Pizza	5168	14:49:46:000	41543	14:54:37:000
S52, Sandwich	2590	15:18:54:006	17090	15:20:50:006
S53, Brownie	2487	10:31:06:003	39738	10:36:04:003
S53, Eggs	2318	10:05:07:007	28568	10:08:37:007
S53, Pizza	1785	09:42:13:005	58917	09:49:50:005
S53, Sandwich	2472	10:25:11:000	18347	10:27:18:000
S54, Brownie	3785	11:56:08:000	52785	12:02:40:000
S54, Eggs	1715	11:29:03:003	31340	11:33:00:003
S54, Pizza	3064	11:15:27:000	62064	11:23:19:000
S54, Sandwich	2921	11:47:33:000	24672	11:50:27:000
S55, Brownie	5205	13:20:55:000	45081	13:26:14:000
S55, Eggs	2934	12:47:49:000	32309	12:51:44:000
S55, Pizza	3544	12:33:04:000	72297	12:42:14:000
S55, Sandwich	3407	13:11:43:006	23657	13:14:25:006

RESULTS

The proposed approach is implemented in a prototype system, and the clustering results are given in Table 3. When discussing these results, one should keep in mind that the number of expected clusters was not provided a priori. Twenty-three subject-activity pairs are grouped in eight clusters, which may appear as significantly more than the four ground truth clusters. However, eighteen of twenty-three pairs were correctly clustered in four clusters, and there were no false positives. To trade-off the clustering quality against the number of identified cluster, we consider the Rand index (RI=0.921), the precision rate (P=1), the recall rate (R=0.636), and the balanced F-measure (F=0.778), as summarized in Table 4. While this is a pilot study, the results are encouraging.

The results presented in the left part of Table 4 are derived directly from Table 3. We make a short remark. Let a_i and a_j be two distinct subject-activity pairs arbitrarily selected from the given set of 23 subject-activity pairs. The number of such two-element combinations is equal to 253 (i.e. $\binom{23}{2}$, cf. the sum of numbers in the second column of Table 4), and for each of them the prototype system evaluates whether or not a_i and a_j belong to the same cluster.

Table 3 *Clustering results.*

Subject, activity	Clusters							
	C1	C2	C3	C4	C5	C6	C7	C8
S50, Brownie	x							
S51, Brownie	x							
S53, Brownie		x						
S54, Brownie	x							
S55, Brownie	x							
S50, Eggs			x					
S51, Eggs			x					
S52, Eggs			x					
S53, Eggs			x					
S54, Eggs			x					
S55, Eggs			x					
S50, Pizza				x				
S51, Pizza				x				
S52, Pizza					x			
S53, Pizza				x				
S54, Pizza				x				
S55, Pizza				x				
S50, Sandwich							x	
S51, Sandwich								x
S52, Sandwich						x		
S53, Sandwich						x		
S54, Sandwich							x	
S55, Sandwich							x	

Table 4 Evaluation results.

True positives	TP=35	The Rand index	RI=0.921
True negatives	TN=198	Precision	P=1
False positives	FP=0	Recall	R=0.636
False negatives	FN=20	Balanced F-measure	F=0.778

DISCUSSION AND CONCLUSION

In addition to the evaluation results reported above, it is important to note that the symbol-based modeling of spatiotemporal signals and the *adapted* Levenshtein distance considered in this paper provide a basis for addressing some of the desiderata in the field:

1. Generalizability: The proposed approach is general to the extent that it includes no explicit expectations or previous knowledge on the activities to the clustered. The only assumption on the input sensor data is that they can be represented by an arbitrary number of synchronized sequences of numeric values.

2. Discrimination capacity: Approaches to automatic human activity recognition are typically intended to differentiate between human behaviors of relatively small similarity, including fundamental behaviors (e.g. walking, sitting, standing, running, etc.), body postures (e.g. arm downwards, arm upwards, etc.) and task-oriented behaviors (e.g. showering, dressing, leaving house, etc.), cf. Jobanputra et al. (2019). In contrast to them, the proposed approach provides a basis for comparing task-oriented human behaviors of significant intercluster similarity, without prior activity segmentation.

3. Real-time performance: Almost all approaches reported in the literature are based on two-stage process: gathering of sensory information, and off-line data processing. Thus, on-line human activity recognition is identified as one of the important open research questions in the field (cf. Avci et al., 2010). The approach introduced in this paper allows for real-time representation and comparison of human activities.

On the other hand, the further challenges of the proposed approach are related to research questions of: (i) more detailed and domain-targeted testing, (ii) exploring new features derived from the original features (e.g. velocity and relative position can be derived from the acceleration data, etc.), and (iii) selecting an appropriate threshold value. These questions will be taken up in future work.

ACKNOWLEDGMENTS

The presented study was partially funded within the framework of the ERA.Net RUS Plus program (research grant ID 99). The Carnegie Mellon University Multimodal Activity (CMU-MMAC). Database used in this paper was obtained from kitchen.cs.cmu.edu, and the data collection was funded in part by the National Science Foundation under Grant No. EEEC-0540865.

REFERENCES

1. Avci, A., Bosch, S., Marin-Perianu, M., Marin-Perianu, R., Havinga, P. (*2010*) Activity Recognition Using Inertial Sensing for Healthcare, Wellbeing and Sports Applications: A Survey, *23rd International Conference on Architecture of Computing Systems 2010*, Hannover, Germany, pp. 1-10.
2. De la Torre, F., Hodgins, J., Montano, J., Valcarcel, S., Forcada, R., Macey, J. (2009) *Guide to the Carnegie Mellon University Multimodal Activity (CMU-MMAC) Database*, Tech. report CMU-RI-TR-08-22, Robotics Institute, Carnegie Mellon University.
3. Felzenszwalb, P.F., Huttenlocher, D.P. (2004) Efficient Graph-Based Image Segmentation, *International Journal of Computer Vision*, 59, pp. 167–181.
4. Hussain, Z., Sheng, M., Zhang, W.E. (2019) Different Approaches for Human Activity Recognition: A Survey, arXiv, 1906.05074, Downloaded July 16th 2020, https://arxiv.org/abs/1906.05074.
5. Jurafsky, D., Martin, J.H. (2009) *Speech and Language Processing: An Introduction to Natural Language Processing, Speech Recognition, and Computational Linguistics*, 2nd edition, Prentice-Hall.

6. Jobanputra, C., Bavishi, J., Doshi, N. (2019) Human Activity Recognition: A Survey, *Procedia Computer Science*, 15, pp. 698-703.
7. Levenshtein, V.I. (1966) Binary codes capable of correcting deletions, insertions, and reversals, *Cybernetics and Control Theory*, 10(8), pp. 707-710 (Original in Doklady Akademii Nauk SSSR 163(4): 845-848, 1965).
8. Schimke, S., Vielhauer, C., Dittmann, J. (2004) Using adapted Levenshtein distance for on-line signature authentication, *Proceedings of the 17th International Conference on Pattern Recognition, 2004. ICPR 2004*, Cambridge, 2004, pp. 931-934, Vol.2.

APPLICATION OF ARTIFICIAL INTELLIGENCE IN DETECTION OF DDoS ATTACKS

Igor Vuković[1]
Ministry of the Interior of the Republic of Serbia

Brankica Popović, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Petar Čisar, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Services distributed over the Internet are ranging from entertaining and informative to those whose availability must not be interrupted because it affects the quality of life, but also safety and health. Due to its importance, the global computer network is a desirable target, attacks are continually taking place, and the damage is more than considerable. Among the many types of attacks, one of the most effective, given the relationship between the damage done and the challenge to be prevented, detect and control, are DDoS attacks. This paper discusses the phases, components, categories, and types of DDoS attacks and emphasizes detection approaches. The standout approach and one that can answer the complexity of detecting DDoS attacks is the classification with artificial intelligence techniques. This work shows why artificial intelligence represents the starting point for further research in information security.

Keywords: distributed denial of service, intrusion detection systems, artificial intelligence, classifiers

INTRODUCTION

Vital information of business organizations and authorities, as well as other parts of society, are stored online, which is why the world today is facing an increase in the number of attempts to disrupt the security of such essential data. Business, government, and private data of individuals are stored in the cloud and use the services provided in this way (infrastructure as a service, platform as a service,

1 igor.vukovic@mup.gov.rs

database as a service, etc.). The lives of individuals revolve around data and information that can be found on the Internet, while communication over the Internet plays a crucial role in everyday life (Napanda, Shah & Kurup, 2015). Modern trends include governments of states that use web applications intensively to solve communication and management challenges as efficiently as possible. Still, these applications have numerous entry points that endanger systems and information security (Kadhem, Amagasa & Kitagawa, 2009). The number of reported security breaches of systems containing private, security, business, and other information at the level of government, organizations, and enterprises has reached worrying values (Kadhem et al., 2009), so maintaining confidentiality, accessibility, and integrity has become necessary.

For this reason, intrusions are among the most critical problems for researchers when it comes to business and personal computer networks (Tsai, Hsu, Lin & Lin, 2009). Intrusion can be defined as a set of actions (usually different types of attacks on the system) that compromise security goals such as availability, integrity, confidentiality, and accountability. Intrusion detection systems or IDS help the computer network resist attacks from outside, mainly when conventional systems for prevention of improper or unwanted data input (firewalls) cannot perform the task (Tsai et al., 2009). Attack detection is based on the assumption that an attacker's behavior differs from a legitimate user's behavior that can be quantified (Stalings, 2011).

This paper aims to present the problem and make an overview of protection against a particular type of attack, which regardless of the level of technological development of IDS systems and other defense mechanisms, remains a challenge because it exploits the basic principles of computer networks. These are Distributed Denial of Service (DDoS) attacks that can endanger individuals' normal functioning, the work of companies and state administrations, damage, and even endanger lives.

The first part of this paper presents the problem and challenges of DDoS attacks. The second part analyzes the detection approaches of this specific type of attack. The third part focuses on the application of artificial intelligence in the detection of DDoS attacks.

DISTRIBUTED DENIAL OF SERVICE

DDoS has become a common threat to companies that promote themselves or do business using the Internet and beyond (Srivastava, Gupta, Tyagi, Sharma & Mishra, 2011). The Internet Protocol or IP is not designed to verify that a packet source is authorized to access the service. Still, packets are delivered to a server that represents their destination, and the server must decide whether to accept packets and respond to the client. A situation where the main challenge is to separate a legitimate client request from a malicious one and when it is easier for a source to generate a service request than a server to validate it is when an opportunity for a DDoS attack arises (Peng, Leckie & Ramamohanarao, 2007).

The importance of DDoS attacks as a threat increased when the security vulnerabilities of individual computers on the Internet began to be exploited. This way attacker is forming a network with a large number of machines over which control is established. It is a network of zombie computers "robots" (botnets (robots + network)), which is used for a coordinated attack and enables the generation of traffic whose value exceeds the usual bandwidth and up to several tens of thousands of times (Srivastava et al., 2011; Saied, Overill & Radzik, 2016). DDoS attacks are aimed at consuming critical network service resources like server processor capacity, stack space, and the capacity of the internet connection (Peng et al., 2007). Distributed system services offered by operating systems such as resource sharing

and directory sharing are often abused, allowing the creation of large botnet systems that place DDoS attacks second only to viruses as threats to Internet users (Srivastava et al., 2011).

There are four components involved in a DDoS attack (Srivastava et al., 2011). The first one is an attacker (botmaster) that scans a large number of computers for security vulnerabilities. Machines that become control masters (C & C servers) are the second component, under the direct control of the attacker. With the help of malicious code, which the attacker installs on the control master, infection of the other computers is possible. The next component are computers that become "zombies". They are under the direct control of their master controllers, and indirectly by the attacker who signals a coordinated attack on the target, which is the fourth component of DDoS attack.

Most DDoS designers manipulate TCP, UDP, and ICMP protocols (Saied et al., 2016; Bindraa & Sooda, 2019). Therefore, the dominant type of attack is the SYN flooding, followed by ICMP, UDP, TCP, HTTP, which change in the second, third, and fourth place in quarterly reports for several years[2].

DETECTION OF DDoS ATTACKS

Attack detection can be defined as the detection of an activity that attempts to compromise the confidentiality, integrity, or availability of resources (Napanda et al., 2015). It is necessary to monitor computer systems and networks, analyze their traffic, due to possible attacks from the outside, or malicious use of systems or attacks that come from within a particular organization. According to the logic of detection, we can distinguish three methodologies (Bindraa & Sooda, 2019):

- Detection based on the known specifics of the attack, i.e. on its "signature";

- Detection based on the significant anomaly detection, primarily in the profile of incoming traffic. In order to notice the anomaly, the normal behavior of the system being protected is first introduced. In other words, it is necessary to determine whether the deviation of the established scheme of normal use can be marked as an intrusion;

- Specification-based Detection or Stateful Protocol Analysis, which is similar to anomaly detection, but depends on generic profiles i.e. network protocol models based on international organizations' standards.

Detection of DDoS attacks by the first method is not efficient enough since a large number of compromised computers used during the attack do not have to change the traffic pattern for the attack to be effective. Detection of anomalies can identify an attack if the monitored traffic behavior does not correspond to the normal traffic profile (Peng et al., 2007) and is especially important as it provides protection against new hitherto unknown attacks (mainly zero-days attacks). Problems are that it also results in a higher rate of false positives, it is not available while rebuilding the behavior profile, and it is difficult to achieve timely alarm activation (Liao, Lin, Lin & Tung, 2013). Various artificial intelligence techniques are used for anomalies detection (Napanda et al., 2015).

The accuracy of detection can be improved by applying hybrid or ensemble detection or classifiers, and the ensemble stands out (Kumar, Kumar & Sachdeva, 2010). Hybrid systems combine techniques for different jobs, while an ensemble is made around the same job. Success of the ensemble method depends on various factors like the size of the training sample, choice of the base classifier, the exact way in which the training set was modified, and so on. (Kumar et al., 2010).

2 https://securelist.com/ (Last accessed on 22 May 2019)

According to the place where the data is collected and where the analysis is performed, the following types of detection systems are recognized: Host-based Intrusion Detection Systems or HIDS, Network-based Intrusion Detection Systems or NIDS (Kumar et al., 2010; Napanda et al., 2015) and hybrid systems. HIDS is a system that monitors and analyzes information received from a specific computer or server, such as network traffic, system logs, and applications, system calls, etc. It reports an attack if an anomaly in the behavior of the system is detected (Kumar et al., 2010; Modi et al., 2013). NIDS collects information from the network, primarily the IP headers and transport layer headers of each packet, and uses detection techniques based on signatures and anomalies (Kumar et al., 2010; Modi et al., 2013; Napanda et al., 2015). HIDS systems collect and analyze data using agents, while others use mostly sensors (Liao et al., 2013).

APPLICATION OF ARTIFICIAL INTELLIGENCE

In the development of IDS, the ultimate goal is to achieve the best possible detection accuracy. Learning techniques developed for the needs of artificial intelligence are applied to build better IDS (Napanda et al., 2015). Artificial intelligence is the development of intelligent machines through the branch of computer science. An intelligent machine is a system that observes its environment and takes over activities that increase its chances of success using computer models (Napanda et al., 2015). The advantages of applying artificial intelligence in relation to other conventional techniques are the ability to establish explicit and implicit models that categorize the schemes used in detection, flexibility, and adaptability in relation to precisely defining thresholds and rules, as well as the ability to learn (Kumar et al., 2010).

DDoS attacks require the classification of a large amount of different information, such as categorizing whether it is a regular traffic profile or increased due to an attack, and not for some legitimate reason. The need for a very complex classification imposes the application of artificial intelligence. We distinguish the following classification approaches in anomaly detection based on artificial intelligence: Supervised (parametric and nonparametric methods (k-nearest neighbor)), Unsupervised (clustering, outlier mining and association mining) and Probabilistic learning (hidden Markov model, Bayesian networks, naïve Bayes, Gaussian mixture model and expectation-maximization algorithm), Soft computing (for instance, artificial neural networks, genetic algorithms, rough sets and fuzzy logic), Knowledge based anomaly detection (rule based and expert system based, ontology and logic based) and Combination learners (ensemble based, fusion based and hybrid).

A classifier that applies the k-nearest neighbor (*k*-NN) method calculates the approximate distance between different points on the input vectors, and then assigns to the unmarked point the class of its K nearest neighbors (Tsai et al., 2009). K is an important parameter that determines how many nearest neighbors are required in order for something to be classified, but to be noted the higher the value of the parameter, the longer the classification time. An example of the application of this technique uses the frequency of system calls to detect malicious online activities (Napanda et al., 2015). The research (Polat, Polat & Çetin, 2020) has shown that in performance, i.e. classification accuracy, the k-NN is ahead of other machine learning techniques in DDoS attack detection.

Figure 1 shows an example of classification with K closest adjacent where x and y are the values monitored by the attack detection system, then the arrangement of vectors on the graph that are already classified as DDoS attacks, these are dark spots, and those that belong to the regular state of the system, represented by white dots. The new sample positioned on the graph, depending on the recorded values, will be classified by determining 5, which represents the previously selected K value of the closest

classified adjacent vectors. The result is 3 dark and 2 light dots, so the decision of the system is that it is a DDoS attack. The obvious problem is determining the K value. The only known thing is that it should be odd, to avoid the situation where classification is not possible because of the same number of neighbors from different classes. Similarly, K should not be divisible by the number of classes. Furthermore, the complexity of the search for the nearest neighbors with a large number of already classified vectors for each new sample creates the need for significant resources.

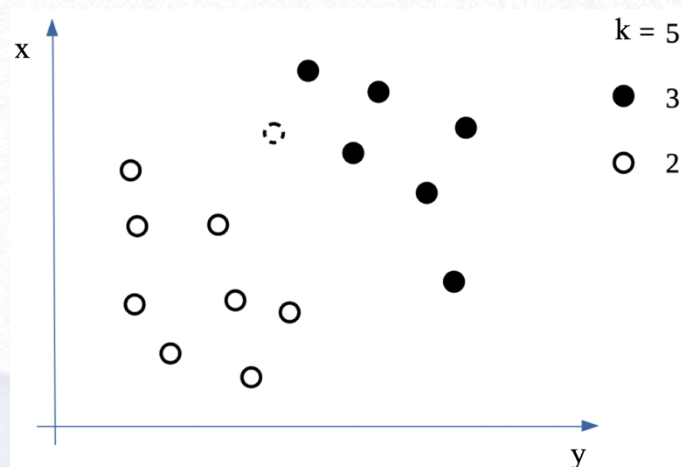


Figure 1 K-nearest neighbor classification

Detection systems based on Artificial Neural Networks (ANN), such as multilayer feedforward, multilayer perceptrons, and backward propagation neural networks, aim to generalize data based on incomplete information and to allow data to be classified as normal or harmful (Modi et al.,2013; Napanda et al., 2015). The neural network consists of artificial neurons, i.e. units that perform processing. The connection between them with a specific weight value depends on how one neuron will affect another. Different DDoS detection schemes have been proposed, mostly using a basic ANN with the Backpropagation algorithm and one hidden layer (Liang & Znati, 2019). Convolutional Neural Networks (CNN) have grown in popularity in recent times leading to significant computer vision innovations and Natural Language Processing. Most of all, this machine learning technique success in specific scenarios such as malware detection, code analysis, network traffic analysis, and intrusion detection motivate researchers to implement CNN in DDoS detection (Doriguzzi-Corin, Millar, Scott-Hayward, Martínez-del-Rincón & Siracusa, 2020).

The genetic algorithm is a class of computer models based on the concept of natural selection and evolution. Chromosome-analog data structure that evolves using selection (striving for an optimal solution from one generation to another), recombination, and mutation (mutation provides population diversity, while the other way is a large population, but it slows down the calculation) are used to convert the problem into a particular domain related to the model (Napanda et al., 2015). This type of algorithm can be used to define simple network access rules which will prevent the passage of known malicious attacks. The disadvantage of the algorithm is that it significantly consumes resources (Kumar et al., 2010).

The Bayesian network performs classification by answering the question of the probability that a particular type of attack can occur again based on previously recorded events related to that type of attack (Napanda et al., 2015). The technique connects previous knowledge and available data about the relationships between the variables based on which predictions are made. Still, the disadvantage is that the results are compared with statistical techniques, which requires significant resources for additional calculations to be performed (Kumar et al., 2010).

Figure 2 shows a segment of the Bayesian network, extremely simplified so that the focus remains on the essence. The system looks at both parameters and points out their probabilities of occurrence, and their existence affects the answer to whether it is a DDoS attack. More precisely, if both parameters exist, the possibility that it is an attack is 90 percent. At the same time, the probability is only 10 percent with the existence of both parameters that it is not an attack.

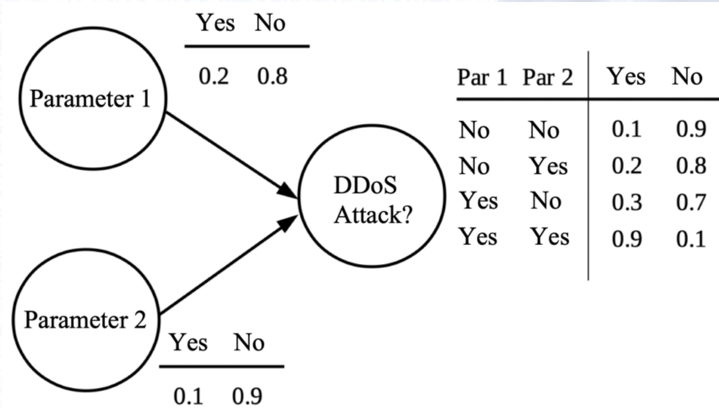


Figure 2 Bayesian network classification

The Decision Tree (DT) is a potent and popular tool for classification and prediction (Kumar et al., 2010). It is an algorithm for supervised learning that consists of a structure, a particular type of graph, in which decision-making at one point affects the decision that leads to the conclusion (Napanda et al., 2015). Each node has an attribute which is the most informative among the characteristics not yet considered on the way from the root. Each branch is marked by the value of the node attribute from which it came out. In contrast, nodes at leaf position are marked with class or category names. The path from the root node to the branches of the tree represents the rules of classification. These rules are defined according to anomalies recorded by the system being protected or encountered earlier (Napanda et al., 2015). DT model provides well-defined rules to accurately distinguish attack traffic from legitimate traffic (Liang & Znati, 2019).

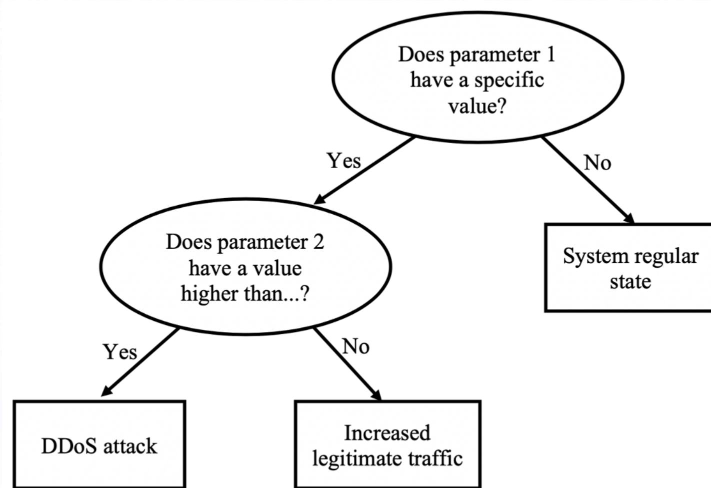


Figure 3 Decision tree classification

Figure 3 presents a decision tree application that classifies the state of a system based on arbitrary parameters measured by an intrusion detection system. The figure shows that one of the nodes at the

leaf position represents a class marked as a "DDoS attack." If you follow the path from the root to the subject node, you can see the rule based on which the classification was performed by monitoring two parameters by the attack detection system.

SVM (Support Vector Machine) attempts to solve an optimization problem that consists of finding decisions boundary in the feature space that separates data from different classes (Liang & Znati, 2019). Support vectors are subsets of training data that are used to determine the boundary between two classes. When SVM cannot divide two classes, the problem is solved by mapping the input data into a higher spatial dimension using one of the so-called kernel functions (for example, radial base function). In a higher dimension, it is possible to create a hyperplane that allows linear separation. There is a curved surface in the lower dimensional space, which is why the kernel function plays an important role in SVM. The ability to learn SVM is independent of the spatial dimension, so they generalize well when there are a large number of features (Kumar et al., 2010). SVM provides the parameter the so-called penalty factor, determined by the user and based on decision between a situation with more misclassified samples, but more stable decision-making, or from the other side a narrower space, but a smaller number of misclassified samples (Tsai et al., 2009).

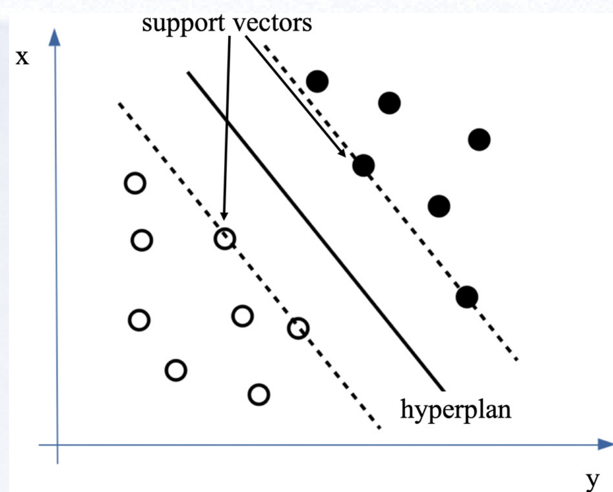


Figure 4 Support vector machines classification

Figure 4 shows a graphical representation of the SVM classification, where the x and y axes represent two arbitrary parameters that are monitored when detecting DDoS attacks. In contrast, the data used for SVM training are shown by light dots if classified as regular system behavior, and dark if classified in the class of attack carried out. The dashed lines represent the boundaries of the decision, while the points through which they pass are the support vectors. A solid line represents a hyperplane that divides two classes. Based on the parameters values, the newly recorded data is positioned on the graph and classified to which side the hyperplane is on telling the detection system whether it is normal traffic or an attack.

The efficiency and accuracy of any classifier depend primarily on the choice of parameters that the detection system monitors. The parameters used are the source and destination IP addresses, source ports and destination ports, connection length, a number of bytes exchanged between pages, connection status, TCP control bits. Besides the number of packets sent from any IP address, the average size of IP packets sent from each IP address and the standard deviation of the packet size sent from each IP address is monitored (Kong, Yang, Sun, Li & Shi, 2017).

Classifiers can be combined to achieve higher precision.

EXAMPLE OF IMPLEMENTATION OF IDS SYSTEM FOR DETECTION OF DDoS ATTACKS

Figure 5 shows the detailed architecture of the DDoS attack detection system presented in (Han, Bi, Liu & Jia, 2017).

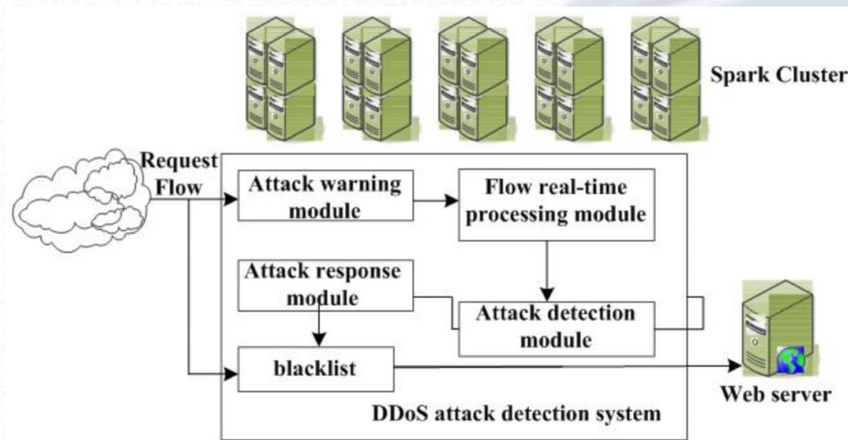


Figure 5 An example of an attack prevention system architecture

An early warning of a DDoS attack based on abnormal changes in the entropy of information about the source and destination IP data was implemented within the attack detection system shown in Figure 5 (Han et al., 2017). Entropy is used as a measure of the unpredictability or uncertainty of an order, it is highest for entirely random data from an information source, and lowest when the information source provides predictable data (Petkovic, Basicevic, Kukolj & Popovic, 2018; Wang, Luo & Zhong, 2019). The utility of entropy in detecting DDoS attacks is that the entropy of regular network traffic varies within a narrow range, while many anomalies caused by DDoS attacks change the distribution of addresses and ports, as well as other traffic characteristics (Petkovic et al., 2018). After launching the attack, the amount of IP addresses of the source will increase drastically as the distribution will be more scattered. On the other hand, the distribution of destination IP addresses and ports will be more concentrated (Han et al., 2017).

The method used in example is the K-Means method, which in addition to a similar name, differs from the K-nearest neighbor classification method (Han et al., 2017). The clustering process begins with a random isoform of K objects representing the center or average value of the cluster. Then, based on the minimum distance from the selected cluster centers, the other sample elements are assigned to each cluster. Determining the new center of gravity is based on the average value of each cluster instances. Sorting begins again based on the distance from the newly calculated center of gravity of the cluster. The process stops when further iterations do not lead to significant changes, i.e. the algorithm converges. During a DDoS attack, the K-mean method requires processing a large amount of data mixed with the flow of data related to the attack making it difficult to determine the initial centers. Therefore, dynamic sampling of K-mean clusters is applied to improve the algorithm and meet the requirements of the DDoS attack detection system (Han et al., 2017).

The system in Figure 5 consists of Attack warning module, Flow real-time processing module, Attack detection module, Attack response module and blacklist. Attack warning module uses an algorithm based on the entropy of data flow information. Processing module collects the data flow characteristics from the warning module and forwards them to the attack detection module. Detection module

uses the data obtained from the processing module for the clustering process based on when the DDoS attack is recognized.

CONCLUSION

Although the DDoS attack has been a problem for the security of information systems for decades, it remains a challenge to detect such attacks. Researchers in their work are intensively looking for solutions or combining existing ones, but the application of artificial intelligence stands out among other branches of computer science. There are many approaches and techniques used to build IDS to detect DDoS attacks. Each approach and technique has its advantages and disadvantages, which is why they cannot be the final solution separately. Signature-based approaches cannot identify completely new attacks, rule-based methods can detect new attacks, but creating and updating a knowledge base is a demanding job, while heuristic methods, such as applying artificial intelligence and classifiers, are not suitable to work in real-time because they require very complex calculations.

DDoS attacks are a critical problem on the Internet, and there are no signs that this will change any time soon. More attackers are continually looking for new targets and new ways to deplete computer networks, and attacks become more complex and sophisticated.

To protect the systems from attacks, firstly they must be detected in a timely and precise manner. However, even after successful detection, the problems do not diminish. One of the responses to a DDoS attack after detection is blocking the source, but the use of botnets makes it difficult to identify legitimate users when blocking. Filtering malicious traffic as another response is also a problem because it is challenging to distinguish between legitimate and malicious packets. Some solutions offered commercially are mostly systems whose size has the role of absorbing the attack, and not to detect it nor stop it[3].

The fact is that the number and scope of DDoS attacks are increasing and that the losses per hour of DDoS attacks can be estimated at tens of thousands of dollars (Han et al., 2017), which is why their detection is necessary. Finding new and improving existing detection methods and selecting appropriate parameters that can be monitored and based, on which correct and efficient decisions can be made, is a broad area for new scientific research. At the same time, the importance of the problem does not diminish over time.

REFERENCES

1. Bindraa, N. & Sooda, M. (2019). Detecting DDoS Attacks Using Machine Learning Techniques and Contemporary Intrusion Detection Dataset. Automatic Control and Computer Sciences, 53 (5), 419-428.

2. Doriguzzi-Corin, R., Millar, S., Scott-Hayward, S., Martínez-del-Rincón, J. & Siracusa, D. (2020). Lucid: A Practical, Lightweight Deep Learning Solution for DDoS Attack Detection. *IEEE Transactions on Network and Service Management*, 17 (2), 876-889.

3. Han, D., Bi, K., Liu, H. & Jia J. (2017). A DDoS Attack Detection System Based on Spark Framework. *Computer Science and Information Systems*, 14 (3), 769-788.

3 https://www.cloudflare.com/ddos/ (Last accessed on 25 September 2019)

4. Kadhem, H., Amagasa, T. & Kitagawa, H. (2009). A Novel Framework for Database Security Based on Mixed Cryptography. *Fourth International Conference on Internet and Web Applications and Services*, Venice/Mestre, Italy, 163-170.
5. Kong, B., Yang, K., Sun, D., Li, M. & Shi, Z. (2017). Distinguishing Flooding Distributed Denial of Service from Flash Crowds Using Four Data Mining Approaches. *Computer Science and Information Systems*, 14 (3), 839-856.
6. Kumar, G., Kumar, K. & Sachdeva, M. (2010). The use of artificial intelligence-based techniques for intrusion detection: a review. *Artificial Intelligence Review*, 34 (4), 369-387.
7. Liao, H. J., Lin, C. H. R., Lin, Y. C. & Tung, K. Y. (2013). Intrusion detection system: A comprehensive review. *Journal of Network and Computer Applications*, 36, 16-24.
8. Liang, X. & Znati, T. (2019). On the performance of intelligent techniques for intensive and stealthy DDos detection. *Computer Networks*, 164, 106906.
9. Modi, C., Patel, D., Patel, H., Borisaniya, B., Patel, A. & Rajarajan, M. (2013). A survey of intrusion detection techniques in Cloud. *Journal of Network and Computer Applications*, 36 (1), 42-57.
10. Napanda, K., Shah, H. & Kurup, L. (2015). Artificial Intelligence Techniques for Network Intrusion Detection. *International Journal of Engineering Research & Technology*, 4 (11), 357-361.
11. Peng, T., Leckie, C. & Ramamohanarao, K. (2007). Survey of network-based defense mechanisms countering the DoS and DDoS problems. *ACM Computing Surveys*, 39 (1), 1-42.
12. Petkovic, M., Basicevic, I., Kukolj D. & Popovic, M. (2018). Evaluation of Takagi-Sugeno-Kang fuzzy method in entropy-based detection of DDoS attacks. *Computer Science and Information Systems*, 15 (1), 139-162.
13. Polat, H., Polat, O. & Çetin, A. (2020). Detecting DDoS Attacks in Software-Defined Networks through Feature Selection Methods and Machine Learning Models. *Sustainability*, 12, 1035.
14. Saied, A., Overill, R. E. & Radzik, T. (2016). Detection of known and unknown DDoS attacks using Artificial Neural Networks. *Neurocomputing*, 172, 385–393.
15. Srivastava, A., Gupta, B. B., Tyagi, A., Sharma, A. & Mishra, A. (2011). A Recent Survey on *DDoS* Attacks and Defense Mechanisms. *International Conference on Parallel Distributed Computing Technologies and Applications, Advances in Parallel Distributed Computing*, 570-580.
16. Stalings, W. (2011). Cryptography and network security principles and practices. Prentice Hall, New York City, USA.
17. Tsai, C. F., Hsu, Y. F., Lin, C. Y. & Lin, W. Y. (2009). Intrusion detection by machine learning: A review. *Expert Systems with Applications*, 36, 11994-12000.
18. Wang, M., Luo, Y. & Zhong, H. (2019). DDoS detection and defense mechanism based on cognitive-inspired computing in SDN. *Future Generation Computer Systems* 97, 275–283.

APPLICATION OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN PYTHON PROGRAM LANGUAGE

Aleksandar Miljković[1]
Ministry of the Interior of the Republic of Serbia

Slobodan Nedeljković
Ministry of the Interior of the Republic of Serbia

Milan Čabarkapa, PhD
School of Electrical Engineering, University of Belgrade, Serbia

Marko Vuković
Dragan Randjelović, PhD
Faculty of Diplomacy and Security, University Union – Nikola Tesla, Belgrade, Serbia

Vladica Stojanović, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: This paper overviews the practical application of the Python programming language in the artificial intelligence (AI) and machine learning (ML) field. The possibilities and advantages, as well as the current challenges of Python programming language, are summarized. Moreover, the capabilities of the considered technologies are demonstrated in the practical examples. Although the provided examples are not very complex, they can clearly indicate the principles of using Python programming language in the AI and ML fields for solving statistically-related problems of clustering and classification. This work and the results presented in this paper can be used as a helpful guide and basis for advanced implementation based on Python programing language for solving different practical AL and ML problems in different sciences, government and industry areas.

Keywords: artificial intelligence, Python language application, machine learning, software development

1 aleksandar.miljkovic@mup.gov.rs

INTRODUCTION

The ability of computers to perform various tasks has experienced exponential growth. The programming capabilities and performances of computer systems have been significantly improved regarding work domains, processing speed, and size reduction. As a part of the computer science field, artificial intelligence (AI) aims to program computers or machines to be as intelligent as human beings. In other words, the main aim of artificial intelligence is to develop programs that will enable computer, a computer-controlled robot, or software to think intellectually, in a similar way as humans. AI is developed by studying how the human brain thinks and how people learn, decide, and work while trying to solve the problem. Due to the strong computing power of computer systems, the question of if a machine can think and behave like a human being has appeared. Thus, the development of AI began with the intention of creating machines possessing intelligence similar to that of humans.

The AI applications can be developed using various programming languages. However, according to the results presented in recent studies related to the application of different programming languages into the AL filed, the best overall performance has Python programming language. The detailed analysis of the Python language capabilities is presented in the recent work of Nagpal and Gabrani (Nagpal & Gabrani, 2019) and it will be omitted in this work. However, they have neither provided any illustrative examples of the application of the Python programming language in the classification application nor the procedure of classification performance evaluation, which is the main objective of this work. To the best of authors' knowledge, there has been no study illustrating the practical application of Python programming language implementation in AI-based applications, specifically the classification applications based on the machine learning algorithms.

The rest of the paper is organized as follows. The necessity for studying AI is explained in the second section. The fundamental AI-related terminology is presented in the third section. The reasons for Python implementation in the AI field are provided in the fourth section. Machine learning and its fundamental algorithms are introduced in the fifth section. The metrics and methods for evaluation of classification performance are presented in the sixth section. The demonstrative examples of Python implementation in machine learning applications are given in the seventh section. Finally, conclusions are derived in the eighth section.

NECESSITY FOR STUDYING AI

As mentioned above, AI aims to create machines as intelligent as humans. Therefore, there are several reasons why it is important to study AI, and they are listed and explained in the following.

1. *AI can learn from data*

In our everyday life, people are dealing with a huge amount of data, and the human brain cannot process all the information, which is why it is necessary to automate things. AI is suitable for automation because it can learn from data and perform tasks that are repeated with high accuracy and without fatigue.

2. *AI can teach itself*

It is very important that a system can teach itself because data are constantly changing, so knowledge derived from such data must be constantly updated. AI can be used to achieve this purpose because an AI-based system can teach itself.

3. *AI can respond in real time*

Artificial intelligence, with the help of neural networks, can deepen data analysis, which enables AI to think and respond to situations in real time.

4. *AI achieves high precision*

With the help of deep neural networks, AI can achieve very high precision. This feature has promoted the AI application in diagnosing diseases such as cancer.

5. *AI can organize data so as to obtain the best results*

Data denote an intellectual property for systems using self-learning algorithms. AI is needed for indexing and organizing data in a way to achieve the best possible results.

6. *Understanding intelligence*

By using AI, intelligent systems can be built. It is needed to understand the concept of intelligence that the human brain can build another intelligent system like itself.

FUNDAMENTAL AI-RELATED TERMS

Artificial intelligence represents a wide research field of study, and it can help to find solutions to the real-world problems.

Machine learning

Machine learning (ML) is one of the most popular AI fields. The basic concept of machine learning is to make machine learns from data in the same way the humans learn from their own experience. It contains learning models based on which predictions about unknown data can be made.

Logic

This is another important research field in which mathematical logic is used to execute computer programs. It contains rules and facts for conclusions, semantic analysis, etc.

Search

This research field is basically used in games such as chess and tic-tac-toe. Search algorithms provide an optimal solution after searching the entire search space.

Artificial neural networks (ANNs)

ANNs represent parallel computing systems, and they have been developed based on the analogy with biological neural networks. ANNs have been used in robotics, speech recognition, speech processing, and many other fields.

Genetic algorithm

The genetic algorithm helps to solve problems with the help of more than one program, where the final result represents the most suitable result among all the obtained results.

Knowledge representation

Knowledge representation is used to present facts and information in a way that is understandable to machines. The more efficient the knowledge is, the more intelligent the system will be.

PYTHON APPLICATION IN AI FIELD

Due to excellent performances, AI represents the future technology. There have been many AI-based applications presented in the literature. Also, AI has attracted great attention from both industry and academia. However, the main question that arises is in which program language AI-based applications should be developed to achieve the best possible performances. Many program languages, including Lisp, Prolog, C++, Java, and Python, have been used to develop AI applications. Among them, Python program language has been gaining popularity recently, due to the following reasons.

Simple syntax and less programming in Python

Python provides developing applications with less coding and simpler syntax than the other programming languages that are beneficial to AI application development, making testing easier, and allowing developers to focus more on programming.

Built-in libraries for AI projects

The main advantage of using Python in AI is that it comes with embedded libraries. Python has libraries for almost all types of AI projects, including the NumPy, SciPy, matplotlib, nltk, SimpleAI (NumPy documentation, 2020), (SkitLearn documentation, 2020), (Python documentation, 2020).

Also, Python is the open-source programming language, so it can be used in a wide range of software tasks, from small shell scripts to advanced corporate web applications (Nanz & Furia, 2015).

MACHINE LEARNING AS MAIN AI METHODOLOGY

Learning denotes the acquisition of knowledge or skills through study or experience. On this basis, ML can be considered as a part of the computer science field that provides computer systems with the ability to learn from experience without being explicitly programmed. The main focus of machine learning is to enable computers to learn without human intervention. Thus, ML algorithms help the computer system learn without explicit programming. The ML algorithms can be roughly divided into supervised and unsupervised (Shalev-Shwartzm & Ben-David, 2014).

Supervised ML algorithms

These algorithms are the most commonly used machine learning algorithms. They are called supervised because the learning process is supervised. In supervised ML algorithms, possible outcomes are already known, and the training data are indicated by the exact answers. There are two types of supervised learning problems, classification and regression. The most common supervised ML algorithms are the decision trees, random forest, *k*-nearest neighbour algorithm, and logistic regression.

Unsupervised ML algorithms

These machine learning algorithms are not supervised. Non-supervised learning problems can be divided into two types of problems, clustering and association. The *k*-means clustering and a priori algorithm are common unsupervised machine learning algorithms.

Most frequent machine learning algorithms

Linear regression

This is one of the most popular algorithms in statistics and machine learning. This is a linear model that assumes a linear relationship between the input and output variables. There are two types of linear regression, simple linear regression which represents the linear regression that has only one independent variable, and multiple linear regression which is linear regression having more than one independent variable.

Linear regression is mainly used to estimate the real values based on a continuous variable, one or more of them. For example, the total sales of a store in one day, based on real values, can be estimated by linear regression (Haslwanter, 2016).

Logistic regression

Logistic regression is a classification algorithm used to estimate discrete values, such as zero or one, true or false, whether or not, based on a given set of independent variables. Basically, it predicts probability; therefore, its output is in the interval between zero and one (Shalev-Shwartzm & Ben-David, 2014).

Decision tree

The decision tree is a supervised learning algorithm mainly used for classification problems. The decision tree has nodes that form a rooted tree that is a directed tree with a node called "root". Root has no incoming branches, and all other nodes have one input branch. These nodes are called leaves or the deciding nodes.

Support Vector Machine (SVM)

It is mainly used for classification problems. The main concept of SVM is to draw each data item as a point in an *n*-dimensional space, with the value of each property being a value of a certain coordinate; the classifier represents the line border between the data classes, as shown in Figure 1.

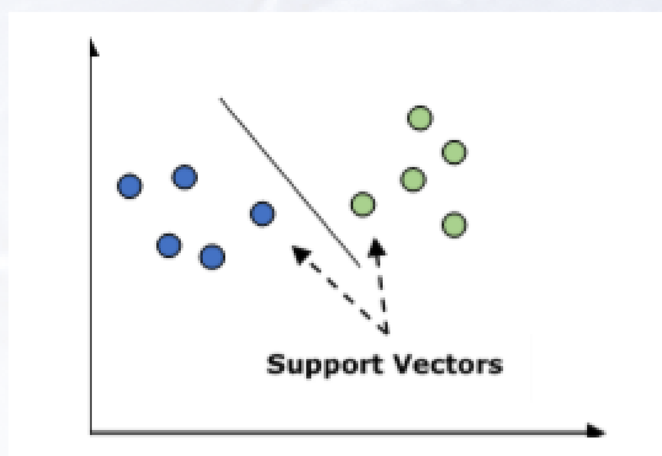


Figure 1: Support Vector Algorithm

Naive Bayes

This is a classification technique that uses the Bayesian theorem for constructing a classifier. The assumption is that the predictors are independent, i.e. it is assumed that the presence of a particular property in a class is not related to the presence of any other property. The Naive Bayes model is easy to build and particularly useful for large datasets (Haslwanter, 2016).

k-Nearest Neighbours (kNN)

It is widely used to solve the classification problem. The basic concept of this algorithm is that it is used to store all available cases and classifies new cases by the majority of its neighbour's votes. The case is then assigned to the most common class among its closest neighbours, measured by the distance function. The distance function can be Euclidean, Minkowski, and Hamming distance functions. The *k*KNN has higher computational complexity than the other classification algorithms. Also, data normalization is required; otherwise, the higher-range variables can be biased, and data preprocessing is also needed to remove the noise (Shalev-Shwartzm & Ben-David, 2014)**.**

k-Means Clustering

This algorithm is used to solve cluster problems. Basically, this algorithm is unsupervised, and it divides the dataset into a certain number of clusters, which are formed by the *k*-means process, where *k* denotes the number of points in each cluster. The algorithm's centroids of each cluster are based on the existing cluster members. The clustering is performed until the algorithm converges.

Random Forest

This is a supervised classification algorithm that can be used for both classification and regression type problems. Basically, it represents a collection of decision trees, i.e. forests. This algorithm can handle the missing values.

CLASSIFICATION PERFORMANCE MEASURING

After the machine learning algorithm development, its effectiveness was evaluated using different performance metrics. The choice of the evaluation metric is very important because the choice of a metric affects how the measurement and comparison of the performance of the machine learning algorithm are performed. The criteria used in the evaluation process are given in the following.

		Actual 1	Actual 0
Predicted	1	True Positives (TP)	False Positives (FP)
	0	False Negatives (FN)	True Negatives (TN)

Figure 2: Confusion matrix

Confusion matrix – This metric is commonly used in classification problems where the output can be of two or more class types. Also, using this metric is the easiest way to measure the performance of a classifier. The confusion matrix is essentially a table with two dimensions, which are "Real" and

"Predicted". Both dimensions have True Positives (TP), True Negatives (TN), False Positives (FP), False Negatives (FN) fields.

In the confusion matrix, one is used to denote the positive class, and zero is used to denote the negative class. The following terms are related to the confusion matrix:

True Positives - cases where the real data class is one, and one is predicted.

True Negatives - cases where the actual data point class is zero, and one is predicted.

False Positives - cases where the actual data class is zero, and one is predicted.

False Negatives - cases where the actual data point class is one, and zero is predicted.

Accuracy - The confusion matrix itself is not a measure of performance as such, but almost all performance matrices are based on a confusion matrix. One of them is accuracy. In the classification problem, accuracy can be defined as the number of correct predictions made by a model over all types of prediction, and it is calculated as follows:

$$Accuracy = \frac{TP+TN}{TP+FP+FN+TN} \quad (1)$$

Precision - Precision shows consistent results when measurements are repeated, and it is calculated by:

$$Precision = \frac{TP}{TP+FP} \quad (2)$$

Recall or Sensitivity - It can be defined as a number of positive models that the model retrieves, and it is calculated as:

$$Recall = \frac{TP}{TP+FN} \quad (3)$$

Specificity - It can be defined as a number of negative model retrievals, and it is calculated as:

$$Specificity = \frac{TN}{TN+FP} \quad (4)$$

Real-world data are not naturally organized into a certain number of characteristic clusters, so it is not easy to draw conclusions. Therefore, it is necessary to evaluate clustering performance as well as its quality, which can be done using the silhouette analysis.

Silhouette Analysis

This method evaluates the quality of clustering by measuring the distance between clusters. Basically, it provides a way to evaluate parameters such as the number of clusters by giving a silhouette. The result is a metric that shows how close each point in a cluster is to the points in adjacent clusters.

Analysis of silhouette results

The result of the silhouette analysis is in the range of [-1, 1], where +1 means that a sample is far from the adjacent cluster, 0 means that a sample is at or near the decision boundary between two adjacent clusters, and -1 means that a sample is assigned to the wrong cluster.

DEMONSTRATIVE EXAMPLES OF PYTHON AI IMPLEMENTATION

Supervised learning: classification

The classification technique aims to obtain conclusions from the observed values. In the classification problem, there is a categorized output, such as "black" or "white" or "teaching" and "non-teaching". When building a classification model, it is necessary to have a training dataset that contains data points and the corresponding tags. Classification models are mainly used in face recognition, spam identification, and many other computer vision-related applications (James, 2017)

Python-based classier

In order to build a classifier in Python, Python 3 and Scikit-learn were used as a tool for machine learning. The building process included three following steps (James, Witten, Hastie & Tibshirani, 2017).

Step 1: *Import Scikit-learn*

In this step, the Python package called Scikit-learn, which is one of the best Python Machine Learning Modules, was installed by the following command:

Import Sklearn

Step 2: *Importing Scikit-learn dataset*

In this step, the dataset used to develop a machine learning model was obtained. The Diagnostic Breast Cancer Basis in Wisconsin was used. The dataset included different information on tumours of breast cancer, as well as the classification codes for malignant or benign. The dataset had 569 copies of 569 tumours and included the information about 30 attributes or traits, such as tumour radius, texture, smoothness, and area. The Scikit-Learned Breast Cancer dataset was imported by the following command:

from sklearn.datasets import load_breast_cancer

The data were loaded using the command:

data = load_breast_cancer()

A list of important vocabulary keys included the following attributes:

- Classification target names (target_names)
- Real targets (target)
- Names of features/traits (feature_names)

The loaded dataset was organized by the following commands:

label_names = data['target_names']

labels = data['target']
feature_names = data['feature_names']
features = data['data']

Next, the class labels that included the first instance of the data, our property names, and the value of the function, were printed using the following command:

print(label_names)

Step 3: *Organizing dataset into subsets*

In this step, the original dataset was divided into two subsets, training set and test set, without any data overlapping between the sets. The dataset was divided by the function *train_test_split()* using the following commands:

from sklearn.model_selection import train_test_split
train, test, train_labels, test_labels = train_test_split(features,labels,test_size = 0.40, random_state = 42)

The second command in the above coded was used to divide the data in that way that the test data represented 40% of the overall data, and the remaining data were used for model training.

Step 4: *Model building*

The Naive Bayesian algorithm was used for model building running the following commands:

from sklearn.naive_bayes import GaussianNB
gnb = GaussianNB() # command for model initialization
model = gnb.fit(train, train_labels) # training data adaptation to the model

Step 5: *Model accuracy evaluation*

The model was evaluated by anticipating the test data using the following commands:

preds = gnb.predict(test)
print(preds)
[1 0 0 1 1 0 0 0 1 1 1 0 1 0 1 0 1 1 1 0 1 1 0 1 1 1 1 1 1 0 1 1 1 1 1 1 0 1 0 1 1 0 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1
0 0 1 1 0 0 1 1 1 0 0 1 1 0 0 1 0 1 1 1 1 1 1 0 1 1 0 0 0 0 0 1 1 1 1 1 1 1 1 0 0 1 0 0 1 0 0 1 1 1 0 1 1 0 1 1 0
0 0 1 1 1 0 0 1 1 0 1 0 0 1 1 0 0 0 1 1 1 0 1 1 0 0 1 0 1 1 0 1 0 0 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1
1 1 0 1 1 0 1 1 1 1 1 1 1 0 0 0 1 1 0 1 0 1 1 1 1 0 1 1 0 1 1 1 0 1 0 0 1 1 1 1 1 1 1 1 0 1 1 1 1 1 0 1 0 0 1 1 0 1]

The above series of zeros and ones represent the predicted values of the tumour classes - malignant and benign.

Model accuracy was evaluated by the following commands:

from sklearn.metrics import accuracy_score
print(accuracy_score(test_labels,preds))
0.951754385965

The result showed that the Naive Bayesian classifier achieved an accuracy of 95.17%.

The entire Python classifier code is provided below.

```
import sklearn

from sklearn.datasets import load_breast_cancer
from sklearn.model_selection import train_test_split
from sklearn.naive_bayes import GaussianNB
from sklearn.metrics import accuracy_score

# loads dataset
# in this example, a set of data to be classified is loaded
# this dataset is an example from the sklearn library and is related to
data = load_breast_cancer()

# from the set of data, the groups in which data are to be classified are extracted
label_names = data['target_names']

# the values are extracted, related to which element of the list belongs to which group
labels = data['target']

# the names for the characteristics describing each of the data are extracted
feature_names = data['feature_names']

# the values for the characteristics describing each of the data are extracted
features = data['data']

# the dataset is divided into two groups
# one group is used for training
# another is to test the performance of the model
#to split dataset, the treain_test_split method is used to which the data is transmitted and to which group
belongs
#defined test_size defines which part of the data to use for testing, while the rest of the data will be used for
training
#random_state variable is determined based on which values to randomly select values
train, test, train_labels, test_labels = train_test_split(features,labels,test_size = 0.40, random_state = 42)

# a new GaussianNB class object is instantiated
# which will be used for classification
gnb = GaussianNB()

# the fit method creates a new model based on the set of data specified for training
gnb.fit(train, train_labels)

#by using the predict method, the classification of the test data is executed based on #the defined model
preds = gnb.predict(test)

# by using the accuracy_score method, we compare real values with the test ones
#in this way, we determine how well the trained model is
# we print this value on the screen
print(accuracy_score(test_labels,preds))
```

Unsupervised learning: clusterization

Unsupervised machine learning algorithms do not have a supervisor that would provide guidance. In learning without supervision, there is no correct answer and teacher for guidance, so algorithms themselves need to discover an interesting form in learning data (Hugunin, 1999).

Clustering is a type of unsupervised method and a common technique for statistical data analysis used in many areas. Grouping is usually the task of dividing a set of observations into subgroups, called clusters, in such a way that observations in the same cluster are similar while those in different clusters are different (Pandas documentation, 2020). Thus, the basic goal of clustering is to group data based on similarity and diversity, as shown in Figure 3.

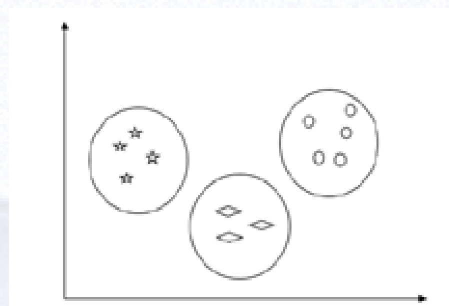


Figure 3: Illustration of data clustering into three clusters

Clustering using *k*-means algorithm

The *k*-means method is one of the well-known algorithms for data grouping. In this work, the straight clustering is considered, where the number of clusters is defined at the beginning of the algorithm. This is iterative grouping logarithm, which includes the following steps:

Step 1: *Define the number of clusters denoted as k.*

Step 2: *Randomly assign each data sample to one of the clusters*

In this step, centroid clusters are calculated. Since this is an iterative algorithm, *k* centroid locations are updated in each iteration until a global optimum is found. The *k*-means algorithm for grouping developed using Python programing language adopting the Scikit-learn module is given in the following (NumPy documentation, 2020), (SkitLearn documentation, 2020).

 # Intorduction of necessary packages:

import matplotlib.pyplot as plt

import seaborn as sns; sns.set()

import numpy as np

from sklearn.cluster import Kmeans

 # Generation of a two-dimensional dataset that contains four blobs, using make_blob from the sklearn. dataset package

from sklearn.datasets.samples_generator import make_blobs

X, y_true = make_blobs(n_samples=500, centers=4,

cluster_std=0.40, random_state=0)

Dataset clustering visualization—refer to Figure 4

plt.scatter(X[:, 0], X[:, 1], s=50);

plt.show()

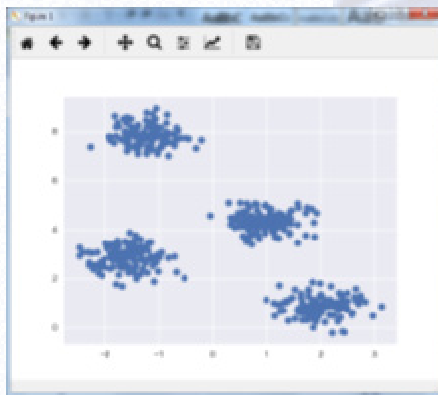


Figure 4: Visualization of the dataset clustering process

The *k*-means object with a defined number of clusters was generated by the following command:

kmeans = KMeans(n_clusters=4)

The number of clusters was equal to four. Next, the training process was perfomed by the following commands:

kmeans.fit(X)

y_kmeans = kmeans.predict(X)

plt.scatter(X[:, 0], X[:, 1], c=y_kmeans, s=50, cmap='viridis')

*centers = kmeans.cluster_centers_*

Dataset clustering visualization—refer to Figure 5

plt.scatter(centers[:, 0], centers[:, 1], c='black', s=200, alpha=0.5);

plt.show()

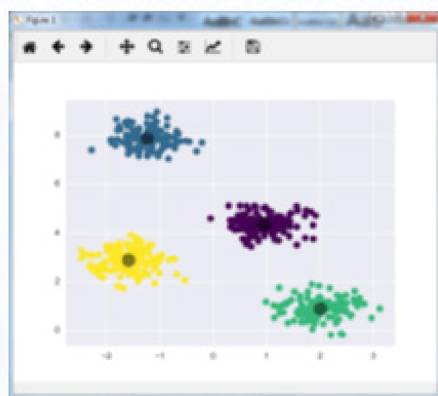


Figure 5: Visualization of data clustering

The entire Python clustering code is provided in the following.

```
import matplotlib.pyplot as plt
import seaborn as sns; sns.set()
from sklearn.cluster import KMeans

from sklearn.datasets.samples_generator import make_blobs

# Generating data that was used for the example
# the make_blobs method generates a series of vectors that we will use to test
# the n_samples attribute represents the number of points to be generated
# n_features represents the number of characteristics each vector needs to have
# centers represent the number of groups, that is, the number of centers around which the vectors should be grouped
# cluster_std represents the standard deviation of point deviations from the center
# random_state number based on which generates
# X represents a variable in which a series of points should be placed
# y_true is a string that indicates which cluster belongs to which point
X, y_true = make_blobs(n_samples=1000, n_features=2, centers=4, cluster_std=0.40, random_state=0)

# the KMeans object is created to which the number of expected clusters is being forwarded as an argument
kmeans = KMeans(n_clusters=4)

# training KMeans model
kmeans.fit(X)

#by using the predict method of K-Means object the model prediction is made
y_kmeans = kmeans.predict(X)

# creating a scatter diagram based on the x and y coordinates of the generated data
# c attribute defines the color or group to which each element belongs
plt.scatter(X[:, 0], X[:, 1], c=y_kmeans, s=50, cmap='viridis')

# the cluster_centers_ attribute represents the cluster center coordinates
centers = kmeans.cluster_centers_

# adds clusters to the existing diagram
plt.scatter(centers[:, 0], centers[:, 1], c='black', s=200, alpha=0.5);

# displays the diagram on the screen
plt.show()
```

CONCLUSION

The main goal of the paper is to illustrate the capabilities of Python programming language implementation in AI applications. The main machine learning algorithms are realized using Python programming language, and the corresponding procedures and codes are demonstrated. The provided examples of Python programming language implementation can be a helpful guide for the research and development, government and industry communities as to how to apply Python in different contexts

related to AI field. Our future work will include a more detailed illustration of Python programming language implementation in the advanced AI-based applications.

ACKNOWLEDGEMENT

The authors would like to thank Ms. Jelena Misic for her support during this work and constructive suggestions. We would also like to thank the editor and anonymous reviewers for their comments which notably improve the paper content and quality.

REFERENCES

1. Nagpal A. and Gabrani G. (2019), "Python for Data Analytics, Scientific and Technical Applications," *Amity International Conference on Artificial Intelligence (AICAI), Dubai, United Arab Emirates*, 2019, pp. 140-145, DOI: 10.1109/AICAI.2019.8701341.
2. James, G., Witten, D., Hastie, T., Tibshirani, R. (2013) "An Introduction to Statistical Learning", Springer New York Heidelberg Dordrecht London, ISBN: 978-1-4614-7137-0, DOI: 10.1007/978-1-4614-7138-7.
3. James, G., (2017), "Introduction to Statistical Learning – with Applications in R", Springer New York Heidelberg Dordrecht London, ISSN: 1431-875X, ISBN: 978-1-4614-7138-7 (eBook)
4. Hugunin. J., (1999) "Python and Java: The Best of Both Worlds", Proceedings of the 6th Annual Python Conference Available: http://www.python.org/workshops/1997-10/proceedings/hugunin.html
5. "NumPy documentation,", (2020), [Online] Available: https://docs.scipy.org/doc/NumPy/index.html
6. "Pandas documentation,", (2020), [Online] Available: https://Pandas.pydata.org/
7. "Python documentation,", (2020), [Online] Available: https://docs. Python.org/3/
8. Nanz, S., and Furia, A.C., (2015), "A Comparative Study of Programming Languages in Rosetta Code", Proceedings of the 37th International Conference on Software Engineering (ICSE'15), pages 778-788. IEEE, DOI: 10.1109/ICSE.2015.90
9. Shalev-Shwartzm, S., Ben-David, S., (2014), "Understanding Machine Learning: From Theory to Algorithms", Cambridge University Press., ISBN: 978-1-107-05713-5.
10. "SkitLearn documentation," (2020), [Online] Available: https://Scikitlearn.org/stable/index.html
11. Haslwanter, T.,(2016), "An Introduction to Statistics with Python with Applications in the Life Sciences", Springer, ISBN: 978-3319283159.

CONSTRUCTIVE SIMULATIONS AS A COLLABORATIVE E-LEARNING TOOL FOR TRAINING OF EMERGENCY TEAMS

Zoran Jekić
National Defense School, University of Defense, Belgrade, Serbia
Goran Šimić, PhD[1]
National Defense School, University of Defense, Belgrade, Serbia

Abstract: Modern armies have a mission to help citizens in different kinds of emergencies such as floods, earthquakes, nuclear and chemical accidents and pollution, as well as help in massive diseases. These tasks are very complex due to many organizations and social groups involved. If needed, they are forming emergency teams that act in challengeable conditions. Complex nature of emergencies requires advanced training methods. Simulation exercises provide researchers to vary conditions, to insert unpredictable events during simulation, to stop the exercise in any moment and to record course of actions for the later analysis and deriving of conclusions. Moreover, simulations are safe to evaluate the readiness of emergency teams and crisis staff for new situations, which have never happened before. The simulations obtain exercise dynamic and conditions closest to reality. This paper explains methodology, development of simulation exercise based on flooding scenario, the limitations, benefits and ways for use simulation exercises in the training plan and education curricula.

Keywords: constructive simulations, joint simulation exercises, emergency teams

INTRODUCTION

Today, constructive simulations are mainly used in military education and training. During the simulation, participants play different roles – as command staff members or act as unit commanders, responsible for fulfilling simulation objectives.

1 gshimic@gmail.com

Modern armies have a mission to help citizens in different kinds of emergencies such as floods, earthquakes, nuclear and chemical accidents and pollution, as well as help in massive diseases. These tasks are very complex due to many organizations and social groups involved: governmental and non-governmental institutions, emergency services, rescue teams, voluntary groups and local people. They have different skills and knowledge. They are forming emergency teams and staff that act in very hard conditions – limited resources, short time, security risks, necessity for fast response, partially or full-destroyed traffic and communication infrastructure.

Complex nature of any kind of emergency directs us to simulation exercises as the only way to prepare emergency teams and staffs. These exercises invite all parties that should act during the disaster.

The next section is a short review of previous research work with the focus on constructive simulations. In addition, it gives the contemporary software products used for constructive simulations. The third section explains methodology for development of simulation scenario. The following section describes different aspects of exercise implementation by using flooding scenario. Finally, the conclusion part includes the experience related to concrete scenario, but also experience gathered during 10 years of practicing the simulation exercises in military training and education.

RELATED WORKS

Although there are different categorizations of simulations (Sulistio et Al., 2004), the most common for military training is division into three categories (Hodson, 2009): constructive, live and virtual simulations. Constructive simulations are the most complex category designed for training and education of staff and commanders of joint forces in order to fulfil complex long-term tasks. Different subject matter experts (i.e. different branches and services, such as engineers, artillery, infantry, armoured, reconnaissance, medical, transport, communication and many other types) are organized in expert teams in order to act as a whole. They need to learn from each other and to adapt their specific working procedures according to new tasks and organization. During the simulation, the participants play different roles – as command staff members or act as unit commanders, responsible for fulfilling simulation objectives. Beside computers and computer networks, they use maps, literature, and regulatory documents for fulfilling their tasks. Different mathematical and logical models are implemented in simulation software to emulate the dynamic of operations as realistic as possible (in different domains as spatial, time, etc.).

Constructive simulations are simulations based on computers and computer networks. These simulations use mathematical and logical models to show the dynamics of combat operations. The influence of the human factor in constructive simulations is limited to the use of people in the role of operators on simulation software, who during the simulation exercise must strictly apply tactical and management principles and use of assigned units (Chauhan, 2013). The logical and mathematical models used in the simulations were developed by experts in the field of the use of forces on the battlefield. The simulations show the dynamic behaviour of units, such as marching, performing various manoeuvres during combat operations, opening fire, supplying food and ammunition, repairing faulty equipment, medical evacuation of personnel and others (Dutta, 2010).

This type of simulation is a powerful tool for researching the characteristics of the existing systems and weapons, as well as for testing the possibilities of new combat systems considered for introducing the armed forces in different meteorological conditions and during the realization of different scenarios of force use. Moreover, simulations significantly reduce the cost of introducing new combat systems

in use; also, the simulation can be repeated countless times, if necessary, from the beginning or from any point in the simulation time that needs to be realized again.

There are many constructive simulation software products. The most frequently cited are: JANUS, ROMULUS, SWORD, SOULT (France), JCATS, ONE SAF (USA), and GESI-SIRA (Canada & Germany). These products can be used for exercises of several levels of commands and units, from company to division (Simic, 2012).

METHODOLOGY AND DEVELOPMENT OF CONSTRUCTIVE SIMULATIONS

There are three phases for development of exercises for training of emergency teams by using constructive simulations: model preparation is the first, testing of simulation exercise phase is the second one and there is planification phase (CEISIM, 2009).

MODEL PREPARATION PHASE

Model preparation phase begins when the exercise creator (trainer, teacher) delivers the basic information about the exercise – the main goal, the exercise objectives and tasks, and the basic ideas for realization. This information also includes maps, human and technical resources planned to be involved in the exercise. Technical staff that is responsible for simulation exercise development arrange several meetings with subject matter experts (instructors, teachers), facing them with possibilities and limitations of simulation software, human and technical resources and time available for exercise. They together try to find an optimal solution. Model preparation phase lasts 4–7 weeks. Time is shorter if there are assets already prepared for some previous exercise (e.g. digital map, equipment, units) that can be reused in the new one. Each piece of equipment and each human (soldier or civilian) as well as each unit have to be transferred and represented with one artificial object (hereinafter *pion*) in the virtual environment. More precisely, technicians together with subject matter experts have to make particular models for endangered people and animals as well as for civilian authorities (e.g. local society institutions, police, medicals, emergency staffs, non-government organizations, humanitarians, etc.). This process is commonly known as *force generation* (military term).

One of the biggest challenges during this process is to make optimal solutions to adapt scenarios to the number of operators and working stations. Simulation software provides control of 1–50 pions by one operator. If the scenario implies more action of a particular pion, the operator is more engaged for its control. Technicians use specialized software tools for modelling of maps, pions and forces. They have to define parameters of logistical support for each pion (e.g. fuel for vehicles, equipment and health statuses for humans and animals, etc.). For instance, creation of new land/water/amphibian motor vehicles (crafts) includes defining vehicle speed in different conditions, fuel and lubricant consumption, load capacity, maintenance intervals and time consumption, but also some experiencing data as conditions and probability of failures during exploitation. After all parts of exercise scenario are completed by using different software tools (i.e. terrain editor and map generator, pion editor, force editor and force generator) they are saved in the appropriate formats. The technicians check everything with subject matter experts again and start the transfer process for loading of the scenario into the simulation server. This is the end of the model preparation phase.

TESTING THE SIMULATION EXERCISE PHASE

The purpose of testing the simulation exercise phase is to check correctness of digital map and pions behaviour in the virtual environment. They should be fully functional in accordance with the requests of concrete scenarios and exercise plan. This phase is commonly conducted seven days before the beginning of the exercise. The trial exercise is attended by the exercise director (heads of emergency teams), teachers (instructors of members of emergency teams), and technical staff and all operators participating in the exercise. One-day trial exercise seven days before the real exercise provides enough time to make minor changes of model and/or fix the bugs on map and pions. Moreover, the technicians use the trial exercise to conduct the training and preparation of operators for performing particular tasks during the exercise.

PLANIFICATION PHASE

Planification phase provides the initial set up of pions (humans, animals, vehicles, equipment etc.). Members of emergency teams, based on the concrete tasks, with the help of the operators, set the units on the digital terrain. Commonly, realization of this phase is one day before exercise and it lasts two to four hours. In exceptional cases, its realization can be immediately before (on the day) of exercise.

During this phase, the exercise director and teachers monitor the work of trainees (emergency team members) and coordinate with technicians to provide all necessary conditions and support. At the end of the planning phase, the exercise director controls the initial distribution of forces and finally, approves the initial constellation of forces for the exercise. In other words, the simulation model is finished. This is the end of planification phase. The saved model is reusable unlimited number of times and can be modified for further requests without need to repeat the development process from scratch.

IMPLEMENTATION

This section describes the simulation exercise in case of use of military forces in the operation to support civilian authorities in flood protection and rescue in the area of Mačva and Srem. The simulation exercise was performed by using constructive simulation software Janus FR-11. The simulation scenario included:

1. Growing of water level,
2. Land and air evacuation of endangered humans and animals from the areas affected by the flood,
3. Land and air evacuation of injured humans and animals from the areas affected by the flood and their disposal at the medical stations,
4. Extraction and repair of damaged technical and material means, and
5. Removal of landslides from blocked roads in the area affected by the flood.

The digital map of simulation exercise area includes realistic terrain of Morović, Bogatić, Crna Bara, Crnobarski Salaš, Badovinci, Dublje and Klenje. The next figure shows the initial positions of the engaged forces (blue objects on the maps below) in the area of Bogatić (LHS) and Morović (RHS) defined in the planification phase (Figure 1).

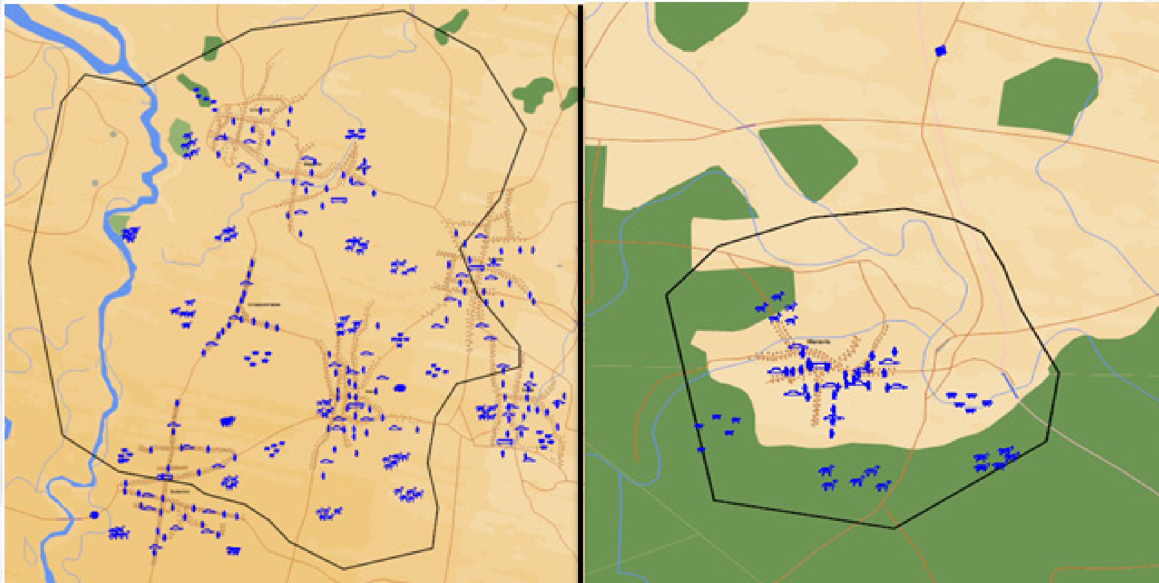


Figure 1. *Planification of forces in the area of Bogatić and Morović*

Flooding Setup Phase

After planification and before beginning of the exercise, specifically for flooding simulations is that there is an intermediate phase for defining flooding parameters (Figure 2). It includes defining the centre and borders of the flooding area, water level at the beginning and end of exercise, *flooding resolution* and *updating frequency*.

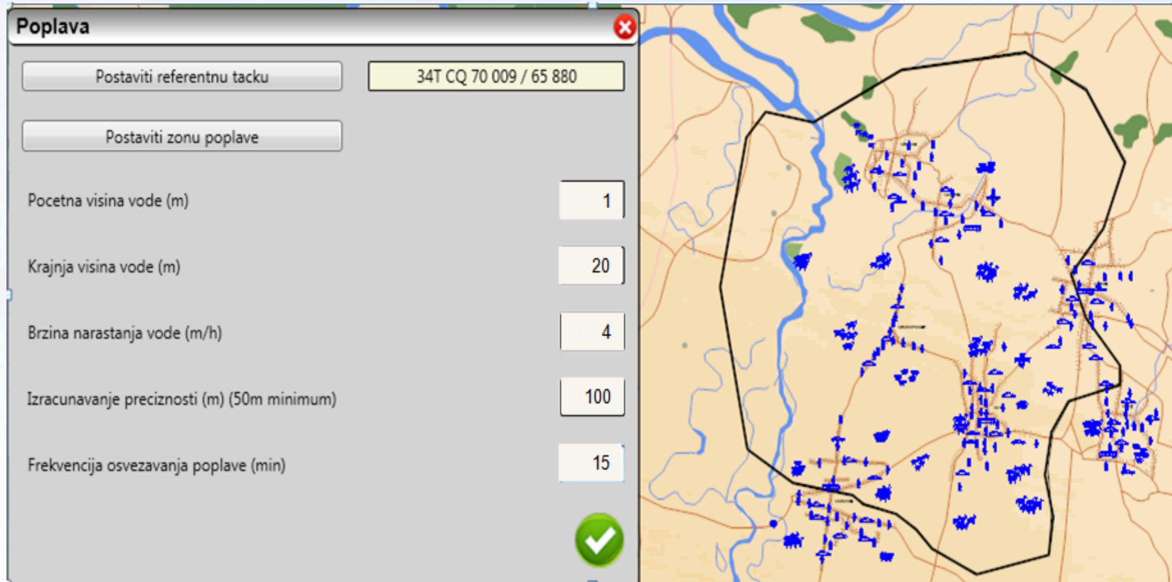


Figure 2. *Flooding setup in the area of Bogatić*

The centre of the flooding area (hereinafter CFA) represents the referential point as its coordinates and altitude defines a shape and a way in which the flooding area spreads. It means that zero water level is the altitude of this referential point. The starting water level is defined regarding the CFA. If the rivers or lakes cause the flooding, the CFA should be positioned on their surface. If the underground waters cause flooding (e.g. in some parts of Vojvodina), the CFA can be positioned on land, usually at the lowest point of the area endangered by flood.

FLOODING TEST PHASE

As mentioned above, flooding represents the specific scenario. Wrong setup of parameters *flooding resolution* and *updating frequency* can produce degradation of system performances due to more time the system needs to recalculate new flooding area shape after updating the water level. Practically, the system has to recalculate for each point on the map if it is under water or not and, if it is – how deep under water the point is. Therefore, the technicians practice the flooding test before the exercise starts. The next illustrations show the flooding dynamic during this phase (Figure 3 and 4). The technicians also test the spreading effects – if it happens in accordance with the characteristics of land shape and objects on the terrain (e.g. dams, embankments, etc.).

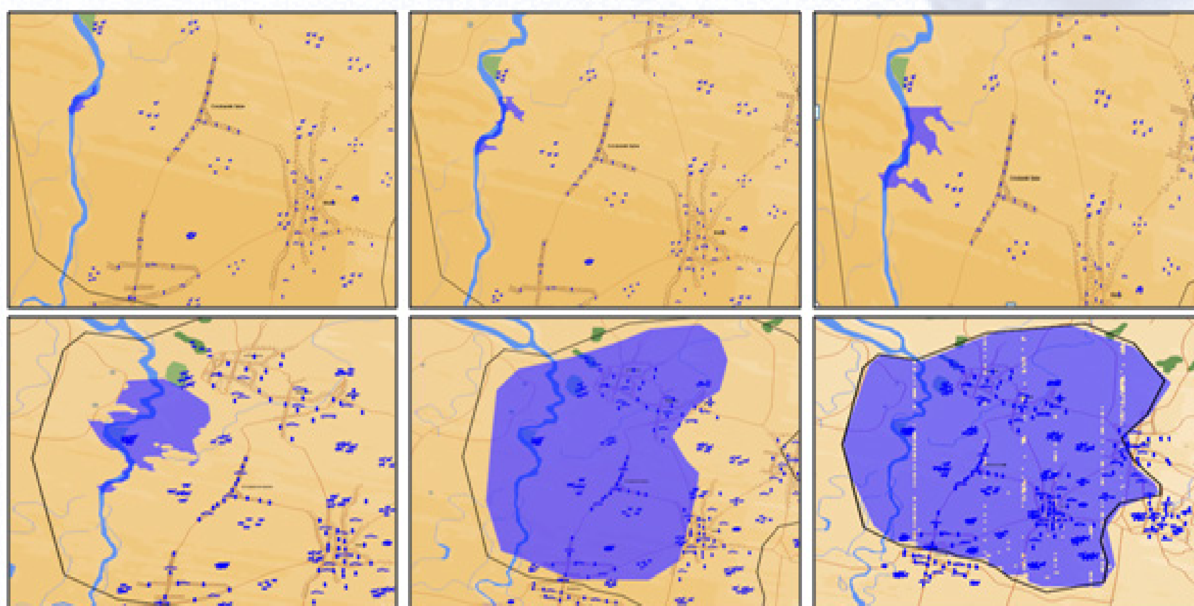


Figure 3. *Spreading of flood in the vicinity of Bogatić*

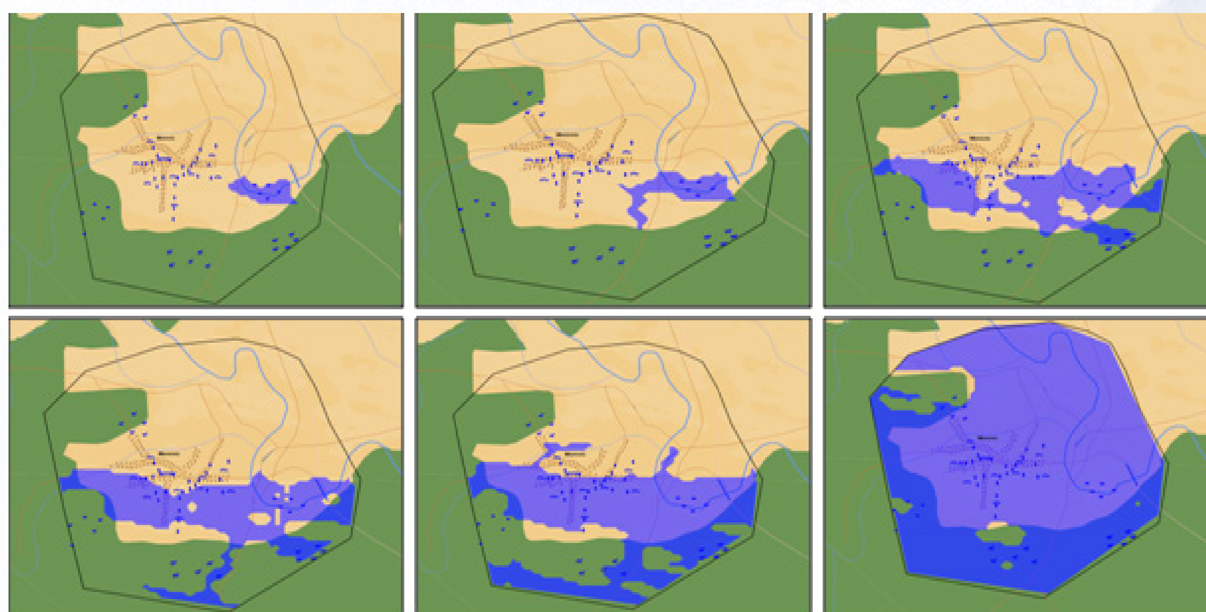


Figure 4. *Spreading of flood in the vicinity of Morović*

Flooding test also includes the testing of pions behaviour: endangered population and animals in the flooded areas, the ability of soldiers and combat and non-combat vehicles to assist the endangered populations in the flood zone.

SIMULATION EXERCISE BASED ON FLOODING SCENARIO

The members of the developed emergency staff represent the simulation exercise players. During the exercise, they are collecting the information, analysing it and making decisions about engagement of forces on different kinds of help they have to obtain in order to fulfil the exercise objectives. More precisely, they receive reports from the subordinates (they play the role of animators), analyse the situation, and make decisions of engagement. The next figure (Figure 5) illustrates evacuation of population by land. Upper left part shows the units with amphibian vehicles coming in the flooding area for rescuing. They search and find the population, and report the situation to the superiors (emergency staff members) (upper right part).

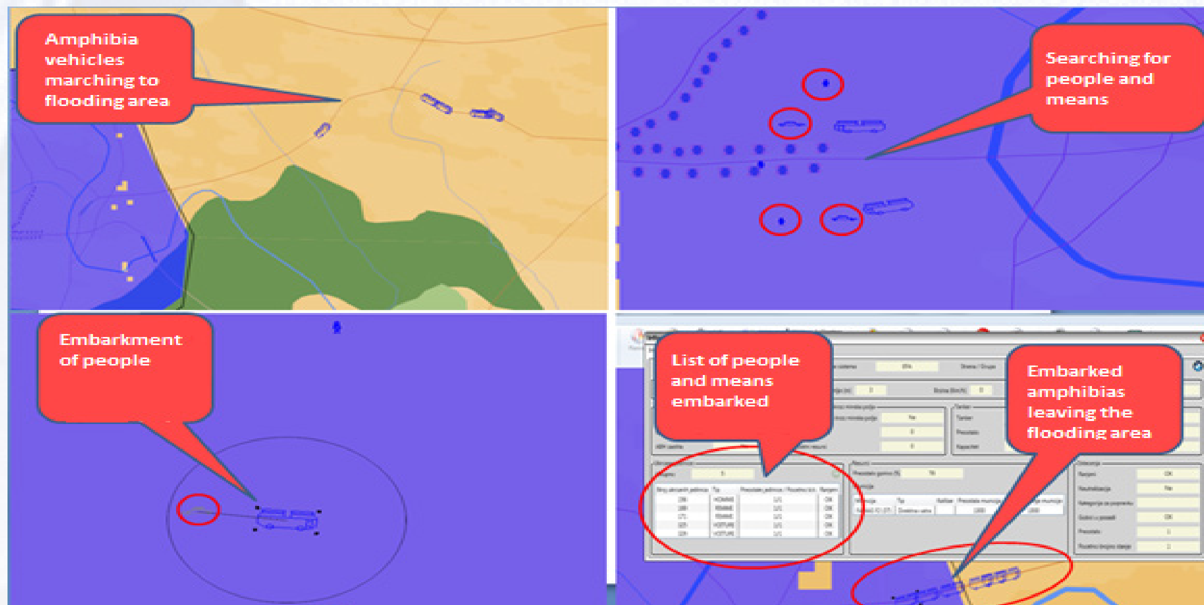


Figure 5. *Overview of rescuing and evacuation of the population by land*

Further, they receive orders and take actions in accordance with it. Bottom left part of Figure 6 shows the embarking of the endangered people on amphibian vehicles, while bottom right part shows the evacuation of this group of people from the flooding area.

The next figure demonstrates air evacuation of the population from the flooding areas (Figure 6). The scenario included the engagement of helicopter units for this purpose. After the reconnaissance mission, the air unit reported to crisis staff about the endangered population and received the order and guidance for the rescue mission. The upper left part of the figure shows the entrance of the rescue helicopter in the flooding area, the upper right part shows finding of the endangered people and their means and the bottom part shows the evacuation of people from the flooding area by helicopter.

Figure 6. *Overview of rescuing and evacuation of the population by air*

Simulation system provides detailed information about the endangered populations and equipment. The next figure shows the system forms that provide this information for exercise participants (Figure 7). The upper part of the figure shows the information of defects on the vehicles endangered by water. The bottom part of the figure shows the status of the injured civilians. Such information are delivered to the members of crisis staff in order to challenge them to quickly make the right decision as needs are usually greater than the available resources. That means the players have to make priorities and to exploit units engaged in crisis scenarios in optimized way.

Figure 7. *System provides detailed information about the endangered population and means*

The next figure shows the air-medical evacuation of the injured civilians from the endangered areas (Figure 8). The upper left part shows helicopter guidance to the location of emergency. Helicopter op-

erator then has to find the particular injured civilians on site, embark them one by one and evacuate to the specified medical station for further medical care.

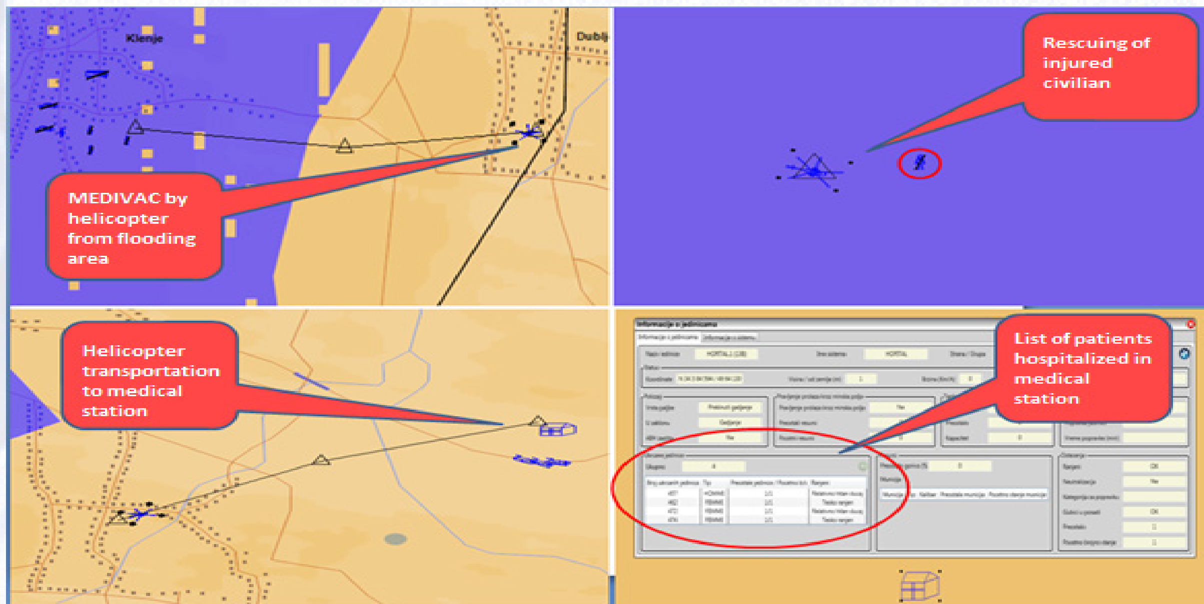


Figure 8. *Medical evacuation flooding area*

The next figure shows the technical support for vehicles and other means with defects located in the endangered areas (Figure 9). Crisis staff should deploy one or more mobile maintenance stations to perform this type of service. Similar to medical care, this kind of help has two phases. Firstly, the mean has to be drowned out of water and transported to the safety area – into the maintenance station. Simulation software offers parameters *out of function time* (hereinafter OFT) to emulate the repairing and maintaining processes. Minute [0 – 999] represents the measurement OFT unit. *Zero* OFT means that the vehicle is in fully functional state. On the other hand, 999 value means that vehicle is out of function and cannot be repaired. Other OFT values describe the time necessary for fixing the problem with the vehicle.

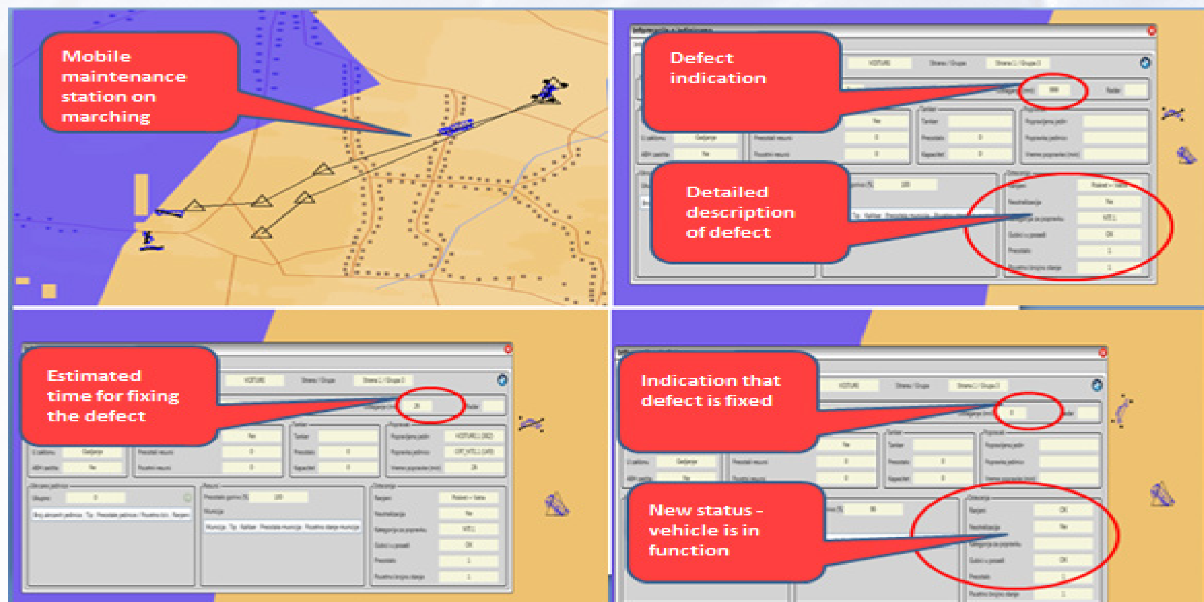


Figure 9. *Reparation of defected vehicles and other means*

As known, flood often causes road damages. Figure 10 shows the support for fixing this kind of problem. After reporting, the crisis staff has to make decisions about the engagement of road maintenance groups (hereinafter RMG). They order the RMG to go on a road damage site and to fix the problem. Simulation software includes the engineering norms used for this kind of simulated action. The figure shows the movement of RMG to the location (upper left part), deployment of resources (upper right part), and fixing the damage. After action, RMG reports to the staff, withdraw from the location and can be directed at the new one.

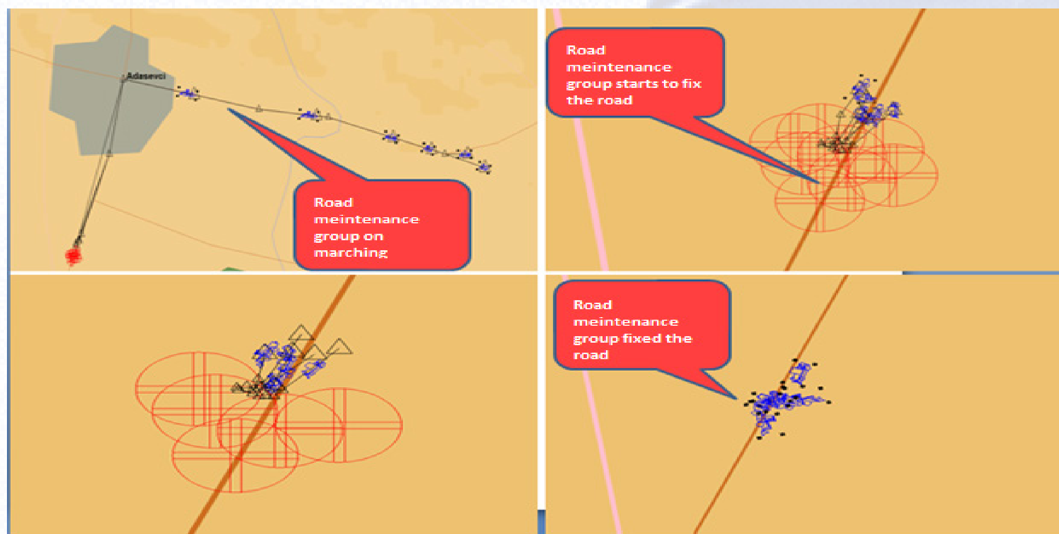


Figure 10. *Road maintenance group in fixing the road damage*

Simulation training also includes the regular use of communication means and procedures during the exercise. Like in realistic situations, the crisis staff members and other participants exchange a lot of information during the exercise. To avoid misunderstanding or missing complete important information, the players should be trained for proper use of communication resources. Command networks are formed on demand of exercise directors. Technicians create them by using VoIP server and radio-network stations. This way technicians record the communication for after action review and course of actions analysis.

CONCLUSIONS

Simulation exercises represent the efficient way for training emergency teams and crisis staff. Contemporary simulation software provides various possibilities in creation of scenarios to provide the training conditions close to realistic situations. Use of simulation is life and healthy safe, environmental safe, it is sparing the time, money and other means. Simulations offer a realistic dynamic of exercise, comprising the engagement of a lot of people simultaneously. Finally, it can be repeated as many times as is necessary for finding the most optimal solutions in a concrete scenario. Simulation exercises provide researchers to vary conditions, to insert the unpredictable events during simulation, to stop the exercise in any moment and to record the course of actions for the later analysis and deriving of conclusions. Moreover, simulations are safe to evaluate the readiness of emergency teams and crisis staff in new situations, which have never happened before. Climate changes and the latest COVID–19 experience directed us that everything is possible and we need to prepare ourselves for the future situations in order to minimize the damages of potential natural and artificial disasters.

REFERENCES

1. Sulistio, A., Yeo, C.S., & Buyya, R. (2004). A taxonomy of computer-based simulations and its mapping to parallel and distributed systems simulation tools, Software–Practice and Experience, John Wiley & Sons, 653–673
2. Hodson, D. (2009). Performance analysis of live-virtual-constructive and distributed virtual simulations: defining requirements in terms of temporal consistency, Doctoral dissertation, Air Force Institute of Technology Wright Patterson AFB, OH, ISBN: 978–1–109–52283–9
3. Dutta, D. (2010). Simulation in Military Training, Defence Science Journal, Vol. 49, 275–285.
4. Simic, G. (2012). Constructive simulation as a collaborative learning tool in education and training of crisis staff. Interdisciplinary Journal of Information, Knowledge, and Management. 7. 221–236.
5. Janus Database Management (2000), Tradoc Analysis Center, Volume 7.
6. Chauhan, S. (2013). Enhancing Training Through Use of Simulations, CLAWS Journal.
7. Uputstvo za organizaciju vežbi na simulacionom softveru „Janus“, Centar za simulacije i učenje na daljinu, Univerzitet odbrane u Beogradu, 2011.
8. Uputstvo za Janus serversku aplikaciju, „CEISIM“, OS Francuske, 2009 (https://sim.cesim.com).
9. Uputstvo za rad supervizora i operatera na simulacionom softveru Janus, „CEISIM“, OS Francuske, 2009 (https://sim.cesim.com).
10. Uputstvo za softver za izradu i uređivanje terena na simulacionom softveru Janus, „CEISIM“ OS Francuske, 2009 (https://sim.cesim.com).

ANALYSIS OF ASPECTS OF PERSONAL DATA PROTECTION RISK ASSESSMENT USING MODERN TECHNOLOGIES IN THE MINISTRY OF INTERNAL AFFAIRS

Milan Gligorijević, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Marija Pećanac[2]
Ministry of the Interior of the Republic of Serbia

Olgica Vulević[3]
Ministry of the Interior of the Republic of Serbia

Aleksandar Maksimović[4]
Ministry of the Interior of the Republic of Serbia

Abstract: The application of modern information and communication technologies is an indispensable factor in improving public safety, which is one of the key priorities in the work of the Ministry of Internal Affairs, based on identified risks and threats defined in the "Strategic Assessment of Public Safety for period 2017-2021". At the same time, the development of modern information and communication technologies has affected the complexity of security risks posed by such systems. On the other hand, citizens rightly expect an adequate response and protection mechanism from modern forms of endangering public safety and legally recognized freedoms and rights of citizens. Having in mind the wide range of security challenges and the need for more efficient work of the police, as well as all the advantages offered by modern technologies, the Ministry assessed that the conditions for the introduction of modern technologies in its work, which includes improvement of video surveillance system, establishment of intelligent

1 milan.gligorijevic@mup.gov.rs
2 marija.pecanac@mup.gov.rs
3 olgica.vulevic@mup.gov.rs
4 aleksandar.maksimovic@mup.gov.rs

video, analytics and construction of eLTE wireless broadband radio network, based on LTE (Long Term Evolution) technology. All of the above, the justification for the use of modern information and communication technologies, legal frameworks and analysis of aspects of risk assessment of personal data protection will be discussed in more detail in this paper.

Keywords: information and communication technologies, video surveillance system, intelligent video analytics, modern radio networks, personal data protection.

INTRODUCTION

Based on the identified risks and threats defined in the “Strategic Assessment of Public Security for the period 2017 - 2021”, the improvement of public security is one of the key priorities in the work of the Ministry of Interior. On the other hand, one of the very important priorities of the Ministry is to bring the police closer to the citizens and better mutual cooperation in order to improve security. Namely, citizens rightly expect a decisive and adequate response to the threats of the modern form of endangering public safety and legally recognized freedoms and rights. Bearing this in mind, the basic task of the Ministry is to engage all the necessary resources starting from the collection of data and information, through assessment, processing and analysis. If such an answer is not forthcoming, we risk the trust of the citizens and the foundations of democracy itself. The challenge is great, because modern forms of endangering public safety are constantly changing, especially due to the accelerated development of information technology and means of communication.

The application of modern information and communication technologies is an indispensable factor in improving the security protection of citizens (Ranđelović, 2014). At the same time, the development and availability of modern communication and information technologies has complicated security threats due to the possibility of their abuse, both for communication, propaganda, recruitment, financing and training, and for cyber-terrorist attacks. On the other hand, in the field of information and communication technologies, the challenges relate to problems regarding the availability, connectivity and compatibility of relevant records of various institutions, as well as providing the necessary level of knowledge and exchange of experiences with representatives of the EU member states. Likewise, the challenges include the impossibility of implementing new technologies in existing resources, i.e. lagging behind in technological development, which causes incompatibility with partners with whom the Ministry cooperates. In this regard, it is necessary to provide access to the Ministry of the latest technological solutions based on the best world experiences, which are applied in their work by the police of modern countries.

With the introduction of modern technologies, conditions are created for more successful police operations, application of model 3E (more efficient, effective and economical way), direct (on-line) insight into the event or history of events, fast and efficient police response, as well as for going to the scene and arresting perpetrators, for investigating criminal offenses and prosecution of misdemeanors, finding or arresting wanted persons, increasing the security of people and property, border control and checking at border crossings, surveillance of the state border outside the border crossing, maintaining public order and peace, providing public gatherings, personalities, facilities and premises, security protection of certain persons and facilities, identification and finding of perpetrators of criminal acts and missing persons on the basis of biometric data on the person, providing evidence for filing misdemeanor and criminal charges, conducting internal control, monitoring legality and improving the work of the Ministry, initiating and conducting disciplinary proceedings, etc. (Kovačević-Lepojević, Žunić-Pavlović, 2010).

LEGISLATIVE FRAMEWORK AND ADVANTAGES OF THE USE OF MODERN TECHNOLOGIES IN THE PROCESSING OF PERSONAL DATA

According to the Law on Personal Data Protection (2018), "personal data" is any data relating to a natural person whose identity has been determined or determined directly or indirectly, especially on the basis of an identity mark, such as name and identification number, location data , an identifier in electronic communication networks or one or more features of its physical, physiological, genetic, mental, economic, cultural and social identity. It is also important not to mention the fact that the law very clearly and unambiguously regulates the conditions for collecting and processing personal data, which aims to ensure equal exercise and protection of the right to privacy for every natural person.

Personal data processing is any automated or non-automated action taken in relation to personal data or their aggregates, such as collecting, recording, sorting, grouping, storing, matching or modifying, detecting, inspecting, using, duplicating, disseminating or otherwise making available, comparing, restricting, deleting or destroying (Manojlović, 2014). Therefore, any use or any contact with personal data, regardless of how long such processing lasted and of what kind it was (active or passive) will be considered data processing.

The law also defines the term "biometric data", which is personal data obtained by special technical processing related to physical characteristics, physiological characteristics or behavioral characteristics of a natural person, which allows or confirms the unique identification of that person, such as the image of his face or his dactyloscopic data.

A simple and logical question arises here: Is a photograph of a person a biometric data, and thus a data on a person? The answer to this question has several aspects. The Law on Personal Data Protection classifies a photograph into biometric data only if it was made by special technical processing in connection with the physical characteristics of a specific person. Furthermore, the photograph is not mentioned as personal data in the Law. However, the General Data Protection Regulation (GDPR) in art. 51 of the Preamble specifies that the processing of a photograph does not in principle constitute the processing of special types of personal data, as a photograph is considered biometric only if it is processed by special technical means enabling unique identification or face identification. This means that not every photo of a person is biometric data. However, photographs on an ID card, passport, photo taken with a camera that uses a face recognition technique, are considered biometric data.

All above discussed comes to the fore because there are numerous advantages of using modern technologies for face recognition, which use biometric data, i.e. personal data. The advantage of using this technology is reflected in the fact that it can influence the deterrence from illegal and antisocial behavior (Bebis et al, 2006). Suspects are easier to identify using face recognition software, i.e. by simply comparing their photographs with databases (e.g. criminal files). The use of software can act preventively on potential perpetrators of crimes and repressively on those who have already committed them. If an individual is aware that the identification software that can easily reveal his identity is used, he will see that the chances of committing a crime with impunity are significantly reduced and he will refrain from committing a criminal activity (Gligorijević et al, 2016). The repressive action is reflected in the easier finding and arresting of persons suspected of having committed a crime on the basis of databases in the possession of state bodies that contain biometric data of already known criminals and convicts.

One of the significant advantages of using this technology is that the input data about a person is collected without contact and interference with that person's activities, i.e. it is not necessary for a person to place fingers or palms on the device or to approach the device to recognize the retina and the like. Since software can work without contact with the people being identified, in some cases they are not even aware that their identity is being verified (Ratcliffe, 2006).

It is also important to note that biometric technology can be useful in the public sphere for border surveillance at the border crossings, identification of criminals, fight against terrorism and elimination of identity fraud, etc. In the private sector, biometrics can help verify information about employees and working hours, advertise more efficiently, help social media users identify and tag other users, and improve security by controlling access to sensitive locations. Employers cite biometric time as an almost flawless way to keep accurate employee time data. Biometric technology generally makes these tasks easier, more efficient and more accurate. Although biometrics are touted as a way to improve security and limit fraud, privacy advocates have raised serious concerns about the technology.

On the other hand, in addition to all the advantages brought by the use of modern information and communication technologies, attention must be paid to assess the risk of the impact of these technologies on the rights and freedoms of individuals and the protection of personal data. Namely, in accordance with Article 54 of the Law on Personal Data Protection, if it is certain that some type of processing, especially the use of new technologies, taking into account the nature, scope, circumstances and purpose of processing, will cause a high risk to the rights and freedoms of individuals, the controller is obliged to assess the impact of the envisaged processing operations on the protection of personal data before starting the processing.

When assessing the impact, the controller is obliged to seek the opinion of the person for the protection of personal data, if it is determined. Impact assessment from Art. 54 paragraph 1 must be performed in the case of:
- systematic and comprehensive assessment of the condition and characteristics of a natural person, which is performed through automated processing of personal data, including profiling, on the basis of which decisions relevant to the legal position of an individual or similarly significantly affect him;
- processing of special types of personal data revealing racial or ethnic origin, political opinion, processing of genetic data or processing of personal data in connection with criminal convictions, criminal offenses and security measures;
- systematic oversight of publicly available areas to a large extent.

The assessment of the impact of the processing carried out by the competent authorities for specific purposes must at least contain a comprehensive description of the envisaged processing operations, a risk assessment of the rights and freedoms of the data subject, a description of the measures to be taken in relation to the existence of risks, and technical, organizational and personnel measures in order to protect personal data and provide evidence of compliance with the provisions of this law, taking into account the rights and legitimate interests of the data subject and other persons.

RISK ASSESSMENT FOR IMPACT MODERN INFORMATION COMMUNICATION TECHNOLOGIES ON RIGHTS AND FREEDOMS OF INDIVIDUALS

Risks to the rights and freedoms of persons that may arise from the use of modern information and communication technologies in the Ministry of the Interior can in principle be divided into the following types:
- Risk relating to the identification of persons without a legal basis
- Risk relating to the recording of private space
- Risk relating to data security breach
- Risk relating to public disclosure of data

Potential events that would imply a risk to the rights and freedoms of persons are related to the identification of persons without a legal basis, based on data collected in the video surveillance system of public areas. At the same time, for the purposes of risk assessment, the reason for illegal identification is to a certain extent, i.e. the fact that the identification is motivated by reasons of a personal or other nature.

The following events could result in the following consequences for the rights and freedoms of individuals:

- Violation of the right to private life by observing the activities of persons identified in the video surveillance system, as well as by storing and other data processing activities on these activities, regardless of the fact that the activities are undertaken in public areas;
- Violation of freedom of association, assembly and expression, i.e. the right to peaceful protest, as well as freedom of movement, by identifying and further processing the data of persons who gather in public areas, as members of an association or regardless of membership in the association, express their opinion, ideas and attitudes, peacefully protest, i.e. move in public areas as part of a procession, protest rally, etc., in accordance with the law governing the conditions for the exercise of these freedoms and rights;
- Violation of freedom of religion by identifying and further processing the data of persons entering or leaving religious buildings or participating in the performance of religious rites in public areas;
- Violation of the principle of non-discrimination through profiling of identified persons on the basis of actual or presumed affiliation to an association, i.e. religious community, political or other opinion, sexual orientation or other personal characteristics.

Analyses have shown that the level of certainty of the occurrence of the mentioned events is low. When assessing the level of certainty, the following circumstances or facts are especially taken into account:

- Identification of persons based on the data collected in the video surveillance system is based in each case on the organizational structure in the system of divided roles in terms of processing, deciding on the need for identification and control, which largely prevents any individual attempt to abuse police powers;

- Any action of processing the data collected in the video surveillance system, including the identification of persons, shall be recorded in order to enable effective control of the exercise of police powers, which has the greatest deterrent effect on potential violators of police powers;

- The number of cases of abuse, i.e. violation of police powers has been very small in recent years in relation to the number of actions taken by authorized persons of the operator indicating the exceptional discipline and conscientiousness of police officers.

- Authorized persons of the controller are already educated on the legal regime of personal data protection, which indicates a high level of awareness of the need to respect the principles of legality and other principles of the Law regarding the exercise of police powers when processing data, especially in video surveillance.

Potential events that would involve a risk to the rights and freedoms of individuals are related to the recording of private space, such as the interior of apartments, houses and backyards, offices and other business premises, using video cameras placed on poles and buildings in public use (Welsh, Farrington, 2009). At the same time, for the purposes of risk assessment, the reason for illegal recording is to a certain extent, i.e. the fact that the recording is motivated by reasons of a personal or other nature.

As a result of the mentioned events, the consequences could occur, which consist in the violation of the right to privacy by inspecting the activities of the person in the space being filmed, as well as by storing and other data processing activities on these activities.

Analyses have shown that the level of certainty of the occurrence of the mentioned events is low. When assessing the level of certainty, the following circumstances or facts are especially taken into account:

- Fixed cameras are physically positioned to record only public space, while mobile cameras can be used to capture private space only in exceptional cases when shooting is not limited by physical obstacles (for example, the camera is placed in a lower position relative to private space or in a position that is very far from the private space or the private space is sheltered by trees, curtains, blinds, fences, etc.), which to the greatest extent limits the possibility of monitoring the activities of persons in the private space;
- Monitoring the activities of persons using mobile video cameras is based in each case on the organizational system of divided roles in terms of processing, deciding on the need for monitoring and control, which largely prevents any individual attempt to abuse police powers;
- The information on the rotation of the camera in each specific case can be determined in order to enable effective control of the exercise of police powers, which has the greatest deterrent effect on potential violators of police powers;
- The number of cases of abuse, i.e. violation of police powers has been very small in recent years in relation to the number of actions taken by authorized persons of the Ministry, which indicates the exceptional discipline and conscientiousness of police officers.
- Authorized persons of the controller are already educated on the legal regime of personal data protection, which indicates a high level of awareness of the need to respect the principles of legality and other principles of the Law regarding the exercise of police powers during data processing, especially in the video surveillance system.

Potential events that involve a risk to the rights and freedoms of individuals are related to the violation of the security of the data collected in the video surveillance system due to access to the equipment used for video surveillance (for example, taking control of cameras), or copying, detecting or transmitting data by a third party. At the same time, for the purposes of risk assessment, the reason for the security breach is not relevant, i.e. the fact that the security breach is motivated by reasons of a personal or other nature.

These events could result in a violation of the right to protection of personal data of persons whose data are violated.

Analyses have shown that the level of certainty of the occurrence of the mentioned events is low. When assessing the level of certainty, the following circumstances or facts are especially taken into account:

- Equipment and data are provided with technical protection measures at the highest level, especially in terms of software protection, data transmission network protection, data protection with cryptosecurity system, as well as physical protection of cameras, lines, data storage equipment, etc., as much as possible measures effectively prevents data security breaches by third parties;

- Equipment and data are provided with comprehensive organizational protection measures, especially the application of a system of divided roles in terms of processing, which most effectively prevents data security breaches by third parties in cooperation with police officers;

- Authorized persons of the controller have already been trained to take technical and organizational measures for the protection of personal data, which largely effectively prevents the violation of data security by a third party;

- For years, there has been no violation of data security by a third party, which indicates the effectiveness of the protection measures taken when it comes to data processing performed by the controller.

Potential events that imply a risk to the rights and freedoms of individuals are related to the legally inadmissible public disclosure of the data collected in the video surveillance system through the media, social networks or the use of other means of communication. In addition, for the purposes of risk assessment, the reason for public disclosure is of some importance, i.e. the fact that public disclosure is motivated by reasons of a personal or other nature.

The following events could result in the following consequences for the rights and freedoms of individuals:

- Violation of the right to private life by inspecting the activities of a person covered by the video surveillance system by the public, i.e. the recipient of information published in the media, within social networks or disseminated through other means of communication;

- Violation of the right to identity in cases when the person covered by the video surveillance system is misidentified in public;

- Violation of personal moral integrity in cases when due to public disclosure of information related to the private life of a person, the reputation, honor or piety of that person has been violated;

- Violation of rights in cases when due to the public disclosure of information related to the private life of a person one of the stated rights has been violated.

Analyses have shown that the level of certainty of the occurrence of the mentioned events is low. When assessing the level of certainty, the following circumstances or facts are especially taken into account:

- The processing of the data collected in the video surveillance system is based in each case on the organizational system of divided roles in terms of performing processing operations, which largely prevents unauthorized public disclosure of data;

- Any action of processing the data collected in the video surveillance system is recorded in order to enable effective control of the exercise of police powers, which has the greatest deterrent effect on unauthorized submission of data to the media, or data transfer for public disclosure;

- The number of cases of unauthorized public disclosure of the data processed by the controller decreases from year to year and is very small in relation to the number of actions taken by authorized persons of the controller, which indicates exceptional discipline and conscientiousness of police officers.

- Authorized persons of the controller are already educated on the legal regime of personal data protection, which indicates a high level of awareness of the need to respect the principles of legality and

other principles of the Law regarding the exercise of police powers during data processing, especially in relation to preventing unauthorized public disclosure of data.

DESCRIPTION OF MEASURES AND MECHANISMS APPLIED IN RELATION TO RISK TO THE RIGHTS AND FREEDOMS OF PERSONS

In relation to the risk to the rights and freedoms of persons, the Ministry of the Interior applies a whole set of different measures and mechanisms with the aim of protecting the stated rights and freedoms. They can in principle be divided into:

- Data security protection measures and mechanisms for protection of human rights
- A system of divided roles in data processing
- Technical aspects of providing video surveillance systems
- Discipline and conscientiousness of police officers
- Mechanisms for the protection of human rights

The presented risks to the rights and freedoms of persons are effectively eliminated, i.e. reduced to a minimum through the application of general organizational, personnel and technical measures for data security protection, i.e. mechanisms for protection of rights and freedoms of persons related to personal data processing. These measures and mechanisms are prescribed by the Law and other regulations, such as the Law on Information Security, the Law on Police, the Law on Records and Data Processing in the Field of Internal Affairs and bylaws issued by the Ministry. Data security protection measures and mechanisms for the protection of the rights of persons are applied in a specific way in the video surveillance system (Kovačević-Lepojević, Žunić-Pavlović, 2012). Some of these measures and mechanisms are applied in relation to several different risks in the same or different way, while other measures and mechanisms are applied only in relation to an individually determined risk.

The video surveillance system is created so that it can be functional only in a system of shared roles.[5] This means that in the collection and further processing of data in the video surveillance system it is not possible to organizationally, technically and legally imagine a situation in which the decision to undertake processing activities aimed at identifying persons or monitoring activities of persons, in the context of assessing the level of certainty of risk, brings outside the system of divided roles.

From the technical point of view of providing a video surveillance system, it is important to point out that the video surveillance system is an integral part of the information and communication system (ICT), which is managed by the Ministry. This system is effectively protected, inter alia, by appropriate technical information security measures applied to the data and equipment used (Andenas, Zleptnig, 2003). In the context of assessing the level of certainty of the occurrence of risk, technical measures effectively protect data and equipment, especially taking into account the fact that no case of data security breach by third parties due to deficiencies related to these protection measures has been recorded in recent years. The technical protection measures provide in particular the recording of each processing operation, i.e. the technical possibility of establishing the facts relating to the use of cameras and other equipment in the video surveillance system in each specific case (Lomell, 2004). In this way, effective control over processing operations is provided, which has the greatest deterrent

5 Obavezna instrukcija o uslovima korišćenja i održavanja sistema video nadzora gradskih saobraćajnica i raskrsnica za grad Beograd, Ministarstvo unutrašnjih poslova, 2015.

effect on potential violators of official powers, in the context of assessing the level of certainty of the occurrence of risks to the rights and freedoms of persons.

Discipline and conscientiousness of authorized officials engaged in the video surveillance system is ensured by the application of preventive and reactive protection measures. Preventive protection measures are primarily implemented through continuous education of authorized officials in connection with the application of the provisions of the Law and other regulations relating to the protection of personal data. Education is performed in accordance with the Decree on Professional Training and Development in the Ministry of the Interior, based on the Program of Professional Development of Police Officers of the Ministry of the Interior and the Directive on the manner of performing work relating to personal data protection in the Ministry of the Interior. Reactive measures are applied in case of violation of data security, i.e. personal rights. The first group of these measures refers to the breach of data security, regardless of whether in a particular case the security breach was responded to by another protection mechanism. The application of measures from this group is prescribed by the Law and the Instruction on the manner of keeping records and notifying about violations of personal data in the Ministry of the Interior. The second group of these measures are disciplinary measures and they are prescribed by the Law on Police. The third group of measures prescribed by the Law and the Criminal Code is applied by the Internal Control Sector, the Prosecutor's Office and the Court. The fourth group consists of measures applied by the Commissioner for Free Access to Information of Public Importance and Personal Data Protection, in accordance with the Law.

From the aspect of mechanisms of protection of human rights, it is important to note that every person whose data is processed by the Ministry including the data collected and further processed in the video surveillance system is authorized to address the Ministry in accordance with the Law. The mechanism for controlling the handling of requests from persons whose data are processed is entrusted to the person for personal data protection in the Ministry, and the forms of control are regulated by the Directive on the manner of performing activities related to personal data protection.

CONCLUSION

Technology is conquering all spheres of our lives alluding to the fact that our quality of life will improve, productivity will increase, costs will be reduced, the level of security of citizens will be raised, etc. The fourth industrial revolution is developing at a rapid pace. It has an impact on all industries in every country in the world changing the entire production and business processes. The biggest risk posed by Industry 4.0 and digital transformation concerns the privacy and security of citizens. In the field of information and communication technologies, new challenges relate to problems regarding the availability, connectivity and compatibility of relevant records of different institutions. Furthermore, the challenges include the impossibility of implementing new technologies in existing resources, i.e. lagging behind in technological development, which causes incompatibility with partners with whom the Ministry of the Interior cooperates.

The "Safe City" project is an intelligent video surveillance system that means that high-resolution cameras are placed in several locations in Belgrade. An intelligent video surveillance system will contribute to more efficient investigation of criminal acts. One of the most important facts is that different types of databases can be created in this way. According to the Law on Police, for the purpose of performing police work, the police can monitor and record a public place using equipment for video

acoustic recordings and photography in accordance with the regulations on records and data processing in the field of internal affairs.

The goal of the Ministry of Internal Affairs is to contribute to more efficient work of the police by introducing modern technologies within the project "Safe Society", thus raising citizens' trust in the work of the police, which will result in better results and reduction of overall crime and security of all citizens.

REFERENCES

1. Andenas, M. & Zleptnig, S.: *Surveillance and data protection: Regulatory approaches in the EU and Member States*, European Business Law Review, 2003
2. Bebis, G., Gyaourova, A., Singh, S., Pavlidis, I.: *Face recognition by fusing thermal infrared and visible imagery*, Image and Vision Computing 24, 2006
3. Gligorijević, M., Maksimović, A., Vučković, J.: *Forenzički i pravni aspekti upotrebe sistema video nadzora u dokazivanju krivičnih dela i prekršaja*, Zbornik radova, Međunarodni naučni skup „Dani Arčibalda Rajsa", Kriminalističko-policijska akademija, Beograd, 2016.
4. Kovačević-Lepojević, M., Žunić-Pavlović, V.: *Primena video nadzora u kontroli kriminala*, Fakultet za specijalnu edukaciju i rehabilitaciju, Univerzitet u Beogradu, Beograd, 2012.
5. Kovačević-Lepojević, M., Žunić-Pavlović, V.: *Mere javnog nadzora u službi prevencije kriminala*, Fakultet za specijalnu edukaciju i rehabilitaciju, Univerzitet u Beogradu, Beograd, 2010.
6. Lomell, H. M.: *Targeting the unwanted: Video surveillance and categorical exclusion in Oslo*, Norway. *Surveillance & Society, 2* (2/3), 2004
7. Manojlović, Z.: *Pravni okvir za primenu video nadzora*, Narodna skupština, Republika Srbija, Br.11/14, 2014.
8. *Obavezna instrukcija o uslovima korišćenja i održavanja sistema video nadzora gradskih saobraćajnica i raskrsnica za grad Beograd*, Ministarstvo unutrašnjih poslova, 2015.
9. Ranđelović, D.: *Upravljanje informacionim sistemima i njihova zaštita,* Edicija monografije, Kriminalističko-policijska akademija, Beograd, 2014.
10. Ratcliffe, J.: *Video surveillance of public places*, Washington, DC: U.S. Department of Justice, Offce of Community Oriented Policing Services, 2006
11. Welsh, B. C., Farrington, D. P.: *Making public places safer: Surveillance and crime prevention*, Oxford University Press, New York, 2009
12. Zakon o zaštiti podataka o ličnosti ("Službeni glasnik RS" br. 87/2018)

PROTECTION OF USER CREDENTIALS IN WEB APPLICATION

Stefan Kartunov, PhD
Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria

Petar Milić, PhD[1]
Faculty of Technical Sciences, University in Priština, Kosovska Mitrovica, Serbia

Kristijan Kuk, PhD[2]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Uroš Dinić
General Police Directorate of the Ministry of the Interior of the Republic of Serbia

Abstract: Protecting user data in web applications is a challenge that developers face with. Enabling secure user login and overcome of vulnerabilities without exposing sensitive data to attackers is based on the application of modern methods and techniques for protection. This paper first reviews the current situation in this area with an emphasis on important security features. Afterwards, the available systems are evaluated and the obtained results are quantified, from where their advantages and disadvantages can be seen. Another goal of the paper is a deeper insight into the field of user data security. Special attention is given to the importance of password protection for access in web applications.

Keywords: web application security, vulnerabilities, data security, user data protection.

INTRODUCTION

Web applications are key enablers for convenient and on-demand network access resources deployed for various needs. Consequently, any web application is exposed to the attacks that come from the network, thus raising issues with confidentiality, authentication, integrity and security. Vulnerabilities in the web applications are exploited by attackers in order to gain access to the system with the aim to cause loss and harm. Keeping this in mind, the first step in protection of the web applications must be

1 petar.milic@pr·ac.rs
2 kristijan.kuk@kpu.edu.rs

provision of secure login to the system (Ristić, Jevremović, & Veinović, 2013). Secure login represents increasingly significant security issue in the modern web applications that deal with protection of user passwords gathered from database. The most common attack to reveal user password is known as SQLi (SQL injection) and XSS (Cross-Site Scripting). SQLi attack take advantage of unchecked input fields in the web application, in most cases login form, to maliciously tweak the SQL query sent to the backend database (Fonseca, Seixas, Vieira, & Madeira, 2014). Similarly, XSS attack utilize executable code like JavaScript into the user browser, in order to leak user secrets for carrying out operations with the user's privilege on behalf of the adversary. A typical web application which is implemented in PHP, is depicted on the Figure 1. It is assumed that a client interacts with the web application by sending HTTP requests and receiving HTTP responses. In relation to the attacks, SQLi can be related to the HTTP requests while XSS can be related to the HTTP responses.

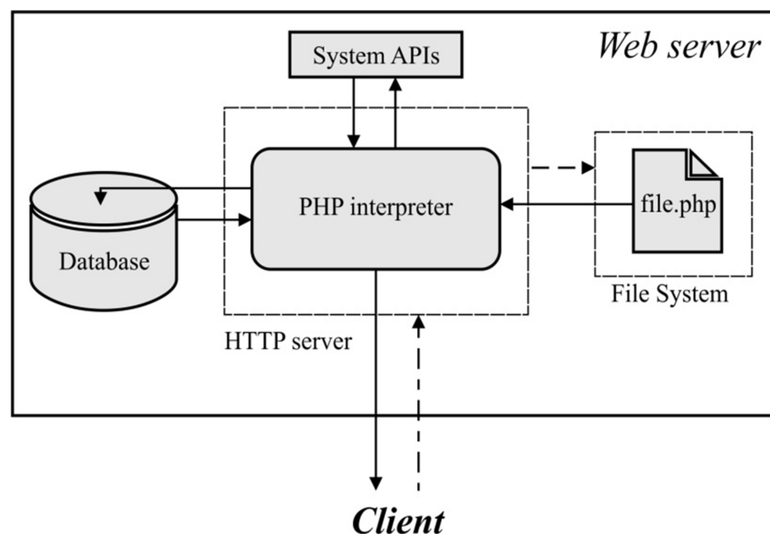


Figure 1. *Typical web application architecture*

Contemporary web applications, such as LinkedIn, Twitter and Sony show that compromising back-end databases can enable attacker access to the confident information (Hunt, 2020). Even such large systems can have security vulnerabilities that can compromise user data. In most cases, user data are compromised due to the improper handle of the variables which are used for gathering of the user entered data. For example, the attacker can exploit variables that supposedly should not be strings (e.g., numbers, dates) for the SQLi attack. Furthermore, revealing of user password can be done by user login in from untrusted machines, such as a friend's computer, the public access machines and others which do not use HTTPS for securing the communication between the client and server.

In this paper we will analyze methods and techniques for secure login in into the web application. By manual literature review, we have identified that protection of user credentials is one of the key enabler for the safe usage of web application. Nevertheless, we will show that current mechanisms of protection is not enough for provision of the desirable level of security. Throughout the paper, the comparative analysis of the available methods and techniques used for securing of the user credential is provided, along with the pros and cons and reference to the OWASP Top Ten as a standard awareness document in the field of the web security. Moreover, we will provide case study of password protection methods and techniques and discuss obtained results. Finally, we conclude the paper with remarks on the future directions of research and give necessary recommendations for the protection of the user credentials.

RELATED WORK

As we mentioned earlier, SQLi and XSS attacks represent the most prevalent security incidents related to the web applications which comes due to the fact that valuable data passes through the web application that uses database (Milić, Kuk, Civelek, Popović, & Kartunov, 2016). If a user input is not handled properly, attackers can insert malicious code which can grant access to the sensitive information and, moreover, cause loss of data. Fonseca & Vieira (2008) came to the conclusion that these two types of attacks can be produced by software faults in development phase of the web applications.

An architecture called *Session Juggler* proposed by Bursztein, Soman, Boneh, & Mitchell (2012) secure user credentials without even entering their long term credentials on the browser. In *Session Juggler* a user first goes to the desired web application, where resulting URL is transferred to the mobile phone where they are asked to login to the site from the phone. By using this approach, *Session Juggler* prevents malware and attackers from hijacking the session by a network sniffer after login. They have shown that on logout, a proper invalidation of session tokens must occur on client and server side. In comparison to the other available tools, *Session Juggler* does not require modification on client side or server side in order to implement the secure login mechanism. For example, research from (Oprea, Balfanz, Durfee, & Smetters, 2004) and (Sharp, Scott, & Beresford, 2006) introduces usage of third parties in the process of protection of user login, consequently requiring modification of client side operations.

Similarly, (Bonneau, Herley, Van Oorschot, & Stajano, 2015) and (Wang, Jian, Huang, & Wang, 2017) propose generation a list of passwords that are only usable one time. This approach requires a server-side modification forcing users to keep a list of passwords for application they want to use. The main problem with this approach is that it does not address the issue that attacker can prevent user from logging out. Considering the usability, deployability and security challenges in the web application authentication will prevent the production of a long list of mutually incompatible password requirements for users. Novel approaches for overcoming these issues rely on applying machine learning in process of the user authentication. Namely, users are faced with requests for second factor authentication (such as one-time code over SMS) when the classifier's confidence is low or the system detects suspicious activity on the application. Nevertheless, a large scale of web applications appear to cope with insecure passwords due to the fact that shortcomings can be covered up with technological smarts in the back-end (Weir, Aggarwal, Collins, & Stern, 2010).

Recent study on securing web applications through login authentication, suggests implementation of hashing of passwords stored in the databases. It was shown that combination of password hashing by using a SHA algorithm and usage of one time passwords increase the security of the authentication and user credentials as well (Maliberan, 2019; Blue, Furey, & Condell, 2017; Seta, Wati, & Kusuma, 2019). Organization such as OWASP (Open Web Application Security Project), PCI-SSC (Payment Card Industry – Security Standards Council), IETF (Internet Engineering Task Force) and IEEE (Institute of Electrical and Electronics Engineers) provide developers and security specialists with necessary recommendations for establishing secure authentication mechanisms in databases. Their primary advice is to avoid usage of an outdated hashing algorithms such as MD5, SHA-128 and incorporation of salt value in stored hashed passwords. As there are no perfectly secure system, setting enough barriers and making the process guessing the password more difficult for the attacker, a higher level of security of user credentials can be achieved with a minimum investment and changes in the existing systems. Also, this barriers will overcome the problem of the rainbow table attack where the attackers must generate a huge rainbow table in order to exploit the system (Wen Chai, 2018). Moreover, a distributed hash crack will be significantly slowed down (Zonenberg, 2009).

ANALYSIS OF METHODS AND TECHNIQUES FOR SECURING USER CREDENTIALS

The importance of protection of the user credentials, especially passwords is a challenge for developers and administrators. In order to bring them closer to the pros and cons of the available tools, in this section we will try to define the criteria for analyzing the available methods, techniques and mechanisms for user data protection. Securing the user data in database-driven web applications is necessary in achieving adequate level of security in such system.

A. *One-sided encryption and hashing*

By using this approach, the password whether it is encrypted or hashed, still exists in the network traffic in order to reach the service. Although they are stored in a database, the attackers will have a chance to succeed to retrieve password back in the plain text by brute force attack, if weak algorithms such as MD5 and SHA-128 is used. Furthermore, encryption methods such as DES, RC4 and Blowfish is proven as weak during to their nature of weak keys used for ciphering. With the progress of the technology, sophisticated attacks utilize GPU chips for brute force attacks as well as the possibility of leasing resources where such system becomes extremely insecure (Zonenberg, 2009).

B. *Two-sided encryption*

Extending the approach of one-sided encryption and hashing with addition of new feature increases the level of security of user credentials. This extensions is reflected in the introduction of one time passwords (OTP). They are valid for only one login session or transaction (Wen Chai, 2018). The advantage of this system is that the algorithm is different of each user's token preventing in that way breaking the algorithm by attackers. Similarly, by using two factor authentication organization can easily increase the level of security of the system with minimal changes in existing authentication system. In this way, attackers are faced with a more difficult step to access a target (Wang, He, Wang, & Chu, 2014).

C. *Security policies*

Anis (2018) has proposed usage of a security policies which work toward preventing attack on web applications and consequently preventing revealing of the user credentials. The idea behind this approach is to ascertain that no user inputs can be received or sent back without going through escaping and encoding mechanisms. Also, OWASP (2020) suggests the use of policy called 'Principle of Least Privilege' which checks all the resources used by the web application against integrity preventing in that manner their alterations. Moreover, OWASP claims that SQLi and XSS attack can be prevented with 'Input Sanitization' and 'Output Validation' policies. Keeping in mind that user credentials can be used for access to multiple services via single sign on, protection of credentials in that case becomes a challenge during to the heterogeneity of the environment that is responsible for secure interoperation between different parties involved (Camath, Liscano, & El Saddik, 2006).

D. *Segmented protection*

Securing a user credentials with segmented protection is based on the encryption of the password with strong hashing algorithms and wrapping it with randomly generated salt values (Ristić, Jevremović, & Veinović, 2013). Random generation of salt values, can be achieved by using PRNG (Pseudo

Random Number Generator) and TRNG (True Random Number Generator) (Adamović, Milenković, Šarac, & Radovanović, 2010). After that process, the final value is divided into two parts and stored into two different databases. It was proven that this approach can improve security, aid compliance, preserve privacy and protect users whose information is stored on insecure system (Blue, Furey, & Condell, 2017). Furthermore, SQLi attack can be mitigated via this approach.

CASE STUDY – PASSWORD PROTECTION BY HASHING FUNCTION

For the purposes of evaluation of password protection by using hashing functions, we have chosen to use phpMyAdmin, a popular database administration tool. This tool implements password storage mechanisms along with a usage of different password hashing functions such as SHA-256, MD5 and BCrypt. Furthermore, two most commonly used techniques for breaking password on these tool is *dictionary attack* and *brute force attack*, which are also used in our experiments. We have conducted experiments with Kali Linux dictionary named "*rockyou.txt*" which is a built-in wordlist with the aim to help any stakeholder to perform different types of password cracking attacks. Moreover, if password is not cracked with dictionary attack method, we try brute force attack with Kraken, a free Windows recovery tool. In Table 1 shows the results of the performed experiments.

Table 1. *Password cracking results*

Method	Password	Hashing function	Time	Can be broken
Dictionary	"kraken"	MD5	578s	yes
Brute force	"fun"	MD5	2692s	yes
Dictionary	"college"	SHA256	1033s	yes
Brute force	"dog"	SHA256	5299s	yes
Dictionary	"batman"	SHA256 with salt	-	no
Brute force	"kraken"	SHA256 with salt	-	no
Dictionary	"password"	BCrypt	847s	yes
Brute force	"dog"	BCrypt	4446s	yes
Dictionary	"hello"	BCrypt with salt	-	no
Brute force	"fun"	BCrypt with salt	-	no

As can be noticed from the Table 1, old types of hashing functions such as MD5 and SHA-256 are vulnerable to the both attack methods, which is in line with our discussion in previous section of the paper. Whatever method is used, it is a matter of time before the password is revealed. Also, the brute force attack takes more time than the dictionary attack for password cracking. It is interesting to mention that usage of the BCrypt hashing function with 4 iterations, extends the time needed for the brute force attack to reveal a password at one hour. In today's world of modern computers that have better and better performance, the time required to damage the system by applying this technique is no longer so significant (Figure 2.). One of the reasons for such situation is utilization of GPU's.

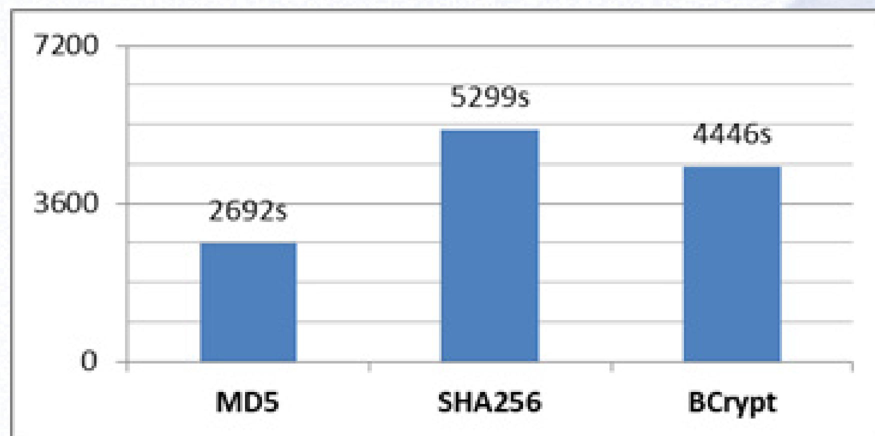


Figure 2. *Time to brute force the password "dog" hashed by different hashing functions on a Nvidia GeForce GTX 1050 3 GB GPU*

Regardless of the hash function applied, by applying the "salt" technique, the password can be made resistant to both types of attacks. Our experiments confirmed this assumption. Addition of the salt values to the password and application of hashing functions such as SHA-256 and BCrypt, puts in front of the attacker a difficult task. Following OWASP Guidelines (OWASP, 2020) for proper implementation of credential-specific salt values, a unique salt must be created upon creation of each credential.

CONCLUSION

In this paper we have analyzed current trends in protection of user credentials in web applications. Also we have provided evaluation of novel technique for protection of user credentials with usage of salt values in hashing process. Utilization of salts in hash functions increases a level of security of user passwords. By following that approach they become unique and attackers cannot reverse them without a lot of effort. Keeping in mind that a number of iterations are performed inside the each hash function on a clear text password, increasing the number of iterations further increases password security, making the attacker's job more difficult, requiring a large amount of computational power and time. Obtained results shows that attacker is faced with a "bottleneck" in the process of password cracking.

For the purpose of minimization of the risk and prevention of attack, SANS Institute (SANS Insitute, 2020) recommends not to use any SHA hashing mechanism under 512 for password hashing due to the reason that they are fast hashes. Application of salt values, make a hash function to look non-deterministic which, as we said early, protects user credentials stored in database.

Further research in this area may lead to the identification of novel approaches and techniques that can increase password stored in databases which are used for accessing web applications. For example, a broader study on evaluation of different hashing and encryption methods with combination of multiple perturbation and application of salt values can identify potential new directions for protection of user credentials.

REFERENCES

1. Adamović, S., Milenković, M., Šarac, M., & Radovanović, D. (2010). Generators of random sequences and their impact on security. *In Proceedings of the INFOTEH 2010* (pp. 820 - 822). Jahorina, BiH: IEEE.

2. Anis, A. (2018). *Securing web applications with secure coding practicies and integrity verification.* Ontario, Canada: Queen's University.

3. Blue, J., Furey, E., & Condell, J. (2017). A Novel Approach for Secure Identity Authentication in Legacy Database Systems. *In Proceedings of the XXVIII Irish Signals and Systems Conference* (pp. 1-6). Killarney, Ireland: IEEE.

4. Bonneau, J., Herley, C., Van Oorschot, P. C., & Stajano, F. (2015). Passwords and the Evolution of Imperfect Authentication. *Communications of the ACM, 58*(7), 78 - 87.

5. Bursztein, E., Soman, C., Boneh, D., & Mitchell, J. C. (2012). SessionJuggler: Secure Web Login From an Untrusted Terminal Using Session Hijacking. *In Proceedings of the XXI International Conference on World Wide Web* (pp. 321 - 330). Lyon, France: ACM.

6. Camath, A., Liscano, R., & El Saddik, A. (2006). User-Credential Based Role Mapping in Multi-domain Environment. *In Proceedings of the International Conference on Privacy, Security and Trust* (pp. 62 - 69). New York, USA: ACM.

7. *CVE*. (2017). Retrieved 2017, from Common Vulnerabilities and Exposures: https://cve.mitre.org/

8. *CVSS*. (2017). Retrieved 2017, from Common Vulnerability Scoring System: https://www.first.org/cvss

9. *CWE*. (2017). Retrieved 2017, from Common Weakness Enumeration: https://cwe.mitre.org/

10. Fonseca, J., & Vieira, M. (2008). Mapping software faults with web security vulnerabilities. *In Proceedings of the IEEE International Conference on Dependable Systems and Networks* (pp. 257-266). Anchorage, Alaska, USA: IEEE.

11. Fonseca, J., Seixas, N., Vieira, M., & Madeira, H. (2014). Analysis of Field Data on Web Security Vulnerabilities. *IEEE Transactions on dependable and secure computing, 11*(2), 89 - 100.

12. Hunt, T. (2020, July). Retrieved from https://www.troyhunt.com/brief-sony-password-analysis/

13. Maliberan, E. V. (2019). Modified SHA1: A Hashing Solution to Secure Web Applications through Login Authentication. *International Journal of Communication Networks and Information Security, 11*(1), 36-41.

14. Milić, P., Kuk, K., Civelek, T., Popović, B., & Kartunov, S. (2016). The Importance of Secure Access to E-government Services. *In Proceedings of the International Conference "Archibald Reiss Days"* (pp. 307-3016). Belgrade, Serbia: Academy of Criminalistic and Police Studies.

15. Oprea, A., Balfanz, D., Durfee, G., & Smetters, D. K. (2004). Securing a Remote Terminal Application with a Mobile Trusted Device. *In Proceedings of the XX Annual Computer Security Applications Conference* (pp. 438 - 447). Tucson, USA: IEEE.

16. OWASP. (2020). *Security by Design Principles - OWASP*. Retrieved 06 30, 2020, from https://www.owasp.org/index.php/Security_by_Design_Principles#Principle_of_Least_privilege

17. Ristić, N., Jevremović, A., & Veinović, M. (2013). System of segment protection of user data in the web applications. *In Proceedings of the XII International Conference "INFOTEH". 12*, pp. 915 - 918. Jahorina, BiH: IEEE.
18. Seta, H., Wati, T., & Kusuma, I. C. (2019). Implement Time Based One Time Password and Secure Hash Algorithm 1 for Security of Website Login Authentication. *In Proceedings of the International Conference on Informatics, Multimedia, Cyber and Information System* (pp. 115 - 120). Jakarta, Indonesia: IEEE.
19. Sharp, R., Scott, J., & Beresford, A. R. (2006). Secure mobile computing via public terminals. *In Proceedings of the International Conference on Pervasive Computing* (pp. 238 - 253). Berlin, Germany: Springer.
20. Wang, D., He, D., Wang, P., & Chu, C.-H. (2014). Anonymous Two-Factor Authentication in DistributedSystems: Certain Goals Are Beyond Attainment. *IEEE Transactions on Dependable and Secure Computing, 12*(4), 428 - 442.
21. Wang, D., Jian, G., Huang, X., & Wang, P. (2017). Zipf's Law in Passwords. *IEEE Transactions on Information Forensics and Security, 12*(11), 2776 - 2791.
22. Weir, M., Aggarwal, S., Collins, M., & Stern, H. (2010). Testing Metrics for Password Creation Policies by Attacking Large Sets of Revealed Passwords. *In Proceeding of the XVII ACM Conference on Computer and Communication Security* (pp. 162-175). Chicago, USA: ACM.
23. Wen Chai, C. (2018). *Secure login authentication system.* Universiti Tunku Abdul Rahman.
24. Zonenberg, A. (2009). *Distributed Hash Cracker: A Cross-Platform GPU-Accelerated Password Recovery System.* New York, USA: Rensselaer Polytechnic Institute.

ENCRYPTION AS A CHALLENGE FOR EUROPEAN LAW ENFORCEMENT AGENCIES

Milana Pisarić, PhD[1]
Faculty of Law, University of Novi Sad, Serbia

Abstract: Strong encryption is of great importance to digital economy and digital privacy. At the same time the use of encryption by criminals was recognized by *Europol and national law enforcement authorities* as a significant challenge for *detection and investigation* of cybercrime and cyber-facilitated crime, rendering traditional investigative techniques ineffective. Since encryption is continuously depriving law enforcement of evidential opportunities, EU member states started to demand a European solution to questions around encryption as a threat to security in Europe. However, there are many political inconsistencies among EU institutions and member states on encryption. The aim of this paperwork is to present and analyze the current state of legal and practical implications of criminal use of encryption and to consider alternative approaches, mainly those aimed to enhance the law enforcement agencies' decryption capabilities of lawfully obtained encrypted data in criminal investigations.

Keywords: encryption, cybercrime, law enforcement, European Union.

INTRODUCTION

Although no one can deny the importance of strong encryption for digital economy and digital privacy, it is a fact that legitimate anonymity and encryption services and tools are being misused for criminal activity. The more and more common use of encryption by offenders to protect their communications or stored data poses a serious challenge for detection and investigation of crime, denying law enforcement the access to electronic evidence. This challenge is not present only in cybercrime investigation, but in investigation of all criminal offences which are enabled by information technologies whose traces may be found in digital devices or whose offenders use these technologies to communicate and conceal their identity and/or location. Because of that many traditional investigative techniques and digital forensic analysis are used not in their full potential or even ineffectively. These issues are recog-

1 mpisaric@pf.uns.ac.rs

nized as a major problem by national law enforcement agencies (LEA) of Member States (MS) and by key stakeholders in fight against cybercrime, organized crime and terrorism in European Union (EU). As the commercial use of strong encryption technology has been on the increase since 2014 and the use of encryption by criminals was recognized by Europol and national LEA as a significant challenge for detection, investigation, and prosecution of all areas of cyber-facilitated crime with cross-border dimension, depriving law enforcement of evidential opportunities, EU has debated how to regulate encryption in order to tackle this "Going dark" problem. The fundamental policy question involving encryption is how to balance competing values: how to promote privacy and spur economic growth and at the same time find proper tools for crime prevention and investigation which are tackled by destructive consequences of encryption misuse. The aim of this paper is to present and analyze the current state of encryption debate and possible legal and technical solutions for it at the EU level.

ENCRYPTION AS AN OBSTACLE IN CRIMINAL INVESTIGATION

Since 2016 the ability of LEA to access the data needed to conduct criminal investigations has been recognized as an increasing challenge, as a result of the enhanced use of encryption.

In September 2016, the Council asked MS to provide answers in a questionnaire in order to map the situation and identify the obstacles faced by LEA when gathering or securing encrypted evidence for the purposes of criminal proceedings (Council of the European Union (2016a). Replies revealed that in the majority of MS encryption is encountered often or almost always in the context of criminal investigations, and this experience is present both with regard to online (in the form of encrypted emails or other forms of e-communication and/or commercial applications such as Facebook, Skype, WhatsApp or Telegram) and offline encryption (most often criminal investigation involving encrypted digital devices and encrypting applications). While national legal framework aimed at securing e-evidence when encrypted is considered sufficiently effective, the main problem is of technical nature: the lack of sufficient technical capacity, in terms of efficient technical solutions to decrypt and respective equipment, is among the top three challenges followed by the lack of sufficient financial resources and personal capacity, in terms of numbers and training of staff.

In 2016 Europol in its Internet Organized Crime Threat Assessment (IOCTA) pointed to encryption as a key threat and serious impediment to the detection, investigation, and prosecution of criminal activity (Europol, 2016a: 50). Twenty European countries reported the use of encrypting software by cybercriminals to protect their stored data, while eight MS specifically stated that dealing with encryption is a major challenge to investigating cybercrime. It was noticed that encryption is no longer restricted to desktop computers, but it is being used on mobile devices. Furthermore, almost half of MS indicated that their investigations involved the use of some form of encrypted communications, such as WhatsApp and Viber, which introduced encryption by default, by way of end-to-end encryption, making communication hard to intercept.

A combination of legislative and technical factors, which deny LEA access to timely and accurate electronic communications data and digital forensic opportunities, such as lack of data retention and encryption, were recognized in IOCTA 2017 as leading to a loss of both investigative leads and the ability to effectively attribute and prosecute online criminal activity (Europol, 2017a: 13). While the implementation of the European Investigation Order was expected to simplify cooperation between judicial authorities and expediting investigations, existing legal frameworks and operational processes

need to be further harmonized and streamlined for dealing with cross-border e-evidence. Such measures, as well as the parallel EU policy processes on encryption, data retention and internet governance challenges, should thoroughly consider the specific law enforcement needs and strive for practical and proportionate solutions to empower innovative, efficient and effective approaches to conducting lawful cybercrime investigations. The growing prevalence and sophistication of cybercrime requires dedicated legislation that more specifically enables law enforcement presence and action in an online environment (Europol, 2017a: 17).

Communication and storage applications and devices increasingly come with encryption by default, which along with data protection and privacy issues, means that law enforcement can increasingly be denied access to the relevant data it needs to locate and identify offenders and to secure evidence (Europol, 2017a: 41). LEA highlighted the difficulties posed by encrypted communication apps and software, and the use of encryption to effectively and indefinitely hide critical evidence, applicable across all aspects of cybercrime (Europol, 2017a: 63).

Owing to the expansion of Internet enabled mobile devices, the wide diversity of platforms and services used, the easy availability of online anonymity and encryption tools and the growing use of the Darknet, it became easier for offenders to store and share material with lower risks of detection, especially in connection with online Child Sexual Exploitation Material (CSEM) (Europol, 2018a: 9) and ransomware (Europol, 2018a: 26).

In June 2019, Europol and Eurojust issued assessment on the common challenges in combatting cybercrime. It is noted that encryption is more and more a cross-cutting challenge that affects all crime areas, including cybercrime, serious organized crime and terrorism. EU LEA indicate that a significant and increasing percentage of cybercrime investigations involve the use of some form of encryption to hide relevant data and communications evidence. Since growing number of electronic service providers implement encryption by default in their services, law enforcement has also observed the increasing misuse of and reliance by cybercriminals upon secure communication apps and channels providing end-to-end encryption, leading to that i*nvestigative techniques*, such as lawful interception, *are becoming increasingly* less effective or even technically impossible (Europol, Eurojust 2019a:10). The increased implementation of encryption also negatively affects digital forensic analysis. Apart from the legal challenges, disclosing the data or circumventing the encryption is not always technically possible. This assessment however concludes with that although a number of the legislative and practical measures addressing the identified challenges are making progress on both national and international levels, the need for a comprehensive international legal and practical framework to address fundamental problems, such as access to cloud data and encryption, is more pressing than ever (Europol, Eurojust 2019a: 20).

The criminal abuse of encryption technologies, whether it be anonymization via VPNs or Tor, encrypted communications or the obfuscation of digital evidence (especially in cases of CSEM) is represented as a significant threat highlighted by respondents to 2019 survey (Europol, 2019a: 56-57). However, inaccessibility of relevant data also comes due to legislative barriers or shortcomings, which we must overcome to enhance cross-border access to electronic evidence and the effectiveness of public-private cooperation through facilitated information exchange (Europol, 2019a: 7). As criminals adapt, law enforcement and legislators must also innovate in order to stay ahead, and seek to capitalize on new and developing technologies. To do so, however, law enforcement needs the knowledge, tools and legislation required to do so quickly and effectively. This is also recognized as the main direction of EU policy on encryption.

EU POSITION ON ENCRYPTION

Although since 2016 the encryption has globally been considered as a major obstacle for criminal investigation, opposite to Five eyes countries commitment to legislating backdoors (Five Country Ministerial 2018), there is a clear opposition to this approach in the EU.

Europol and ENISA agreed that built-in backdoors to encryption do not provide a secure fix to police frustrations. The directors of the two agencies said that while [backdoors] would give investigators lawful access in the event of serious crimes or terrorist threats, it would also increase the attack surface for malicious abuse, which consequently would have much wider implications for society (Europol, ENISA 2016). As both France and Germany suffered terrorist attacks throughout 2015/2016, including attack in Paris in November 2015 and in Nice in July 2016, at the meeting of French and German interior ministers on August 23rd 2016, they called for feasible solutions to decryption, but without weakening the protective mechanisms, both in legislation and through continuous technical evolution that would afford security agencies the ability to access encrypted data and enable courts to demand that Internet companies decrypt data to help further criminal investigations (Tech Crunch (2016, August 24). In December 2016, ENISA issued opinion in which it recognized requests of law enforcement for creating means to circumvent encryption as protection measures as legitimate, but also stressed out that limiting the use of cryptographic tools would create vulnerabilities that can in turn be used by terrorists and criminals, and lower trust in electronic services, which would eventually damage industry and civil society in the EU (ENISA 2016, 16).

Because all MS, except five of them, favored the need for practically orientated measures (more resources and tools) prevailed over the need for adoption of new anti-crypto legislation at the EU level, the Council endorsed the four-steps approach as basis for the future work in this regard: A. Launch of a reflection process on the challenges faced by criminal justice in relation to the use of encryption with the purpose to define practical solutions that would allow the possible disclosure of encrypted data/devices through an integrated EU approach and framework; B. Explore possibilities for improving the technical expertise both at the national and EU level to face current and future challenges stemming from encryption; C. Encourage the members of the European Judicial Cybercrime Network to bring to its forum for discussion, exchange of information, good practices and expertise also the practical/operational aspects related to encryption; D. Deepen the practical/operational aspects of the encryption-related trainings for LEA provided by EU entities and increase the capacity building efforts (Council of the European Union, 2016b).

In the Resolution passed in early October 2017, the European Parliament explicitly asked MS to refrain from enforcing measures that may weaken the networks or services that encryption providers offer. The Resolution stressed that feasible solutions must be offered, via both legislation and continuous technological evolution, in aligning the conditions for the lawful use of investigative tools online (European Parliament 2017).

Besides, the Cybersecurity strategy (European Commission 2017a) recognized encryption as a vital tool for the protection of personal data and fundamental rights, the Commission adopted on 18 October 2017 its position on encryption used by criminals, embedding it in its anti-terrorism package in the Eleventh progress report towards an effective and genuine Security Union (European Commission 2017b). The Commission set out a package of anti-terrorism measures including measures to support law enforcement and judicial authorities when they encounter the use of encryption by criminals in criminal investigations. These includes (a) legal measures to facilitate access to encrypted evidence, and (b) technical measures to enhance decryption capabilities. As for the legal measure,

creation of appropriate legal framework for cross-border access to electronic evidence that would overcome challenge of cross-border access to electronic evidence located in another country was announced. Technical measures do not mean prohibiting, limiting or weakening encryption. Instead of that 1) the Commission will support Europol to further develop its decryption capability; 2) a network of points of expertise should be established, with Europol as a network hub to facilitate collaboration among them; 3) MS authorities should have a toolbox of alternative investigation techniques at their disposal to facilitate the development and use of measures to obtain needed information encrypted by criminals, and the European Cybercrime Centre (EC3) at Europol should be the best-placed to set up and keep a repository of those techniques and tools; 4) the attention should be paid to the important role of service providers and other industry partners in providing solutions with strong encryption; 5) training programs for law enforcement and judicial authorities should ensure that responsible officers are better prepared to obtain necessary information encrypted by criminals; 6) the Commission will support the development of an observatory function in collaboration with the EC3 at Europol, the European Judicial Cybercrime Centre (EJCN) and Eurojust. So, instead of legislating backdoors, the Commission appears to be exploring alternative approaches, including investing in decryption. Although the Commission opted for non-legislative approach by building on Europol's existing toolbox of decryption capabilities, because these technical measures could mean anything, they could highlight the shortcomings of current laws and policies and thus fail to safeguard encryption in the longer term, leaving the door open to future legislation toward the so-called backdoors for LEA to access private data.

The Commission proposed to fund and develop means to break encryption without prohibiting, limiting or weakening encryption, but workarounds applied in achieving this goal could pose a legal challenge, especially if it is in a form of government hacking developed and used without an adequate legal framework and often without respect for national or international human rights safeguards. Since the current debate about encryption has become too polarized, with tech companies unnecessarily framing the issue as a zero-sum game, in which any tool that provides lawful access to law enforcement will necessarily compromise user privacy, the EU advocates targeted approaches to the development of new investigative tools that are proportionate to the crime that was committed. This approach is consistent with the Commission's prior commitment to research functional encryption: technologies that would change the way data is encrypted in the first place to allow law enforcement to gain selective access to data in certain circumstances, instead of granting all or nothing law enforcement access to a device (European Commission 2019). In other words, the aim is to come up with a solution that could be later implemented by service providers and device manufacturers so that all three sides of the "Going dark" debate (the user, the provider and the government) are satisfied.[2]

ROLE OF EUROPOL

The current non-legislative approach to encryption in EU is focused on enhancing the technical capabilities already available within Europol and encouraging their use by MS in the respective limits of its mandate, as well as the further developing of Europol as European Centre of expertise on encryption.

2 For instance, EU will contribute over EUR 4.2 million to FENTEC project developing "functional encryption" ("FE") technology. FE has recently been introduced as a new paradigm of encryption systems with the aim to overcome all-or-nothing limitations of classical encryption. In an FE system the decryptor deciphers a function over the message plaintext: such functional decryptability makes it feasible to process encrypted data (e.g. on the Internet) and obtain a partial view of the message plaintext. These systems would effectively encrypt private messages and data and at the same time they would allow law enforcement to obtain a partial view of the message plaintext.

As concluded in Report in 2017 that most MS do not have access to the right level of expertise and technical resources, which seriously challenges law enforcement and judicial authorities' ability to access encrypted information in criminal investigations, the Commission has supported Europol ever since to further develop its decryption capability.

Since 2014, Europol has been offering Member States support in decrypting data carriers or mobile phones. The unit is based at the EC3. EC3 provides operational capabilities, such as advanced digital forensic, technology tools and platforms. According to Consolidated Annual Activity Reports (CAAR), this decryption platform was so far used on 35 occasions during 2014 with no indication of successful results (CAAR 2014, 15), [3] on 26 occasions during 2016 with no indication of successful results (Europol 2016b: 30), during 2017 it was used on 28 occasions achieving successful results 9 times (Europol, 2017b: 30), during 2018 on 32 occasions achieving successful results 12 times (Europol, 2018 b: 38), and on 59 occasions during 2019 with a 39% successful decryption rate (Europol, 2019b: 28).

Additional resources were provided for Europol to enable its EC3 support to MS to address challenges related to encryption in criminal investigations.[4] While in the Report from December 2017 (European Commission (2017c), the Commission stressed that the assessment of the specific needs for additional resources was ongoing, in January 2018 the Commission declared it would amend the 2018 Europol budget with an additional EUR 5 million to reinforce Europol's capabilities to decrypt information lawfully obtained in criminal investigations (European Commission, 2018).[5] This amount was aimed to set up a new dedicated Decryption Platform in cooperation with the EU Joint Research Centre (JRC), which was finally created in early 2020.[6]

IOCTA 2019 declared that EUROPOL is at the forefront of law enforcement innovation and acts as a knowledge platform for the provision of EU policing solutions in relation to encryption and other issues. In order to play an active role in the efforts of law enforcement against the use of encryption for criminal purposes, EC3 focuses on digital forensics and cross-departmental encryption support

3 There are no available data on the use of decryption platform in 2015 in CAAR 2015.

4 The Commission proposed a total of 86 additional security-related posts for Europol (19 more than in the 2017 budget), in particular to reinforce Europol's EC3. Future technological developments should be taken into account on the basis of research and development under the Horizon 2020 program and other EU-funded programs.

5 After that, encryption has not been mentioned in the reports, concluding the 20th Report from 30th October 2019.

6 These funds were received in May 2018 (CAAR 2018, 9). Meetings with the different stakeholders to capture the requirements were held and different cooling technologies and equipment contracting options were considered. Service Level Agreement (SLA), facility and security requirements and budget planning with regards to the off-site platform located within one of the premises of the JRC were finalized in 2018. One decryption expert was recruited and worked on the development of a decryption manual that would serve as valuable input for the project. In May 2019, Europol addressed a note to the European Parliament and the Council with information regarding decryption platform at Europol, in which they explained that the JRC computing room and involved services were used by Europol to support the decryption activities to be conducted by Europol. The support would consist of the setup and maintenance of high-performance computing platform for decryption located in one of the JRC's premises. The realization was planned for 2019 – 2020 (operational use in 2020), while afterwards an addendum would be attached and signed for the maintenance period. Europol and the JRC finalized a service level agreement (SLA) which covered the design, procurement, installation, configuration, maintenance and administration of a High Performance Computing decryption platform at Ispra (Italy). The first meeting of the Steering Committee took place in June and the first equipment and tests were scheduled for Q4, with the go-live planned for Q1 2020. However, due to some challenges the JRC was facing with the contractor working on the building integration the go-live of the project was delayed to Q2 (Europol, 2019b: 27).

for recovering encrypted criminal data and will be further developing and utilizing its potential to perform as a European center of expertise on decryption (Europol 2018 b:15, 24). Europol has the function of a network hub to facilitate collaboration among national expertise points[7] and Europol's EC3 was elected as the best-placed to set up and keep a repository toolbox of alternative investigation techniques and tools at disposal to MS to facilitate the development and use of measures to obtain needed information encrypted by criminals. EC3 will expand the toolbox available to law enforcement officers across Europe and beyond, increasing their technical and forensic capabilities (Europol, 2019a: 4). Such a toolbox has not been developed yet, and one may doubt that national LEAs might be willing to share sensitive encryption-cracking forensic tools and expertise across borders without the impetus of legislation. Europol's EC3 has observatory function in collaboration with the European Judicial Cybercrime Centre (EJCN) and Eurojust. Europol and Eurojust released joint "First Report of the observatory function on encryption" in January 2019 (Europol, Eurojust (2019b) and "Second Report of the observatory function on encryption" in February 2020 (Europol, Eurojust (2020) containing relevant statements or propositions made with respect to how law enforcement can potentially cope with encryption and its related challenges.

CONCLUSION

Encryption is more and more a cross-cutting challenge that affects all crime areas, including cybercrime, serious organized crime and terrorism, and significant and increasing percentage of investigations involve the use of some form of encryption to hide relevant data and communications evidence. Because growing number of electronic service providers implement encryption by default in their services, law enforcement has also observed the increasing misuse of and reliance by cybercriminals upon secure communication apps and channels providing end-to-end encryption, leading to that i*nvestigative techniques*, such as lawful interception, *are becoming increasingly* less effective or even technically impossible. Apart from the legal challenges, disclosing the data or circumventing the encryption is not always technically possible. This assessment however concludes with that although a number of the legislative and practical measures addressing the identified challenges are making progress on both national and international levels, the need for a comprehensive international legal and practical framework to address fundamental problems, such as access to cloud data and encryption, is more pressing than ever.

Since 2016 encryption has been recognized as an obstacle to criminal investigation and therefore a threat to security in Europe. As data access policies and capabilities differ among MS, problems with encryption in criminal investigations vary from one MS to another. There is also the problem with legal frameworks for cooperation between MS and states outside the EU, while they are considered as slow and inadequate for addressing forms of cross-border criminal cases involving encrypted information. In order to counter the criminal abuse of encryption, LEA need proper tools, techniques and expertise in digital forensics. They must be equipped with adequate training and resources to obtain and handle electronic evidence in situ using techniques, such as live data forensics. LEA should

7 For example, capacity building for LEA community continued and three training courses on Hashcat were organized and delivered by the Forensic team to (24) MS representatives. Additionally, an internal course on applied Python programming was delivered to Europol staff by members of the Forensic team. Two decryption expert groups were created in 2019. The first one for practitioners who attended the Hashcat training course delivered by Europol and the second one (End-to-End Encryption - E2EE) for those experts who attended the Encryption Network meetings organized by the Forensic team. Europol acquired new tools to enable the extraction of data from password protected mobile devices (Europol (2019b: 28).

continue to monitor trends in the use of applications and software by cybercriminals and maintain awareness of the different investigative opportunities and challenges that each provides. It is essential for LAE to build and maintain relationships with academia and private industry as they may be able to assist or advise law enforcement where it lacks the technical capability.

REFERENCES

1. Council of the European Union (2016a). *Encryption of data – Questionnaire*. Accessed on July 15, 2020. http://data.consilium.europa.eu/doc/document/ST-12368-2016-INIT/en/pdf.
2. Council of the European Union (2016b). *Encryption: Challenges for criminal justice in relation to the use of encryption - future steps - progress report*. Accessed on July 15, 2020. https://data.consilium.europa.eu/doc/document/ST-14711-2016-INIT/en/pdf.
3. ENISA (2016). *Opinion Paper on Encryption Strong Encryption Safeguards our Digital Identity*. Accessed on July 15, 2020. https://www.enisa.europa.eu/publications/enisa-position-papers-and-opinions/enisas-opinion-paper-on-encryption.
4. European Commission (2017a). Joint Communication to the European Parliament and the Council Resilience, Deterrence and Defence: Building strong cybersecurity for the EU, 13.9.2017. Accessed on July 15, 2020. https://ec.europa.eu/transparency/regdoc/rep/10101/2017/EN/JOIN-2017-450-F1-EN-MAIN-PART-1.PDF.
5. European Commission (2017b). Communication from the Commission to the European Parliament, the European Council and the Council, *Eleventh progress report towards an effective and genuine Security Union* COM/2017/0608 final. Accessed on July 15, 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52017DC0608&from=EN.
6. European Commission (2017c). Communication from the Commission to the European Parliament, the European Council and the Council, *Twelfth progress report towards an effective and genuine Security Union*, 12.12.2017. Accessed on July 15, 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52017DC0779&from=EN.
7. European Commission (2018). Communication from the Commission to the European Parliament, the European Council and the Council, *Thirteenth progress report towards an effective and genuine Security Union*, COM/2018/046 final, 24.1.2018. Accessed on July 15, 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018DC0046&from=EN.
8. European Commission (2019). *Functional Encryption Technologies*, 6.9.2019. Accessed on July 15, 2020. https://cordis.europa.eu/project/rcn/213111/factsheet/en.
9. European Parliament (2017). *Resolution of 3 October 2017 on the fight against cybercrime (2017/2068(INI))*. Accessed on July 15, 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52017IP0366&from=EN
10. Europol (2014). *Consolidated Annual Activity Report (CAAR)*. Accessed on July 15, 2020. https://www.europol.europa.eu/sites/default/files/documents/consolidated_annual_activity_report_caar_2014_0.pdf.
11. Europol (2016a). *The Internet Organised Crime Threat Assessment (IOCTA) 2016*. Accessed on July 15, 2020. https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime-threat-assessment-iocta-2016

12. Europol (2016b). *Consolidated Annual Activity Report (CAAR)*. Accessed on July 15, 2020. https://www.europol.europa.eu/sites/default/files/documents/europol_annual_activity_report_2016.pdf.

13. Europol (2017a). *Internet Organised Crime Threat Assessment (IOCTA) 2017*. Accessed on July 15, 2020. https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime-threat-assessment-iocta-2017.

14. Europol (2017b). *Consolidated Annual Activity Report (CAAR)*. Accessed on July 15, 2020. https://www.europol.europa.eu/publications-documents/consolidated-annual-activity-report-caar-2017.

15. Europol (2018 b). *Consolidated Annual Activity Report (CAAR)*. Accessed on July 15, 2020. https://www.europol.europa.eu/publications-documents/consolidated-annual-activity-report-caar-2018.

16. Europol (2018a). *Internet Organised Crime Threat Assessment (IOCTA) 2018*. Accessed on July 15, 2020. https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime-threat-assessment-iocta-2018.

17. Europol (2019a). *Internet Organised Crime Threat Assessment (IOCTA) 2019*. Accessed on July 15, 2020.HTTPS://WWW.EUROPOL.EUROPA.EU/ACTIVITIES-SERVICES/MAIN-REPORTS/INTERNET-ORGANISED-CRIME-THREAT-ASSESSMENT-IOCTA-2019.

18. Europol (2019b). *Consolidated Annual Activity Report (CAAR)*. Accessed on July 15, 2020. file:///C:/Users/mpisaric/Downloads/consolidated_annual_activity_report_2019.pdf.

19. Europol, ENISA (2016). *Joint Statement: On lawful criminal investigation that respects 21st Century data protection*. Accessed on July 15, 2020. https://www.enisa.europa.eu/publications/enisa-position-papers-and-opinions/on-lawful-criminal-investigation-that-respects-21st-century-data-protection

20. Europol, Eurojust (2019a). *Common challenges in combating cybercrime*. Accessed on July 15, 2020. https://www.europol.europa.eu/publications-documents/common-challenges-in-combating-cybercrime

21. Europol, Eurojust (2019b). *Joint Report First Report of the observatory function on encryption.* Accessed on July 15, 2020. https://www.europol.europa.eu/publications-documents/first-report-of-observatory-function-encryption

22. Europol, Eurojust (2020). *Joint Report Second Report of the observatory function on encryption.* Accessed on July 15, 2020. https://www.europol.europa.eu/publications-documents/second-report-of-observatory-function-encryption

23. Five Country Ministerial (2018). *Statement of Principles on Access to Evidence and Encryption*. . Accessed on July 15, 2020. *https://www.homeaffairs.gov.au/about-us/our-portfolios/national-security/security-coordination/five-country-ministerial-2018*.

24. Lomas, N. (2016, August 24). Encryption under fire in Europe as France and Germany call for decrypt law. *Tech Crunch*. Accessed on July 5, 2020. https://techcrunch.com/2016/08/24/encryption-under-fire-in-europe-as-france-and-germany-call-for-decrypt-law/?guccounter=1&guce_referrer_us=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_cs=sMnhNkTpqBEB3VgCB0PgRA.

CYBERCRIME – EMERGING ISSUE

Ivana Luknar, PhD[1]

Abstract: With the rise of social distancing, security of the Internet and online communication has become an essential issue and cybercrime an emerging challenge. Challenges inherent to cybercrime evolve just as quickly as the technology that creates those challenges. Therefore, it is recommended that more research be conducted for a better understanding of cybercrime and how rapidly-evolving technologies will alter the response of police in the future.

Keywords: cybersecurity, cybercrime, Internet

INTRODUCTION

In the world of mass contagion by coronavirus we are experiencing a lot of changes. Coronavirus spread across the world and forced people to stay at home. A general hypothesis is that coronavirus will push advanced technology and its adoption forward in almost every field of our existence including: E-government, medicine and healthcare, application of robotics, agriculture and food production, distance learning, etc. While the use of information technology (IT) appears to be the main tool to communicate and minimize the pandemic's impact of social distancing, the availability of Internet and online communication has become essential for any person, institution and even government. For sure, development of digital technology has produced many benefits to society, but it has also produced a wide range of cyber threats. Those threats can seriously harm and target individuals, industry, critical infrastructures and even governments. Parallel to the growth of the Internet, IT possibilities and increasing number of the users, the range of illegal cyber activities continues to grow. Considering all of the above-mentioned aspects of the current situation brought about by coronavirus and technology development, it is not hard to predict cyber criminals as an emerging issue. The demand for cybersecurity evaluation has increased. Given the urgency of addressing these issues, purpose of this paper is to instigate worldwide governments to develop and reform digital strategies concerning cyber domain. First, the paper discusses the Internet and cybercrime by content analysis method. After that, the paper concludes by pointing out the need to improve understanding of cybercrime and offering recommendations to ensure better cybercrime prosecution in the future. This is also an overview of cybercrime, security and its problematic nature and difficulties of understanding it.

1 ivanaluknar@gmail.com

INTERNET

Undoubtedly, computer technology, and especially the Internet, has created a new space for people to interact and connect. Advanced technology and high-speed Internet connection has changed human social interaction worldwide and allowed for long distance fast connection and communication. Wide range of Internet usage for work, information and leisure (sharing photos and videos with friends, paying bills, searching, etc.) carries opportunity for nefarious individuals to exploit others using the Internet and advanced technology, resulting in cyber-victimization. The use of the Internet will continue to increase.

Table 1. World Internet usage statistics 2020 (Internet World Stats., March 3, 2020)

Internet Users 31 May 2020	Internet World %	Penetration Rate (% Pop.)	Growth 2000-2020	Internet World %
Africa	526,710,313	39.3 %	11,567 %	11.3 %
Asia	2,366,213,308	55.1 %	1,970 %	50.9 %
Europe	727,848,547	87.2 %	592 %	15.7 %
Latin America / Caribbean	453,702,292	68.9 %	2,411 %	10.0 %
Middle East	183,212,099	70.2 %	5,477 %	3.9 %
North America	348,908,868	94.6 %	223 %	7.5 %
Oceania / Australia	28,917,600	67.7 %	279 %	0.6 %
WORLD TOTAL	4,648,228,067	59.6 %	1,187 %	100.0 %

Many authors have written about the internet as powerful communication tool that has the potential to amplify and accelerate crime in a fraction of a second (Davis, 2012; Williams, 2008; Broadhurst, 2006; Humphrey & Schmalleger, 2012: 331). It goes beyond the concept of territoriality and functions independently of state borders. “The location of the offenders in relation to the scene of the crime is the characteristic of cybercrime that differentiates itself most from others… the criminal usually is not present at the [cyber] crime scene thus making apprehension difficult” (Speer, 2000: 260). The evolution of the Internet is a significant challenge. “While criminals may operate across jurisdictional boundaries, law enforcement cannot” (Finklea, 2013: 10), which results in the existence of jurisdictional struggles.

CYBERCRIME

There is no generally accepted definition of cybercrime (computer-related crime). Huge numbers of definitions have appeared, according to Furnell et al., “in part because the problem is dynamic and changes over time, and also because different sources have tended to assess things from differing perspectives (e.g. some may look particularly at external attacks and consequently exclude internal abuse, whereas others may focus upon malicious code threats and thereby omit other forms of attack)” (Furnell, Emm & Papadaki, 2015). For the purpose of this paper we have chosen some definitions of cybercrime:

- “crimes committed at a distance, with significant difficulties concerning the determination of the place of perpetration of such an offence, carried out by electronic means, in a digital sphere” (Pradillo, 2011: 364)

- "any crime that is facilitated or committed using a computer, network, or hardware device" (Gordon & Ford, 2006: 14)
- "any unauthorized, or deviant, or illegal activity over the Internet that involves a computer as the tool to commit the activity and a computer as the target of that activity" (Moitra, 2005).

Mainly, cybercrimes are traditional crimes, but facilitated in an electronic environment. That is why cybercrimes can look similar to traditional types of offending. Technology has allowed criminals to expand their scope with more pathways thus making crime more complex, while anonymous nature and indirect involvement reduce the probability of cybercrime punishment. Cybercrimes imply the use of computer technology to perform or facilitate the commission of unlawful acts, and also crimes against computers, networks and systems. So, computer can be both the tool and the target of an offense. Broadhurst has summarized the wide scope of cybercrime in this way:

- "Interference with lawful use of a computer. Cyber-vandalism and terrorism; denial of service; insertion of viruses, worms and other malicious code.
- Dissemination of offensive materials. Pornography/child pornography; online gaming/betting; racist content; treasonous or sacrilegious content.
- Threatening communications. Extortion; cyber-stalking.
- Forgery/counterfeiting. ID theft; IP offences; software, CD, DVD piracy, copyright breaches, etc.
- Fraud. Payment card fraud and e-funds transfer fraud; theft of internet and telephone services; auction house and catalogue fraud; consumer fraud and direct sales (e.g. virtual "snake oils"); online securities fraud.
- Other. Illegal interception of communications; commercial/corporate espionage; communications in furtherance of criminal conspiracies; electronic money laundering" (Broadhurst, 2006: 413).

Davis mentioned three components of cybercrime: "1) a computer with which the action is perpetrated; 2) a victim computer; and 3) an intermediary network" (Davis, 2012: 273). Parker (Parker in: Humphrey & Schmalleger, 2012: 335) has identified seven different types of cyber criminals: 1) pranksters, 2) hucksters, 3) malicious hackers, 4) personal problem solvers, 5) career criminals, 6) extreme advocates, and 7) malcontents, addicts, irrational and incompetent people.

Cybercrime has evolved from the typical computer crime of the past to other more complex computer offense forms and will continue to change as malicious users become more technology-savvy and gain easier access to computers. For sure, cybercrime has changed from simple variations of existing categories of crime to more complex forms.

Today, a good deal of uncertainty exists in addressing crimes with a cyber-component. A lot of issues have complicated cybercrime investigations. Bossler and Holt mentioned some of them: "the lack of a standard definition for cybercrime; little public outcry in comparison to traditional forms of crime; difficulty in investigating an invisible crime; an inability to acquire and maintain the required technologies needed to investigate these offenses due to resources; difficulty in training and retaining officers; and gaining managerial and line officer support for investigating these forms of crime" (Bossler & Holt, 2012: 167). They also indicate that police and prosecutors do not have enough knowledge and the resources needed to adequately investigate and prosecute cybercrime (Bossler & Holt, 2012). Computer-related crime cannot be investigated or prosecuted based on common law. Since many cybercrimes lack a visual element, users of the internet, computers and other forms of advance technology may not see responding to cybercrime as "real" police work. All of the above mentioned issues have contributed to a deficiency in reliable statistics and significant underreporting of cybercrime, which further makes assessing the actual prevalence of computer crime more difficult.

RECOMMENDATIONS

Recommendations for measures that can be taken to ensure multilevel defense against cybercrime:

- Consciousness use of the internet – "People have to have a common understanding of what to do to protect themselves, and why, know what to do" (Levi, 2017b: 15) and who to contact in case of cyber offense against them and their property. Generally refers to raising public awareness and knowledge of cybercrime through different campaigns. "Public awareness campaigns are an important component in policing cybercrime as they inform the public on existing threats, while providing knowledge on how they can protect themselves online" (Koziarski & Lee, 2020: 205).

- Conscious implementation of new digital technology in our work and lives (systematic control, planning, set rules, consideration of cause and effects) – Fast growing and increasing dependence on technology as well as complex nature of cyber space and cybercrime have created worldwide concern about how to deal with fast changes and issues, secure cyber space and combat cybercrime.

- International monitoring, juridical cooperation - Cybercrime issue is a challenge for both domestic and international law enforcement. Many authors agree that law enforcement responses and prevention strategies to cybercrime are often ineffective (Holt, Lee, Liggett, Holt & Bossler, 2019; Lee et al., 2019; Willits & Nowacki, 2016). Where those laws that concerns key aspects of information security and information assurance intersect in transnational cases maybe harmonized or conflict-ridden. Levi suggest to "reconsider some of the overlaps that exist between online and offline crimes, and think through the ways in which online is transformative either for levels and organisation of crime commission or for the balance between disruption (another ambiguous term) and the traditional detection, investigation and prosecution processes that constitute a criminal justice response" (Levi, 2017a: 15). Indisputably, both juridical and technical coordination between nations is essential for effective transnational law enforcement when we speak about cybercrime.

- Multilevel transnational cooperation – Discussing cybersecurity and cybercrime and international exchange of experiences: conferences, summits, workshops, congresses, conventions and other mechanisms, in many ways rise awareness about the cybercrime issues. Relations among nations concerning cybersecurity are mostly adjusted through treaty obligations such us: European Convention on Cybercrime, the United Nations (UN) Convention against transnational organized crime and The National Cybersecurity Framework Manual of 2012. Budapest Convention (The **Convention on Cybercrime** of the Council of Europe - CETS No.185) adopted in November 2001 and supplemented by a **Protocol on Xenophobia and Racism** committed through computer systems „remains the most relevant international instrument – the "gold standard" – on cybercrime" (Council of Europe, June 23, 2019). It was the first instrument that served as a guideline against cybercrime and a framework for international cooperation between 65 signatories (until today) to this treaty "on crimes committed via the Internet and other computer networks, dealing particularly with infringements of copyright, computer-related fraud, child pornography and violations of network security. It also contains a series of powers and procedures such as the search of computer networks and interception. Its main objective, set out in the preamble, is to pursue a common criminal policy aimed at the protection of society against cybercrime, especially by adopting appropriate legislation and fostering international co-operation" (Council of Europe, November 23, 2001). The United Nations (UN) Convention against transnational organized crime indirectly deals with cyber-crime when carried out by criminal networks in relation to serious crime. Above mentioned instruments are designed to address rights and collaborations between countries regarding cyber activity. Those conventions provide examples of greater law harmonization. Because they have effectively established a complex network of activities, regulations and treaty obligations between convention signatories and fewer opportunities for

transnational criminals to exploit jurisdictional and legal loopholes between nations. "Convention signatories also are required to harmonize their internal domestic laws to allow for broad coverage of improper activity and consonance with the laws of other countries with which they must collaborate. Countries that have not signed on to the convention's requirements may need more ad hoc solutions to transnational collaboration, although bilateral treaty obligations between major technological nations fill some of those gaps" (Losavio, Pastukov, Polyakova, et al., 2019: 2).

- Reducing the dark number - When a crime occurs, willingness of the individuals who are victimized to report it is crucial in effective crime control because police can only intervene and a response by the justice system can be expected if cybercrime is officially noted. There are many reasons why "cybercrimes are less likely to be reported" (Graham, Kulig & Cullen, 2020: 11). "Experimental results show that people perceive a computer crime to be more serious when the data is more sensitive, the offender is motivated by financial gain, the amount of loss is high, and a large number of records are affected—in roughly that order. If sentencing reflected public perceptions, a crime with these features would be punished more harshly than a crime in which these factors are less true" (Graves, Acquisti & Anderson, 2019: 347). Cross, in her case study of online fraud, finds inability and frustration of victims to lodge a complaint because the uncertainty of who and where to report an offense to (Cross, 2019: 9, 36). Also, "a failure to improve law enforcement responses to cybercrime may negatively impact their institutional legitimacy as reliable regulators of cybercrime" (Koziarski, & Lee, 2020: 199). Studies on willingness to report crime to the police "find that legal cynicism is negatively correlated with perceptions of procedural justice and positively correlated with procedural injustice. Surprisingly, however, their models reveal cynicism to be significantly and positively related to reporting and beliefs about arrests – a counterintuitive finding" (Graham, Kulig & Cullen, 2020: 11). "Dark numbers" of cybercrime present a serious problem that cannot be alleviated by prosecution allowing offenders to continue breaking the law. Reporting and notification of cybercrime is also essential for monitoring cybersecurity and defense both at the state and international levels.

- Law enforcement responses - The concept of jurisdiction which refers to cybercrime is particularly challenging and problematic. As Crowther noticed, most cyber activity should not involve the military at all, but "militaries should be able to range anywhere throughout cyberspace to complete appropriate missions" (Crowther, 2017, 74). "It is quintessential for law enforcement to be effectively trained on what they have the capacity to do, given their contextual circumstances, as it may have the capacity to improve officers' perceptions. For agencies that have limited resources allocated for cybercrime, this may include speaking to victims, taking reports, and passing along information to other agencies that have greater cybercrime resourcing" (Koziarski, & Lee, 2020: 205).

- Improve cybercrime policing - "There is scope for a more dynamic, structured and response-focused approach to guidance, warnings and awareness-raising, and the police can play a collaborative role in arrangements to provide that advice before and after individuals become victims" (Levi et al., 2017b: 16). The focus is to improve cybercrime policing through updating and evaluating traditional police approaches, developing new, more efficient ways that could assist and improve cybercrime policing. Some authors encourage the emergence of "evidence-based policing (EBP)" (Sherman, 2013: 385; Koziarski & Lee, 2020: 199) and the use of "triple T" strategy: 1) targeting, 2) testing and 3) tracking (Sherman, 2013: 383-385) to develop and improve factors associated with policing wide range of crimes. Collecting and using digital evidence has produced notable benefits in the criminal justice system. "There are also jurisdictional challenges related to cybercrime and digital evidence as the Internet is boundless, and enables offenders to affect victims well beyond their physical reach. Investigators may recognize that an act occurred, but be unaware of the location of the offender relative to their jurisdictional boundaries due to the virtual nature of the offense" (Holt, Clevenger & Navarro, 2020: 94). Because many cybercrimes transcend multiple geographic locations, it is often

unclear which agency should respond. Police all over world struggle with addressing cybercrime and deciding on how to conduct adequate police investigations because of their ability / inability to acquire the necessary technology and knowledge, difficulties to retaining officers who possess the appropriate skills to deal with cybercrime, as well as insufficient training.

- - Dedicated well-trained police personnel - There is some tension regarding the question as to whether all police officers generally should be responsible for investigating cybercrimes and digital evidence or these investigations should be reserved for a smaller group of specialists. Some authors have suggested training all cadets during their time at the academy in order to facilitate their subsequent efforts to address the issue of cybercrime (Holt, Clevenger & Navarro, 2020: 100; Nowacki & Willits, 2020; Bossler & Holt, 2012: 168) or "employing specialist civilian staff" (Levi, Doig, Gundur et al., 2017b: 16). Nowacki and Willits consider dedicated personnel as "one of the most common law enforcement responses to cybercrime" (Nowacki & Willits, 2020: 73). Holt suggests the establishment of specialized cybercrime policing units with skills necessary to address cyber offenses and which tend to have higher levels of training to deal with these offenses (Holt, 2018).

CONCLUSION

As information-technology power grows exponentially, the majority of future crimes will contain a cyber-component. Widespread use of the Web and technological innovations indicates that cybercrime will become a more and more common issue with the time, and especially after worldwide changes designed to prevent coronavirus spreading when states across the world closed their borders and reduced social life to minimum. This new worldwide reality caused by coronavirus enhanced the reliance on IT communications and their security. Police and law regulations are experiencing a challenging era dealing with crime with cyber-components. This paper is an invitation to governments, IT experts and criminologists to increase awareness of the increased prevalence of digital devices as components of crimes and criminal investigations by applying their knowledge and skills to the improvement of cybercrime prevention and prosecution.

REFERENCES

1. Bossler, M. A. & Holt J. T. (2012). Patrol officers' perceived role in responding to cybercrime. *Policing: An International Journal of Police Strategies & Management* 35 (1), 165-181.
2. Broadhurst, R. (2006). Developments in the global law enforcement of cyber-crime. *Policing: An International Journal of Police Strategies & Management* 29 (3), 408-433.
3. Council of Europe (2001, November 23). *Convention on Cybercrime, Details of Treaty No.185*, Budapest. Accessed on June 23, 2020. https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/185
4. Council of Europe (2019, June 23). *Cybercrime Convention Committee (T-CY), Preparation of the2nd Additional Protocol to the Budapest Convention on Cybercrime*. Accessed on June 21, 2020. https://rm.coe.int/t-cy-2019-19-protocol-tor-extension-chair-note-v3/16809577ff
5. Cross, C. (2019). Oh we can't actually do anything about that': the problematic nature of jurisdiction for online fraud victims. *Criminology & Criminal Justice*, *Online*, 1-18. Accessed on June28,2020. https://eprints.qut.edu.au/127517/1/CCJ_Jurisdiction_online_fraud_accepted_CROSS.pdf

6. Crowther G. A. (2017). The Cyber Domain. *The Cyber Defense Review* 2 (3), 63-78.

7. Davis, T. J. (2012). Examining perceptions of local law enforcement in the fight against crimes with a cyber component. *Policing: An International Journal of Police Strategies & Management*, 35 (2), 272-284.

8. Finklea, M. K. (2013, January 17). *The interplay of borders, turf, cyberspace and jurisdiction: Issues confronting US law enforcement*. Congressional Research Service Report for Congress, Washington DC: Congressional Research Service. Accessed on July 3, 2020. https://fas.org/sgp/crs/misc/R41927.pdf

9. Furnell, S., Emm, D. & Papadaki, M. (2015). The challenge of measuring cyber-dependent crimes. *Computer Fraud and Security 10*, 5-12.

10. Gordon, S. & Ford, R. (2006). On the definition and classification of cybercrime. *Journal in Computer Virology*, 2(1), 13-20.

11. Graham, A., Kulig, T.C, & Cullen, T. F. (2020). Willingness to report crime to the police. Traditional crime, cybercrime and procedural justice. *Policing: An International Journal* 43(1), 1-16.

12. Graves, T. J., Acquisti, A. & Anderson, R. (2019). Criminology perception versus punishment in cybercrime. *Journal of Criminal Law & Criminology*, 109 (2), 313-363.

13. Holt, J.T., Clevenger, S., & Navarro, J. (2020). Exploring digital evidence recognition among officers and troopers in a sample of a state police force. *Policing: An International Journal*, 43 (1), 91-103.

14. Holt, T.J. (2018). Regulating cybercrime through law enforcement and industry mechanisms. *The ANNALS of the American Academy of Political and Social Science 679*, 140-157.

15. Holt, T.J., Lee, J.R., Liggett, R., Holt, K.M. and Bossler, A. (2019). Examining perceptions of online harassment among constables in England and Wales. *International Journal of Cybersecurity Intelligence and Cybercrime*, 2(1), 24-39.

16. Humphrey, A. J., & Schmalleger, F. (2012). *Deviant Behavior*, 2nd ed., Canada: Jones & Bartlett Learning.

17. Internet World Stats (2020, March 3). Internet Usage Statistics. The Internet Big Picture. World Internet Users and 2020 Population Stats. Accessed on June 21, 2020. https://www.internetworldstats.com/stats.htm

18. Koziarski, J., & Lee J. R. (2020). Connecting evidence-based policing and cybercrime. *Policing: An International Journal*, 43(1), 198-211. DOI 10.1108/PIJPSM-07-2019-0107

19. Levi, M. (2017a) Assessing trends, scale and nature of economic cybercrimes: overview and issues. *Crime, Law and Social Change* 67(1), 3-20. Accessed on July 1, 2020. http://orca.cf.ac.uk/95719/3/Assessing%20trends%20final%20published.pdf

20. Levi, M., Doig, A., Gundur, R. et al. (2 more authors) (2017b). Cyberfraud and the implications for effective risk-based responses: themes from UK research. *Crime, Law and Social Change*, 67 (1), 77-96. Accessed on July 3, 2020. http://eprints.whiterose.ac.uk/144360/8/Levi%2C%20Doig%2C%20Gundur%2C%20Wall%20and%20Williams%20%282017%29%20Cyberfraud%20and%20the%20implications%20for%20effective%20risk-based%20responses%20-%20themes%20from%20UK%20research.pdf

21. Losavio, M.M., Pastukov, P., Polyakova, S., et al. (2019). *The juridical spheres for digital forensics and electronic evidence in the insecure electronic world*, WIREs Forensic Sci. 1:e1337. Accessed on June 15, 2020. https://doi.org/10.1002/wfs2.1337

22. Moitra, S. (2005). Developing policies for cybercrime", *European Journal of Crime, Criminal Law and Criminal Justice*, 13 (3), 435-464.
23. Pradillo, J. C. O. (2011). Fighting against Cybercrime in Europe: The Admissibility of Remote Searches in Spain. *European Journal of Crime, Criminal Law & Criminal Justice* 19(4), 363-395. DOI: 10.1163/157181711X587800.
24. Speer, D. (2000). Redefining borders: The challenges of cybercrime. *Crime, Law and Social Change 34*, 259-273.
25. Williams, K. (2008). Using Tittle's control balance theory to understand computer crime and deviance. *International Review of Law Computers & Technology*, 22(1-2), 145-155.
26. Willits, D. & Nowacki, J. (2016). The use of specialized cybercrime policing units: an organization analysis. *Criminal Justice Studies*, 29 (2), 105-124.

APPLICATION OF FREE TOOLS IN THE PROCESS OF PROTECTION OF WIRELESS NETWORKS

Vladimir Jovanović, MSc[1]
Ministry of the Interior of the Republic of Serbia

Abstract: Users in physical state have mostly gotten used to this view of a computer network, above all due to its price and simplicity of its installation, where with minimal spending results on one network on a high level. However, with the rise of mobile devices comes the need to use its capabilities, and up until now it hasn't been possible to access and execute any of these high-level operations. However, the fact that the complete traffic is done aerially leads users to a question, who is able to access their data. [2]

Wireless technology creates new threats and raises a certain level of compromising of data on a significantly lower level. The complete traffic takes place on radiofrequency waves which comprise over the air which is available to all, unlike communications through older mediums, where the protocol of data is concretely defined. In case of unencrypted data, that is, encrypting with the "weaker" algorithm, the attacker can very easily access the data and compromise the trust of the file. Besides that threat come other negative characteristics of that type of networking. The reach, that is, the geological tracking is not on the visible level, because the user is in someone's sight of "the golden cage", which has the ability to move, that is, to change positions in the network and if nothing is interrupted, while that all restricts it to be in certain range of the access point, as in the case of greater distancing or interruptions on the side of certain objects, where heavier emitting of radiofrequent signals come to a significant influence on the quality, which contributes to the lessening of speed and consistency.

Keywords: cybersecurity, cybercrime, security, wireless network

INTRODUCTION

How are the basic components of the wireless computer network Access Point (*AP*), as the central rope which secures data sharing through the network through radiowaves between on the end of user

1 v-jovanovic@hotmail.com

2 Wireless Security Threat Taxonomy. IEEE Workshop on information assurance, Welch D., Lathrop S., 2003

devices and particular users. In concrete technical-organisational manner, the user does not have a selected role, but in this safe aspect, the user is the weakest link in this chain. The user is the most common target of the attack. This exception gets in years, or even decades behind, because complete technology establishes that every system gets constructed in a way that can serve its user, above all to ease and execute certain processes. The sole construction of the system and its later implementation can, in a way, rely on the user, whereas the admin of the system usually possesses maximal privileges. These privileges exist most commonly either due to malice or some other factor of abuse, all in the goal of compromising and abusing the system. In a clear example of defense of computer networks, this link comes in as one of the most basic problems. Before projecting the system of defense is that the first principle of defense be simple on the front-end users for understanding, so that opposition to its use does not come up.

The basic factors of the multi-factor authentification are founded on the authentification of users on the basis of[3]:

- What the user knows – password
- What the user possesses – smart card, identification chip
- What the user is – biometric data

These factors can also be combined together, of which security level is raised, but far from perfect, that is impenetrable to threats and attacks. Solutions through chip-based identification, or biometric data requires a significantly more developed infrastructure, where the sole source of biometric data in digital form takes a large portion of memory, so these two solutions are not taken in quality for implementation.

Since a technical capability to commit to this much data did not exist in a relatively short period, it was necessary to find the most optimal solutions, or a compromise of a solution that is the cheapest for implementation and accessible to the users. That solution was the only acceptable use of a password, which is in use to this day. Solution like a step in authentification requires the selection characters to be inputted, so that examination could be done and access be allowed. The input of these commands is a simply possible access point to the network, in case there are no additional settings connected to controlling security, with any device and from any user in the network. Only the sharing of passwords is founded on a particular way of sending, verbal sharing between users, which represents the only layer of and the sharing of models of authentification, which allows access to the wireless computer network. The system of defense depends on cryptological algorithms, which contributes to defense measures on a great level, but in fact is implementing cryptological protocols, try to compensate the faults of this measure of defense. All of these protocols are shown to be implemented, if the end user with their own malice (accidental or purposeful) does not reveal password in plain text, to which attackers are made possible "at hand" to give possibility of the access point.[4]

The possibility of abuse of the user does not represent the only threat on this type of network, as attackers have several goals from the access point, and with that develop their attacks, so that they could damage other links in the system.

3 Multi-Factor Authentication: A Survey, Ometov A., Bezzateev S., Mäkitalo N., Andreev S., Mikkonen T., Koucheryavy Y., 2018

4 Wireless Network Security: Vulnerabilities, Threats and Countermeasures, 2011

THE TERMINOLOGY OF THE ATTACKS

The terminology of the attacks encompass many basic steps which are attempted to be realised in theory is called "*Cyber Kill Chain*", which describes the structure of the attacks[5]:

1. Reconnaissance

Approaching information on potential targets, so that the attacker the target, it is most commonly done through certain webpages, which could present a potential bait for "catching" targets, that is, working pages to which they are accessed. Including followed networks and communications, which are ordered to receive additional information on potential targets

It can comprise of next activities, which can and do not need to be connected[6]:

- Identifiyng targets – ordering selected target of the attack, which reveal which information is committed, which in this case is an individual target being attacked
- Selection – refers to determining greater numbers of potential targets which on the basis of certain parametres become able to decide, these parametres can be united
- Prolification – refers to a string of actions which certain groupings characterising same personalities be instituted

There are two types of reconnaissance:

- Active – the attacker's goal is taking information and generating fakes, exchanging information which is done through the network. In this category includes: *SPAM* messages, *Phishing*, social engineering and scanning ports.
- Passive – the attacker eavesdrops network traffic, does not commit packet exchange, but exclusively commits their later analysis. This type of reconnaissance is difficult to detect, as they are not affecting the network's status, like using packets. Some of the informative tools which are used for this type are: *Shodan, Whois, Censys, Dumpster Diving*

2. Weaponization

This step is done on the side of the attacker, without the interaction with the victim. The attacker creates malicious software, the way the attack would be realised. There are two notable tools for this (*Metasploit* and *Unicorn*).

3. Delivery

The attacker sends a malicious "package", the target is attacked through shared programs, use of social engineering techniques, physical.

4. Activating tools

Execution of scripts on the victim

5. Allowing access

Installation of malicious software on the machine

6. Forwarding commands and controls

5 Intelligence-Driven Computer Network Defense Informed by Analysis of Adversary Campaigns and Intrusion Kill Chains, Hutchins E., Cloppert M., 2011

6 Technical Aspects of Cyber Kill Chain, Yadav T., Rao M., 2016

The attacker through channels made possible by victim's computer forwards commands on another computer

7. Actions on objects

The attacker takes over steps on concrete selections, to which they achieve their goal, of which these objects are most frequent: history of payment, logging data, account data and other confidential data.

The goal of discovering this chain of elements and just its defining is indeed on learning countermeasures, from which any of the steps may be prevented. Learning these certain measures can lead to prevention of further consequences of the attack, and learning of other steps. Measures which can be evaluated are:

1. Discovering – confirmation on whether the attacker is commiting reconaissance tasks, like examination of suspicious activities which enables attacker's reconaissance before the attacker.
2. Rejection – prevention of unsolicited breaches in the system, preventing inputting of malicious tools.
3. Interruption – stopping or redirecting outgoing traffic, which prevents finalising changing packets for the attacker.
4. Cancellation – commands which could commit a counterattack, which will be targeted at the attacker.
5. Deception – laying data for the attacker, which will serve as its bait
6. Segmentation of the network – use of techniques of networking gains performance and additional level of security.

Wireless connection represents a significant risk for organisation, as the attacker will not be physically present in company rooms to commit attacks. Wireless attacks can be committed by a malicious user from distant location without the physical presence. With that, the structure of attack and defense differs from classical terminology of attacks[7]. The terminology which could be used for wireless computer network would be comprised of the next steps:

1. Discovery – the emiting of signal is done to which tools are used like: *NetStumbler*, *NetSurveyor и Xirrus Wi-Fi Inspector* like other tools which are used for scanning suitable networks in range and strength of the signal.

Figure 1. *Display of tool Xirrus Wi-Fi Inspector for scanning available networks and signal strength*

7 Modified cyber kill chain model for multimediaservice environments, Kim H., Kwon H., Kim K., 2018

2. Mapping – once the list of wireless computer networks (*Wi-Fi*) is displayed, it can geographically visualise through geographic maps. „*WiGLE*" is one such service based on the webpage, which accepts information on networks from scanners and shows the networks on a map.

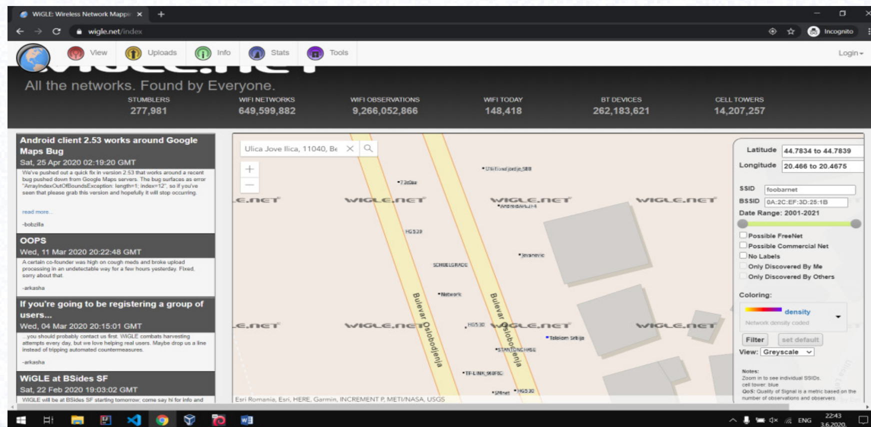


Figure 2. *Display of tool for mapping available wireless computer networks Wigle*

3. Analysis – setting tools for following activity of network traffic. Manufacturers of operating systems have foreseen potential security threats, so "*Microsoft*" before creating its own operating system allowed following (eavesdropping) traffic, but does not allow putting packets in. While operating systems "*Linux*" allow both functions. The tool that makes it possible to do is „*Aircrack-ng*" (on the condition it has an appropriate network adapter with the possibility of the *Monitoring* mode). The tool which is supported on more operating systems is „Wireshark".

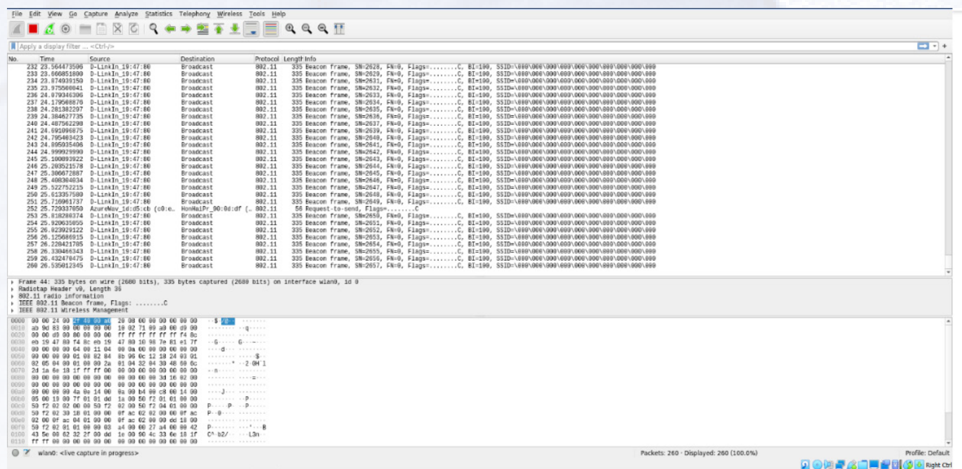


Figure 3. *Display of tool for analysing networks Wireshark*

4. Executing an attack – after fulfilling conditions for executing an attack come the possibilities for final realisation of the attack. The choice for the attack depends on the attacker and the goal needed to meet:

a) MAC Spoofing – access points have an ability of filtering *MAC* addresses which means that on a wireless network can only be connected by devices whose *MAC* is in a whitelist. Changing the network adapter also leads to changing the *MAC* address. With the help of the tool „*SMAC*" exchanging addresses can be done, generating virtual network adapter.

b) Attack on authentification – this type of attack is used for pre-meditated shutting of a user who are legitimately logged on selected access point.

c) Man in the middle – in this type of attack, the attacker first deactivates the active legitimate user from the access point, and then forces the victim to connect to the fake access point, and by the end intercepts all data which victim and receives during the session.

5. Probing encryptions – searching for the encryption key which is used on a wireless computer network. Using a toolset „*Aircrack*" makes it possible to execute probing the secret encryption key.

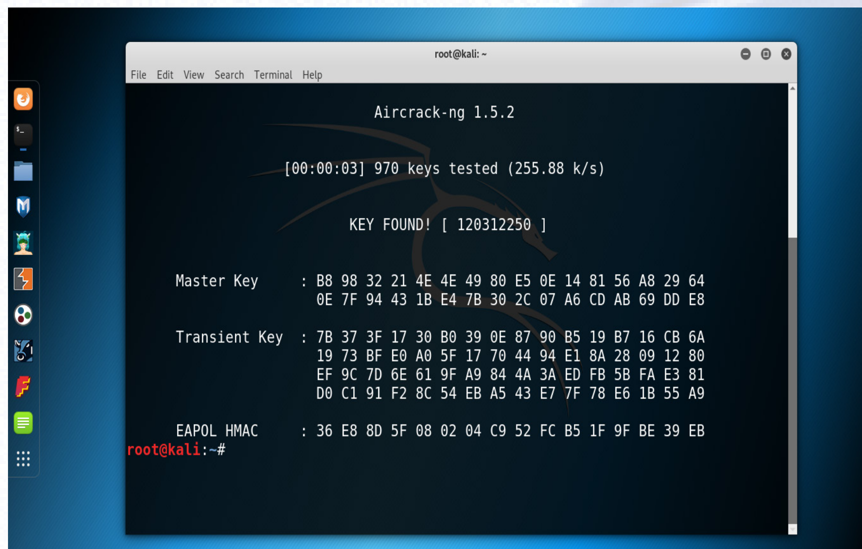


Figure 4. *Display of tool for probing encryption Aircrack*

Terminology of wireless computer network defense is turned to the following string of next steps:

1. Consideration – establishing a polis is done, right of access, separating a certain part of the network for „guests"
2. Discovery – ordering a degree of discovering/hiding *SSID* of adjacent access points, filtering *MAC* address, establishing a naming convention, establishing necessary tools for protection
3. Encryption – establishing a secure protocol for encryption
4. Testing – phase in which simulation of potential attacks is done and examining established aspects of defense. In this step we have two types of targets in which simulated attacks are done:
    a) Access point – attacks are done here on access point, and those are attacks of deauthentication of the user, *DOS/DDOS*, spoofing *MAC* address, *Evil-Twin*
    b) User – attacks which are based on human weaknesses and using particular moments of impatience and are done by Man in the Middle, following traffic, methods of social engineering
5. Analysis – on final testing the analysis of the status is done and evaluation of potential improvements.

ATTACKS ON WIRELESS COMPUTER NETWORK

Often in practice are two terms for labelling grouping for attacks used, where individual attacks are grouped by combined characteristics and the way of committing in the next categories:

- Active attacks – where the goal for the attacker changes data and generate spoofed changes of informations, which are transmitted through the network. In this group of attacks come attacks

which are more commonly called: *Unauthorized Access*, *Active Eavesdropping*, *Man in the Middle Attack*), *Session Hijacking*, „*Denial of Service*", acronym „*DOS*" and *Replay*

- Passive attacks – the attacker eavesdrops network traffic, does not commit packet exchange, but exclusively commits their later analysis. Passive attacks are difficult to detect, as they are not affecting the network's status, like using packets. This type of attack uses a weakness of free range of information aerially, where the user, or rather an access point, cannot detect exchanges, as there are none, as it has to do with the impact of normal function of the network. This could be characterised as another weakness, as exclusively detection of packet exchanges or interruption of signal is characterised as an attack. In both groups can attacks be detected through *Traffic Analysis* and *Passive Eavesdropping*.

WIRESHARK

"*Wireshark*" is a free tool for scanning and analysis of networks, following communications, receiving and sending network packets and sights. This tool is used for network analysis of a packet and following traffic and activities in network's frame. It's used largely in the framework of support of solving network problems, where a source of certain problems can be found, compared to the desired status with real, and comparison analyses. Examining of application repair, where programmers can see a way of application's behaviour which use secure or networked protocols, for their control and higher development. Following packets for security reasons is one of the functions which is used to a large measure, as with this examination a detailed analysis is done and it is possible to look into certain parametres which can mark certain faults in great measure in the network.[8]

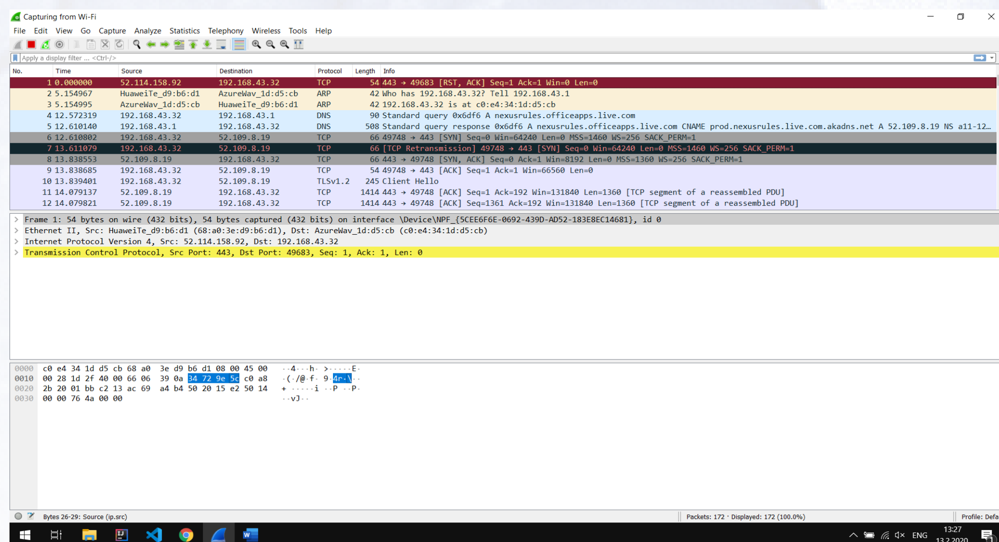


Figure 5. *Display of recording packets through tool „Wireshark"*

Every packet represents in the frame of one column, meaning it is possible to get information from the receiver, sender, protocol, length and just information on the packet. The platform is very useful, because it is visually accessible to the user, so they could better identify types of packets, protocols, and certain anomalies. Protocols are divided by colours, where "*TCP*" packets represent green, "*UDP*" blue, and in case of certain faults or anomalies are represented in red colour, this display is possible to

8 Instant Wireshark Starter, Singh A., 2013

change depending on the user. Display of analytic data, which pertain to activity of traffic in the frame of wireless computer network is one of the options, so that the user could get the big picture of the traffic protocol through a network.

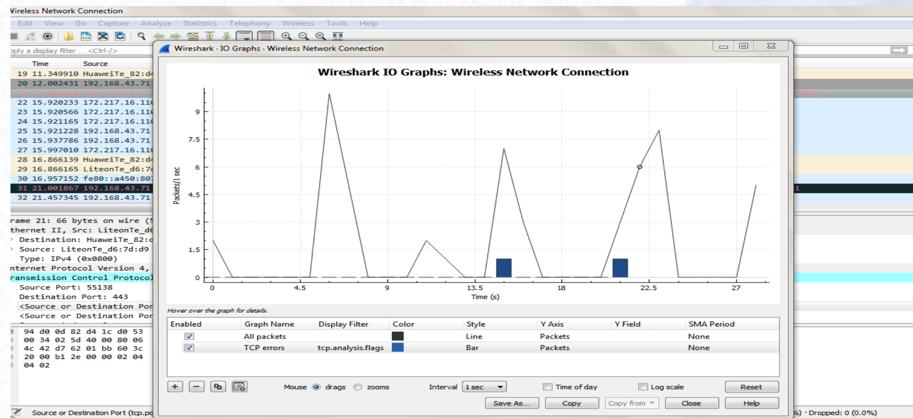


Figure 6. *Display of generated graphic following traffic activity*

ACRYLIC WIFI

Represents the pool of tools which enables following statuses of wireless computer networks. These tools makes network analysis possible, where details of access points can be examined, signal strength, security protocols, packet density. Because this version of the software is commercial, certain functions are available exclusively to select users, while the free version of the software only has basic information on the network status. Examination and control of the device connected on the network, and their geolocating, on the basis of signal quality which comes to them can be useful in the case of following and controlling a certain number of devices, and potential defenses from unauthorised devices. In the process of working with this tool is the free version used, which in a passive way can look at certain more detailed information on access points, but an accent is put on the quality of a signal and rates cryptographic protocols. It is compatible to *Windows* operating systems.

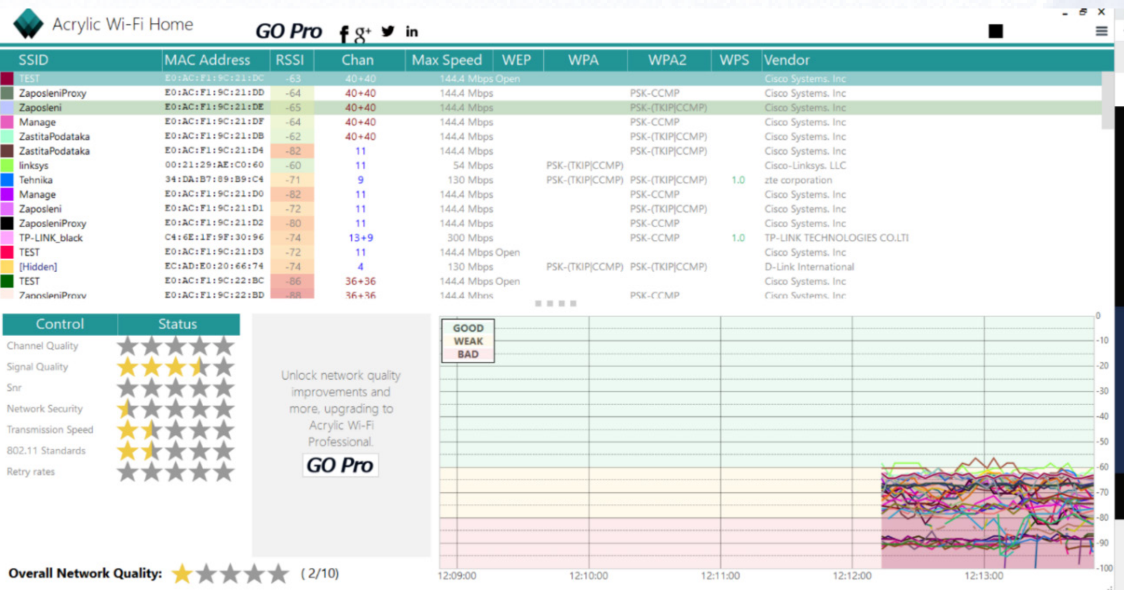


Figure 7. *Display of tool for network and signal analysis Acrylic WiFi*

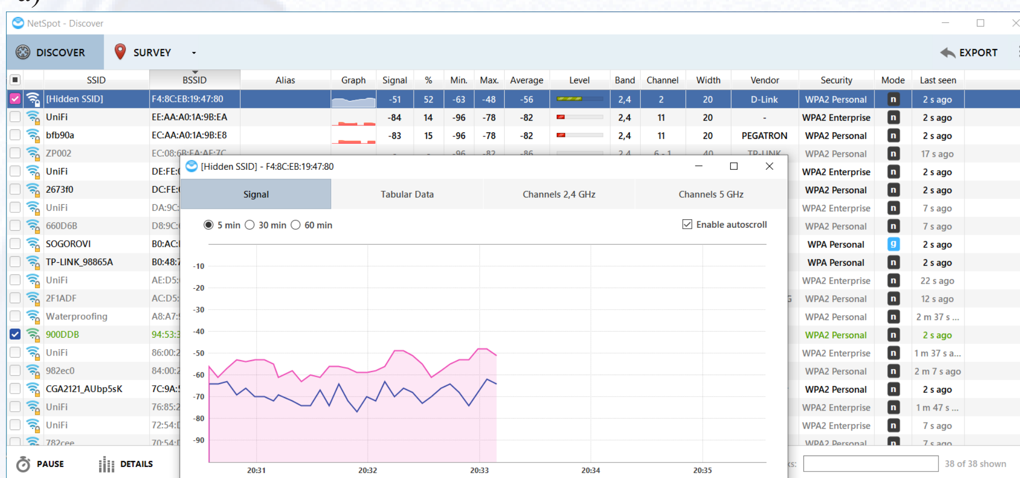
NETSPOT

A tool meant for monitoring statuses of wireless computer networks which brings user examination of availability of wireless computer networks. Besides basic data on the network (*MAC*, *SSID*, security protocols for encryption), there are also other features for users, which deal with statistical displays and signal strength inside a network. This tool works in two modes[9]:

1. Discovery – mode for discovering available networks in the area with data pertaining to signal quality and type of defense
2. Survey – mode for surveying places, that is visualisation two-dimensial display of a device place, in which couverage is examined, speed, quality of a signal and potential blocks from interference.

This tool is an optimal solution for institutions and professional workplaces, where it is necessary to have a coverage of the place, for optimisation of resources. The tool is free to download and supports *MAC OS X*.

a)



b)

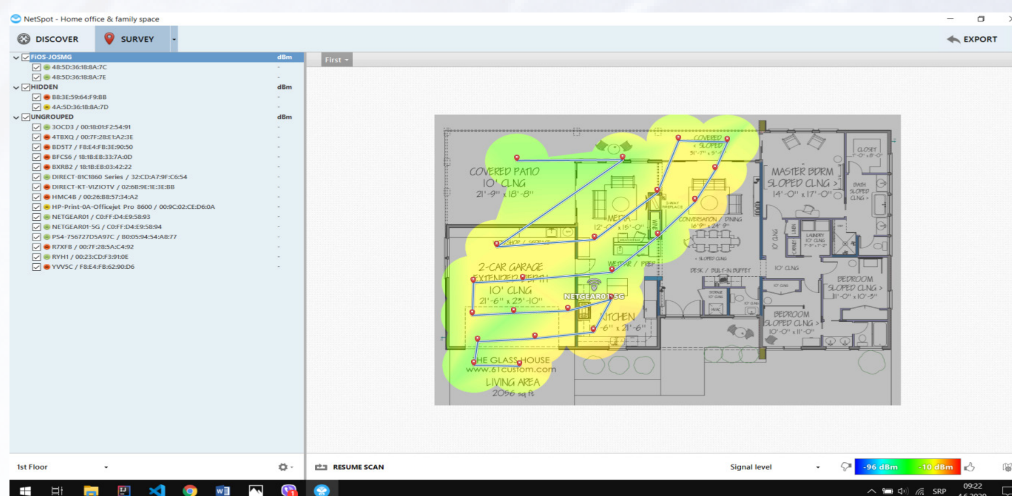


Figure 8. Display of NetSpot tools with overlaid view of an architecture of a place and signal range a) Discovery mode b) Survey mode

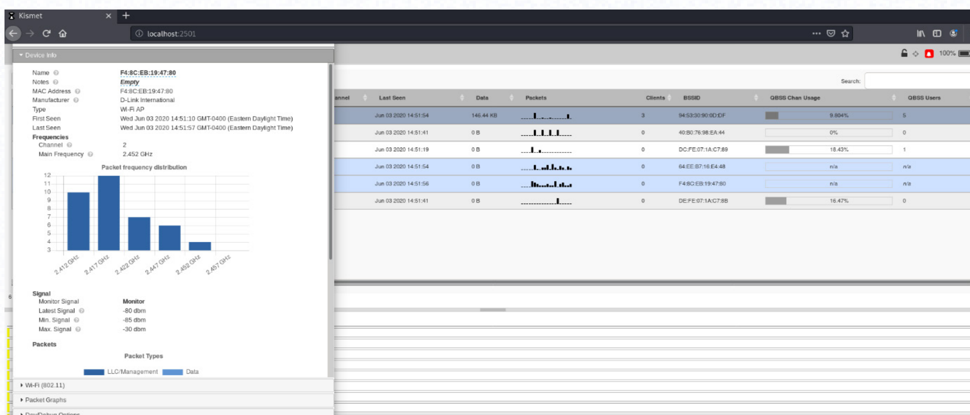
9 Analysis of the Coverage Area of the Access Point UsingNetspot Simulation, Suryani A., Pantjawati A., 2018

KISMET

This tool falls on a group of tools which are used in "*Kali Linux*" operating system. „*Kismet*" is an open-source tool which scans networks, following packets, detections of activity in a wireless network, detections fall on a network. For a successful functioning of these tools, it is necessary to possess a networking interface which supports *Monitoring mode*.

Visualisation of a display of packets and data, eases the user just following network activities, where in activity of the packet protocol is their presentation done. With this tool, the user can have a visual in suspicious activities in the network frame, data on devices which are connected, their use of networks, and the potential malicious attempts breaches from an attacker.[10]

a)



b)

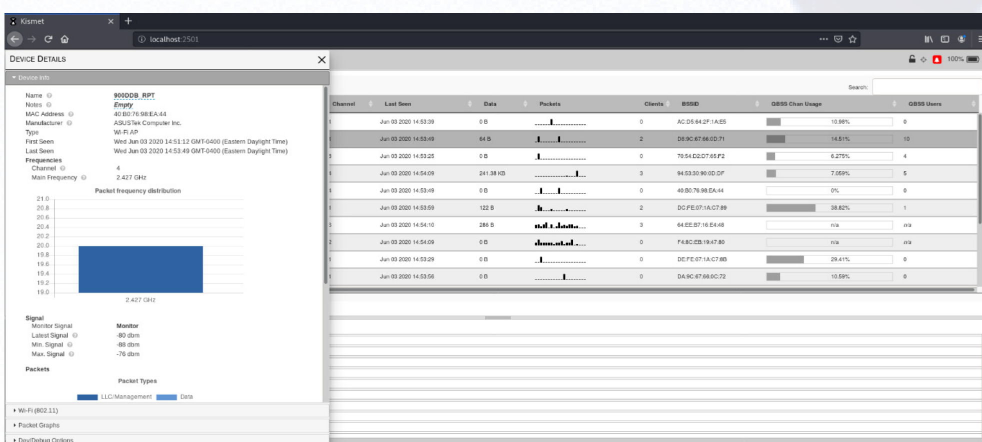


Figure 9. Display of window „Kismet" tool
a) network taken by a DOS attack б) network not under attack

PRTG NETWORK MONITOR

This tool is developed by a company "*Paessler*", so the acronym means „"*Paessler Router Traffic Grapher*". The software is used for overseeing and classification of individual parts of a system connected to a network, like a range, packet activity, but the main feature is collecting statistical data of network

components, through switches, routers, servers and other devices and applications so that a complete picture of potential activities and alarms can be gotten in case of unwanted effects[11]. The mode of automatic scanning does not require from a user to do manual types of scanning, but rather it is expected that in a certain measure sets fields which could be first showed and in which software to pay attention to. The software offers a free trial use from calendar days, which after that requires payment.

In the frame of investigating the tool is used in the process of a "*DOS*" attack, which the software timely felt a significant increase in *ping*, which automatically means that a problem was found. The visual of a problem is examined, where with a graphic diagram which a gradual spike can be seen, which is clearly differentiating from previous status.

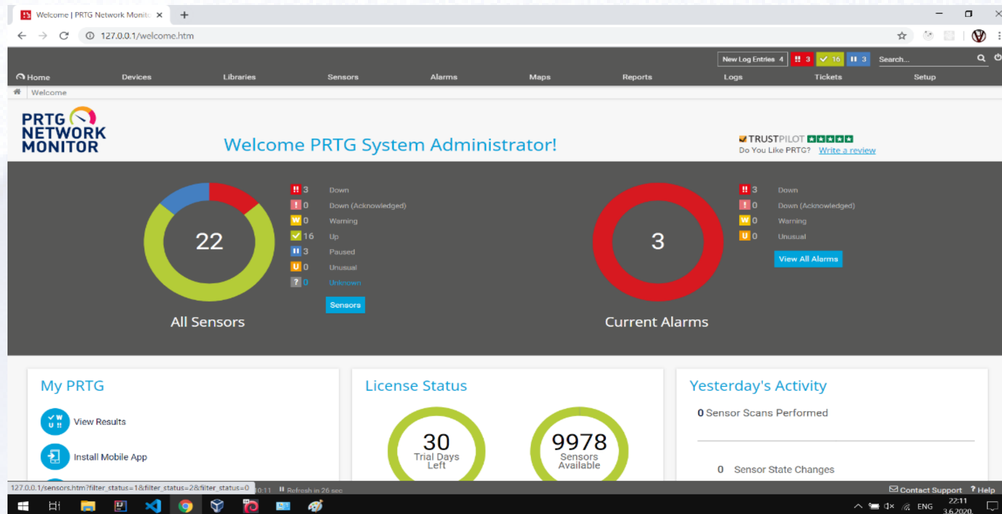


Figure 10. *Display of starting form of tool for monitoring networks PRTG Network Monitor*

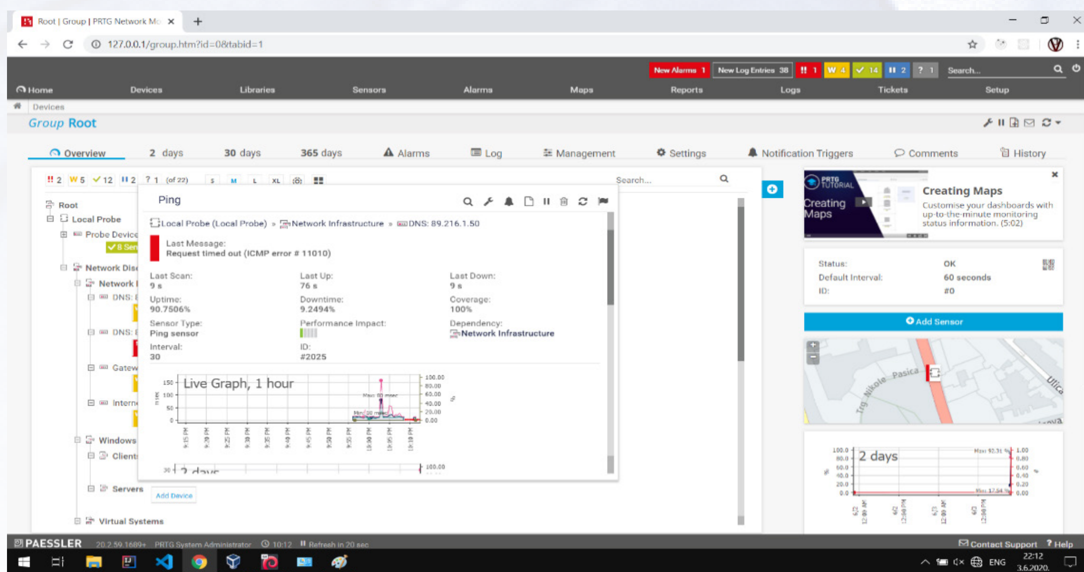


Figure 11. *Display of a detailed examination of alarmed parts of the system, where a graphical display of a call and reasoning for an alarming*

The control for the user would present a frame which could be usable in both cases (for wireless and wired computer networks), where the concrete "*MAC*" device address is ordered to be connected to a network and besides the knowledge of the credentials. The supervision of the network like its exam-

ination is with the help of tools like "*Wireshark*" able to detect certain anomalies in traffic and packets shared through the network. Use of the system detection and prevention of breaches in the network is integrated in such tools like "*Kismet*", which the examination of activity and packet amount is done in "*Kali Linux*" operating system, which is possible to react in case of increased amounts of requests or fluctuations of the same packets. The presented tools, whose work is presented are based on an analysis of all network, which is expected by users to actively react to attacks and potential anomalies on the network. Tools which are made possible to work even on "*Windows*" operating system are available to the whole auditorium of the user. "*Acrylic WiFi*" is a tool which is exclusively aimed at analysing signals and which could help the user over potential evaluation of available network on the basis of certain parametres, pertaining to signals, security, potentially low range, forests etc. The user could find it useful before examining potentially malicious networks with suspicious degrees of protection, forests, where it could be concluded that is done on a malicious attempt. "*NetSpot*" is a tool which could be put into a group for projecting the architecture of wireless computer networks on an individual level. The possibility of bringing maps, could show possibility of calculating in realistic conditions and free calculations of signal coverage, where it is possible to get answers on questions on where to put access point, so that a more optimal and secure signal flow could be made possible. "*PRTG Network Monitor*" is a tool which could be put into this category, as it pertains to a commercial tool, but gives a possibility of complete examination of status and reacting to alarming activities, which are detected through calls. Active eavesdropping of the status contributes to a fast reaction, which besides examined threats are certain advises to the user also done, with potential solutions. Statistical collection and examination of data contributes to a future analysis of status and advancing to parts of the system where the outage was made. Rates are given by parameters not enough (1), enogh (2), thoroughly (3).

Table 1. *Display of evaluation tools*

	Display en-cription types	Operating systems	Package analysis	Visualization of channel activities	Responding of attacks	Monitoring	Rating
Wireshark	1	3	3	2	2	1	2
Acrylic WiFi	3	1	1	2	1	2	1,67
NetSpot	2	2	2	2	1	2	1,83
Kismet	3	1	2	3	2	3	2,17

CONCLUSION

The present terminology of attacks (*Cyber Kill Chain*) is established, so that a system of defense could also be uniformly defined, which is founded stopping individual parts of the chain. The use of tools for scanning and testing surrounding networks (*Acrylic WiFi and NetSpot*) is it possible to establish access to malicious and suspicious clones of the network, which are activated on the intention for redirecting traffic to them. After potential committing of an attack (i.e. *DOS*) the tool "*Kismet*" examined and showed a raised level of traffic and channel takeover, which the interruption of network, where the user can see that they are in the target of the attack.

Each of these presented solutions require a certain degree of administration, so the end user is not able to expect a total automation of these functionalities, which would be prevented, that is, removed an unauthorised attack on a wireless computer network.

It is necessary to establish a clear principle of defending computer networks, as the fall of network infrastructure, leads to fall of the whole system. A question is made on the amount of contribution to system defense that open-source tools have, which could be available to anyone, and just that advanced in certain segments. Operating system of open-source "Linux", as one of its versions offers "Kali", which is aimed towards ethical hacking, because it provides tools of open-source for the realisation of various tests, but can also be used for defense.

REFERENCES

1. Wireless Security Threat Taxonomy. IEEE Workshop on information assurance, Welch D., Lathrop S., 2003
2. Multi-Factor Authentication: A Survey, Ometov A., Bezzateev S., Mäkitalo N., Andreev S., Mikkonen T., Koucheryavy Y., 2018
3. Wireless Network Security: Vulnerabilities, Threats and Countermeasures, 2011
4. Intelligence-Driven Computer Network Defense Informed by Analysis of Adversary Campaigns and Intrusion Kill Chains, Hutchins E., Cloppert M., 2011
5. Instant Wireshark Starter, Singh A., 2013
6. Technical Aspects of Cyber Kill Chain, Yadav T., Rao M., 2016
7. Modified cyber kill chain model for multimediaservice environments, Kim H., Kwon H., Kim K., 2018
8. Analysis of the Coverage Area of the Access Point UsingNetspot Simulation, Suryani A., Pantjawati A., 2018
9. A Study on the Kismet-Based Wireless Intrusion Prevention System, Kim C., Xun C., Jung H., 2016
10. Network Monitoring Tools and Techniques uses in the Network Traffic Management System, Rahman W., Nguyen P., Rusliyadi M., Lydia E., Shankar K., 2019
11. Xirrus Wi-Fi Inspector, https://www.techspot.com/downloads/6901-xirrus-wifi-inspector.html, 2020
12. WiGLE, https://wigle.net/, 2020
13. Aircrack, https://www.aircrack-ng.org/doku.php?id=cracking_wpa, 2020
14. Wireshark, https://www.wireshark.org/, 2020
15. Acrylic WiFi, https://www.acrylicwifi.com/en/wlan-wifi-wireless-network-software-tools/wlan-scanner-acrylic-wifi-free/, 2020
16. Netspot, https://www.netspotapp.com/, 2020
17. Kismet, https://www.kismetwireless.net/, 2020
18. PRTG Network Monitor, https://www.paessler.com/, 2020

TOPIC VII

INNOVATIVE TECHNIQUES AND EQUIPMENT IN FORENSIC ENGINEERING

DOPING – SUBSTANCES WITH HORMONAL AND BIOLOGICAL EFFECTS

Ľuboš Cehlárik, MSc[1]
Academy of the Police Force, Bratislava, Slovak Republic

Jozef Meteňko, PhD[2]
Academy of the Police Force, Bratislava, Slovak Republic

Abstract: The paper deals with sports doping as a negative phenomenon in society. Characterization, distribution, and abuse of substances with hormonal and biological action in addition to androgenic anabolic steroids. In the introduction of the article we discuss the history of the concept of doping and its explanation in terms of several perspectives. There is a large number of substances with hormonal effects, so the paper focuses on their distribution and description of their negative properties on the human body in the context of legislation in force in Slovakia and from the point of view of forensic chemistry.

Key words: doping, anti-doping, sport, health, substances, hormonal effect, biological effect.

INTRODUCTION

In the beginning of the 20th and 21st century came the sports, but also in other areas of human activity big increase of demands to the indivbiduals and society. In sport, it is an extreme competition that places high requirements on mental and physical activity and the readiness of athletes in order to achieve the best results, break sports records, beat opponents and win. However, we take this for granted, because sport must have a sense of ethics, fair play, honesty, excellent performance, character, joy, fun, teamwork, dedication, linkage, respect for rules and laws, respect for oneself and other participants, courage, cohesion and solidarity. It is well known that sports competition is a global phenomenon that breaks down borders between countries. At the same time, we must accept the fact that sporting activity is facing new threats and challenges that have emerged in society. These include commercial pressure, abuse of young athletes, doping, racism, violence and money laundering.

1 lubos.cehlarik@minv.sk, lubos.cehlarik@akademiapz.sk
2 jozef.metenko@minv.sk, jmetenko@hotmail.com

We agree with the opinions of the authors (Rondová & Kasinec, 2015), who note that the professional sport is no longer a context of social prestige, when athletes performed their profession with pride and the price was mainly the feeling of victory, or modest financial evaluation. Modern sport has become an implement for raising large amounts of money, regardless of the tools, methods and damage involved, and that is why we often see various sports scandals, often celebrities, who, under public pressure, admit to using banned doping substances, for example.

The best athletes, coaches, sports managers cannot forget one of the main facts, which results from their social status, that they represent an ideal for young people to achieve sports success, they are strong role models that motivate young people (active as well as passive athletes). Any sport scandal, which is not eligible and is caused by inappropriate observance by a top athlete (e.g. exposed doping) sheds a very negative light on all the attributes of the sport we have known since ancient times.

The result is also a negative situation, where allowed or not allowed resources are also used by recreational sports amateurs in order to shape their body according to their own idealized idea, quickly gain excellent condition, muscle mass and improve overall physical and mental performance. It is striking that this problem affects younger and younger boys and girls (Rondová & Kasinec, 2015: 89). Therefore, in the next part of our paper we will focus on the issue of doping and anabolic androgenic steroids.

DOPING – CHARACTERIZATION

Nowadays we know several theories that try to explain the origin of the term doping. Kuklík and the collective state (2012) in their publications that in the 18th century the South African Kafrov tribe used the word “dop” for an invigorating alcoholic drink that they drank during a religious ceremonial dance. The Zulu tribe prepared a drink from grapes and cola to improve physical performance in battle. Extract from the plant Cola nitida and Cola accuminata was also commonly drunk in West Africa during running or walking competitions. American slang has been enriched by the term “doop” by Dutch colonizers, which means “strong sauce”. It was a special mixture of tobacco and Datura stramonium. The plant is toxic with the atropine alkaloid and has a sedative effect, whis is causing hallucinations and confusion. In 1889, the word “dope” was first used to prepare viscous opium for smoking, and in the 1990s it was used for all narcotics. Later, this term was introduced to name not only narcotics, but also many other substances, while in the field of sports, the word took the form of “doping”. The word “doping” can also be found in the English dictionary as early as 1889, and its definition expresses a special mixture of opium and narcotics for racehorses.

In the broader knowledge of the literature (Štáblová, Brejcha et al., 2006), we discover cognition about doping in antiquity and the Middle Ages, where, in addition to athletes (Olympians), doping agents were used by dukes and gladiators who drank supportive drinks to stimulate their aggression, overcome fatigue and reduce pain after injury. History indicates that coaches who focused on long-term physical training of athletes had knowledge of the effect of diet on their mental and physical readiness for the Olympics (they ate dried figs and drank herbal concostions to bleed some internal organs). It is also interesting to note that in the 18th century, when the main power of the Church declined, there was a freer scientific and technical development and with it a new era of doping. We can therefore say that since the 18th century there is a period when new synthetic substances used as doping come to the fore, and in the 19th century many chemicals are already known which have found application in this area. We give an example as early as 1886, when a cyclist died at the Paris-Bordeaux race as a

result of doping drug overdose, resp. almost a hundred years later (1967), an English racer Simpson died during an amphetamine overdose during the Tour de France.

It is necessary to emphasize that from the basic interpretation of the concept of doping and the historical analysis of the issues related to it, we can say that doping (the use of specific chemical substances) is about influencing, increasing physical or mental activity of a living organism in order to achieve better physical or mental performance (muscle growth, increasing sports performance, concentration, pain relief, changes in perception of reality, etc.).

The word doping can be found in the literature in several interpretations. Žilinka and Motyčík (2015) define the term as follows: "Doping - the use of prohibited pharmacological substances and methods. A phenomenon that is contrary to the "spirit of sport", i.e. such values as strengthening health, ethics, honesty, respect, fair play, teamwork or solidarity. A phenomenon that attacks the ideals and principles that are our common heritage, and thus the very moral foundations of society. " Doping states Štablová and Brejcha (2006) as "Doping is the use of substances that belong to the group of prohibited means, but also the use of illegal methods such as e.g. blood doping." However, both definitions lack the motivation and purpose of the use of illicit substances. Kuklík et al. (2012) offers a much broader clarification of the concept. It is any attempt by an athlete or other person (manager, coach, doctor, physiotherapist, masseur) to increase mental performance, or to treat an illness, injury - unless medically justified, only for the purpose of competition. "This includes the use, administration or prescribing of prohibited substances before or during a competition." He further emphasizes that this also applies to out-of-competition testing of anabolic steroids, peptide hormones and related substances with similar effects. Other prohibited methods or manipulations of samples taken for testing are also considered doping. Kuklík et al. (2012) also consider the incompleteness of the above definition in the context of constantly evolving modern technologies, i.e. whether it includes all possible doping methods. It leaves this question of creating a new definition open... Nowdays, we can declaredly say that the issue of doping concerns not only athletes, but has also been noted in professions that require physical strength, fitness and mental resilience to stress.

The International Federation of Sports Medicine gave attention to the problem of doping in sports as early as the 1920s, and in 1928, doping was banned at a meeting of the International Olympic Committee at its meeting. It was not until the 1960s that the first list of banned substances were adopted, but also without any sanctions. In 1967, the International Olympic Committee introduced anti-doping controls for the Olympic Games in Mexico, and in 1968 it defined the term doping (Štáblová, Brejcha et al., 2006). At the Montreal Olympics, doping controls on anabolic steroids have already been systematically carried out. In the early 1990s, it was known that banned substances and methods were used in at least forty types of disciplines, especially in elite sports. Their number already exceeded more than hundreds. In response, a list of banned substances and methods was issued, which was an effort to coordinate the efforts of international and domestic sports federations, sports organizations and sports organizations, and prevent their use from the public. During this period, a list of doping substances and methods was compiled annually and systematically by the Medical Committee of the International Olympic Committee and was one of the annexes to the International Olympic Charter against Doping in Sport (by adopting it we can speak of a systematic fight against doping). It was binding for all sports associations of the member countries. Gradually, the control system was overhauled, but despite any activity, doping came to the forefront of sports activities, which resulted in many sports scandals. Let's move on a little further, to the 21st century.

The World Anti-Doping Agency (WADA, Montreal, Quebec, Canada) first issued the World Anti-Doping Code in 2003, which entered into force in 2004. It was amended on January 1, 2009. Further

revisions were approved by the World Anti-Doping Council. Anti-Doping Agency in Johannesburg on 15 November 2013. The Comprehensive Revised Code is effective from 1 January 2015. Its primary objective is to protect the fundamental rights of athletes to practice sport without doping, to promote health, justice, equality for athletes, but also to harmonize, coordinate and implement anti-doping programs at international and national level to combat doping, detect, discourage and prevent doping (World Anti-Doping Agency – *Svetový antidopingový kódex 2015*, 2015).

Doping is defined by the Anti-Doping Agency of the Slovak Republic as the occurrence of one or more anti-doping rule violations in the following cases: evidence of the presence of the prohibited substance or its metabolites, markers, the use or attempted use of a prohibited substance or prohibited method by an athlete, avoidance, refusal or non-sampling, failure to provide information on whereabouts, falsification or attempted falsification during any part of a doping control, possession of a prohibited substance or prohibited method, trafficking in, or attempting to trade in, any prohibited substance or prohibited method, the submission or attempted administration of any prohibited substance or prohibited method to any athlete during the competition, or the submission or attempted administration of any prohibited substance or prohibited method that is prohibited outside the competition to any athlete outside the competition, participation, prohibited association (Antidoping Agency SR - *Antidopingové pravidlá SR. Verzia 1.2. 2017.*, 2017).

SUBSTANCES WITH HORMONAL AND BIOLOGICAL EFFECTS

Steroid hormones are a large group of compounds with a perhydrocyclopentanephenanthrene nucleus and are divided into glucocorticoids, mineralocorticoids, androgens, estrogens and progestogens according to their biological effect.

In general, anabolics are considered to be substances (anabolic substances) that promote anabolism, which consists in the creation of more complex molecules and the storage of energy in the supply. These include protein synthesis, the formation of glycogen stores or the energy of proteins and fats.

Natural anabolic substances are androgens, i.e. male sex hormones produced by the testes, which are responsible for the development of primary and secondary male sexual characteristics, spermatogenesis and stimulation of muscle growth (Chromý, 2008).

Androgenic anabolic steroids were developed in the 1930s to treat hypogonadism (a disorder of the gonads). Today, they are mainly used to treat delayed puberty and diseases associated with the weakening of the body. From a medical point of view, these are synthetic derivatives of the hormone testosterone.

They support muscle growth (anabolic effect) and the development of male sexual characteristics (androgenic effect). Anabolic steroids are among the substances that are abused mainly to increase sports performance, increase muscle weight, and increase strength. They are abused especially in sports where it is necessary to use a lot of force or in endurance disciplines. They are also used for regeneration after physically demanding training. They found their place in bodybuilding, fitness. This is a society-wide problem, in which we can also include drug use. The most risky group are adolescents, who often reach for the mentioned substances, which significantly affect their physical and mental health. As they affect the growth of skeletal muscles, they were abused mainly by bodybuilders, weightlifters and later they got into other sports. Their use logically led to influencing the results in sports activities. Many manufacturers intentionally chemically modify these substances in order to maximize their anabolic effects and suppress their androgenic effect. They are also risky

because of to the emergence of a specific form of addiction during their long-term use (Šimurka & Zavřel, 2008). Effective combating their production, distribution and use is currently an important element in combating crime in this area (health damage, addiction).

Anabolic steroids are among the most frequently detected chemicals in sports doping controls. They are responsible for proteosynthesis, which results in a positive nitrogen balance in the body, it is the so-called anabolic effect. Their advantage is that they shorten the part for regeneration and reduce the proportion of body fat. Their downside is that they affect male sexual characteristics. In English-speaking countries, the terms "juice", "steroids", "grain" have been used for anabolic steroids, and the term "roids" is used in American English (Chromý, 2008).

Chaloupková et al. (2019) states in its publication that according to an anonymous internet questionnaire (Parkinson & Evans, 2006) from 2006, almost 100% of users of anabolic steroids administer intramuscularly. 89% of users obtain them from illegal sources and more than 50% admit that they use steroids synthesized in illegal laboratories. Subjective side effects occur in almost 100% of anabolic steroids users. In addition, testosterone and its derivatives can be administered in the form of tablets, by injection, transdermally, through the nasal mucosa, the mucosa of the eye, rectally. They are used in low doses, because a significant increase in muscle mass can negatively affect sports performance.

DIVISION OF SUBSTANCES WITH HORMONAL AND BIOLOGICAL EFFECTS

Nowadays, the World Anti-Doping Agency (2020) distributes prohibited substances for the purposes of doping in sport and subsequently also the Antidoping Agency of the Slovak Republic (Antidoping Agency SR – *Zoznam zakázaných látok a metód*, 2020) as follows (we present a simplified form for publication purposes):

S0. Non - phase - in substances

S1. Anabolic substances

- Subgroup S1.1 Anabolic androgenic steroids
- Subgroup S1.2 Other anabolic substances

S2. Peptide hormones, growth factors, related substances and mimetics

- Subgroup S2.1 Erythropoietins and substances affecting erythropoiesis
- Subgroup S2.2 Peptide hormones and their release factors
- Subgroup S2.3 Growth factors and their modulators

S3. Beta-2 agonists

S4. Hormonal modulators and metabolic modulators

- Subgroup S4.1 Hormonal modulators
- Subgroup S4.2 Metabolic modulators

S5. Diuretics and masking agents

MISUSAGE OF SUBSTANCES WITH HORMONAL AND BIOLOGICAL EFFECTS

In the second part of our paper we will not speak about the first group of substances, i.e. exogenous and endogenous anabolic androgenic steroids, but rather we will list several selected substances with different hormonal and biological effects that are abused in sports doping.

To group S0. Non-phase-in substances include pharmacological substances that do not fall into any of the above groups and are not approved by a public authority for therapeutic usage in humans, as well as substances in preclinical, clinical or discontinued testing, synthetic drug derivatives and veterinary-approved medicinal products.

Other anabolic substances such as Clenbuterol, selective androgen receptor modulators, tibolone, zeranol, zilpaterol are included in subgroup S1.2. Selective androgen receptor modulators (SARMs) are substances that have a similar effect as anabolic androgenic steroids and do not even have a characteristic steroid structure. However, they have a 10-fold greater affinity for androgen receptors than testosterone alone, and once bound to the appropriate receptors, it is not possible for them to bind to testosterone. Currently, **ostarin** and **andrarine (S-4)** are the best studied. These are substances that can be taken orally and were originally used to treat muscular dystrophy, osteoporosis and benign prostatic hyperplasia. The products are illegally manufactured in China and distributed in Europe and America. As an example, we present a positive out-of-competition doping finding of ostarin in cyclist Nikita Novikov (May, 2013) and in the American wrestler Obenson Blanc (June, 2013), for whom they were imposed a two-year ban on sports activities. In June 2013, a positive doping finding for andarin was found in the Jamaican horse Damar Robinson, who was punished by a one-year ban (Antidoping Agency SR - *Anaboliká*, 2020).

Another hazardous group that includes banned substances is S2. Peptide hormones, growth factors, related substances and mimetics. These are substances with a diverse chemical structure and a wide range of effects. In general, these are proteins that are naturally formed in the human body and have stimulatory effects that affect the production of other substances.

The authors Pagáč, Gulán and Csáderová (2018) point out the abuse of erythropoietin (EPO) and other substances that affect erythropoiesis. Examples include erythropoietin receptor agonists, hypoxia-induced factor stabilizers, GATA inhibitors, and others. **Erythropoietin** is a glycoprotein cytokine that is excreted by the kidneys in cellular hypoxia. Its main function is to stimulate the production of red blood cells in the bone marrow. It was artificially manufactured in the 1980s to treat anemia. It is abused mainly for its ability to improve the endurance of the athlete and reduce the time needed to regenerate the human body. In 1998, the Festina team was expelled from the Tour de France for the use of erythropoietin because everyone had systematically used this banned doping substance. In 2013, Lance Armstrong also confessed to doping, i.e. he took erythropoietin, growth hormones, testosterone and cortisone along with blood transfusions. There are also cases of this form of doping in cross-country skiing, biathlon, triathlon, marathon running, speed skating, boxing, and weightlifting. Negative effects include increased hematocrit, increased blood pressure, risk of thrombosis, heart attack, and stroke.

In this group of substances, we must also mention **growth hormone** itself. Human growth hormone (hGH) consists of 191 amino acids and is often referred to as somatotropin. It has anabolic effects and therefore causes the growth of muscle mass. Skier Andrus Veerpalu or British rugby player Terry Newton (Antidoping Agency SR - *S2. Rastový hormón*, 2020) was convicted of its use.

To group S3. Beta-2 agonists include selective beta-2 agonists and non-selective beta-2 agonists, including any optical isomers. Examples include fenoterol, formoterol, higenamine, indacaterol, olodaterol, prokaterol, reproterol, salbutamol (with certain exceptions), salmeterol (with certain exceptions), terbutaline, tretoquinol, tulobuterol, Vilanterol. These substances are most often used for airway dilation in the treatment of asthma. These substances are abused by athletes for their ability to stimulate proteosynthesis (anabolic effect) and burn fat in high doses.

We can also include the above-mentioned **clenbuterol** in this group, which, although it belongs to the group S1.2 other anabolic substances, belongs to among beta-2 agonists due to its characteristic structure. Clenbuterol is known as a substance which was given to animals for significant fattening and the consumption of such foods can lead to positive doping findings in athletes. If an athlete has to undergo asthma treatment with beta-2 agonists, a therapeutic exemption must be granted. However, if an athlete experiences a beta-2 agonist with a diuretic or masking agent, this is considered an unfavorable analytical finding (unless a therapeutic exemption has been established for these agents). The Anti-Doping Agency SR states that in 2018 beta-2 agonists were detected in samples of athletes 164 ×, which is 4% of all adverse analytical findings (Antidoping Agency SR – *Higenamín ako zakázaný beta-2 agonista*, 2020).

To group S3. Beta-2 agonists also include the substance **higenamine**, which is found in several Asian plants such as *Nelumbo nucifera*, *Aconitum carmichaelli* or *Nandina domestica* used for culinary purposes. Higenamine can stimulate the relaxation of bronchial smooth muscle, which leads to dilation of the airways and at the same time increase the heart rate and myocardial contractility. It is most often used as a nutritional supplement for weight loss and a means to increase sports performance. It is legally sold in Europe, the USA and Canada (*https://www.a1supplements.com/swft-stims-higenamine*).

Beta-2 agonists are most often abused in endurance sports (cycling, athletics, swimming, cross-country skiing), where an increased supply of oxygen is needed. However, it should be emphasized that in athletes who do not suffer from asthma, these substances tend to have negative effects. Negative effects on the human body include excessive sweating, restlessness, tremor, tachycardia, angina pectoris, decreased blood potassium levels, arrhythmias, increased glucose levels. Here are some examples of illicit doping substance abuse: in 2010, clenbuterol was detected in a urine sample by Spanish cyclist Albert Contador. His victory in the Tour de France was unpaid and he was banned from working for two years. Austrian bodybulider Andreas Münzer died at the age of 31 of organ failure due to the use of beta-2 agonists. In 2002, Belgian police found erythropoietin, morin and Clenbuterol in the house of cyclist Frank Vandenbroucke. In February 2019, the sports activity of the Polish hockey player Lukasz Bartak was suspended for 18 months due to a positive finding of higenamine. The Anti-Doping Agency of the Slovak Republic states that in 2018 higenamine was detected worldwide in 42 samples of athletes, which is 26% within the group of beta-2 agonists (Antidoping Agency SR – *Higenamín ako beta-2 agonista*, 2020).

DOPING IN SLOVAK REALITIES

Since the task of every advanced society is to protect its own public health, the Slovak legal system also regulates the use of substances with hormonal effects by a criminal law, for example in Slovak Act no. 300/2005 Coll. The Criminal Code (§ 176), whose task is to prevent the access and use of these substances (including doping methods) by individuals. The wording of the offense with the legal name is as follows: "Unauthorized treatment of substances with an anabolic or other hormonal effect". The

purpose of this rule of law is, in essence, to prevent the unauthorized manufacturing, importing, exporting, transporting, offering substances with hormonal effects on a larger scale or providing, administering anabolic androgenic steroids or other substances with a hormonal effect to another person for a purpose other than treatment. In this case, intermediary activity is also punished. The penalty rate ranges from three years to 15 years, depending on the seriousness of the offender's conduct. It should be emphasized that this is not just a single provision of the Criminal Code.

In connection with the above-mentioned criminal offense (Section 176 of the Criminal Code), we consider it necessary to emphasize that by analyzing data from the Evidence-Statistical Crime System, we find that in 2015 no single criminal offense was registered in this system according to the above paragraph. In 2016, two cases were identified. In 2017, 10 violations were detected, two cases were clarified and three persons were prosecuted for this crime. In 2018, 5 violations of the law were detected, one case was clarified, while the damage of 134 euros caused by this crime was also registered, and in 2019, 5 cases were detected, one of which was subsequently clarified. From this simple calculation, we can conclude that the detection and clarification of crime in connection with the abuse of anabolic androgenic steroids and other substances with hormonal effects is at a very low level, which is in contrast to the general knowledge on this issue. From the analyzed data we can conclude that the abuse of these substances, which significantly damage the health of the human body has a high latency and in our opinion, it is not given sufficient attention, as is the case with drug crime. Another argument in relation to the low number of detected cases of substances with hormonal effects abuse may be that in detecting and clarifying drug and pharmaceutical crime, anabolic androgenic steroids and other substances with hormonal effects abuse is only an associated problem occurring in an insignificant form and is qualified by other criminal offenses.

CONCLUSION

In the introduction to our paper, we analyzed the historical context of the use of doping substances, and we found that these substances, which support the activity of the body through various subjective manifestations at the physiological or mental level, have been used since time immemorial. Likewise, the development of the word "doping" itself has its historical framework, which we have also described. Since the use of prohibited doping substances before, after or during sports activities at the national or global level, resp. their abuse by professional or amateur athletes is perceived in society as a negative phenomenon, so we have included in the contribution an international and national attitude to this negative phenomenon. The aim of our paper is not a simple definition of substances with hormonal and biological effects, their medical use, division, calculation of their huge amount, but we want to point out their abuse by young people (age limit is decreasing), people who are sensitive to their sports ideals and athletes (top or amateur).

We presented the reader with a wide range of chemicals – substances with hormonal effects. This is only an illustrative calculation, because there are many more substances included in the list of banned substances than we stated in our contribution. The Anti-Doping Agency of the Slovak Republic regularly prepares information a list not only about prohibited substances and methods, but also about authorized drugs, which are classified into groups according to the disease for which they are to be used and which can be used by the athlete (Antidoping Agency SR - *Povolené lieky 2019*, 2019). In this context, we want to draw attention not only to the abuse of substances with hormonal effects, respectively all prohibited doping substances and nutritional supplements during sports activities, but also on the issue of pharmaceutical crime, which also addresses the issue of combating illegally

manufactured pharmaceuticals, which can also be reached by top athletes. In this context, we still share Drugda's view (2019) that pharmaceutical crime has a negative impact on society as a whole in terms of public health threats through the production of counterfeit medicines, drugs, nutritional supplements, medical devices in underdeveloped countries with their subsequent smuggling, illegal distribution, and sales to more developed countries of the world. It further points out that those pharmaceutical products can be sold online or through individuals, and that this issue therefore needs to be addressed as a matter of urgency.

In the article, we also clearly indicated the forms of abuse and we also presented a huge calculation of the negative effects of substances with hormonal and biological effects on the human body. It is the negative effects of these often readily available hazardous substances that are a major problem for the public health of our society.

REFERENCES

1. DRUGDA, J. 2018. Farmaceutická kriminalita – základné pojmy a východiská. In *Farmaceutická kriminalita – hrozba pre Európu.* Bratislava: Akadémia Policajného zboru v Bratislave. p. 9-14. ISBN 978-80-8054-777-6.
2. CHALOUPKOVÁ, L. et al. 2019. Nález anabolických steroidů v těle zesnulého sportovce. In: *Bulletin národní protidrogové centrály.* No. 4, p. 30-33.
3. CHROMÝ, J. 2008. Užívání anabolických látek mládeží (nejen) ve světle trestního práva. In: *Trestněprávní revue*. Vol. 7, No. 7, p. 193-202.
4. KUKLÍK, J. et al. 2012. *Sportovní právo*. Praha: Auditorium, 2012. 182 p. ISBN 978-80-87284-28-5.
5. PARKINSON, A. B.; EVANS, N. A. 2006. Anabolic androgenic steroids: A survey of 500 users. In: *Med. Sci. Sports Exerc.* Vol. 38, No. 4, p. 644-651.
6. PAGÁČ, T.; GULÁN, Ľ.; CSÁDEROVÁ, Ž. 2018. Biologické látky s iným hormonálnym účinkom. In *Farmaceutická kriminalita – hrozba pre Európu.* Bratislava: Akadémia Policajného zboru v Bratislave. p. 85-91. ISBN 978-80-8054-777-6.
7. PYŠNÝ, L. 2006. *Doping: rizika zneužití – Zakázané prostředky v kondičním i vrcholovém sportu.* Praha: Grada Publishing, 2006. p. 19-20. ISBN 80-247-1702-6.
8. PYŠNÝ, L. 2005. Motivace a demotivace příjmu anabolických steroidů mládeží v ČR. In: *Vox pediatrie*. Vol. 5, No. 3, p. 20-21.
9. RONDOVÁ, E.; KASINEC, R. 2015. *Doping v športe, práve a filme.* In: Acta Facultatis Iuridicae Universitatis Comenianae Tomus XXXIV No. 2/2015. p. 84-99.
10. ŠIMURKA, P.; ZAVŘEL, M. 2008. Anabolické steroidy a mládež. In: *Pediatr. prax*. No. 6, p. 353-356.
11. ŠTABLOVÁ, R.; BREJCHA, B. et al. 2006. *Návykové látky a súčasnosť*. Praha: Vydavatelství PA ČR, 2006. 302 p. ISBN 80-7251-224-2.
12. ŽILINKA, M., MOTYČÍK, M. 2015. K trestnoprávnej ochrane pred dopingom. In: *Justičná revue*, Vol. 67, No. 1, p. 84-89.

INTERNET SOURCES:

13. ANTIDOPING AGENCY SR. *Anaboliká.* [online]. [cit. 21 July 2020]. Available on the Internet: https://www.antidoping.sk/data/files/364_s1-anabolika.pdf
14. ANTIDOPING AGENCY SR. *Antidopingové pravidlá Slovenskej republiky. Verzia 1.2b.* 2017. [online]. [cit. 19 July 2020]. Available on the Internet: https://www.antidoping.sk/data/files/86_sada-rules-12b-2017.pdf
15. ANTIDOPING AGENCY SR. *Higenamín ako beta-2 agonista.* [online]. [cit. 22 July 2020]. Available on the Internet: *https://www.antidoping.sk/data/files/629_higenamin.pdf*
16. ANTIDOPING AGENCY SR. *Higenamín ako zakázaný beta-2 agonista.* [online]. [cit. 21 July 2020]. Available on the Internet: https://www.antidoping.sk/data/files/546_higenamin.pdf
17. ANTIDOPING AGENCY SR. *Povolené lieky 2019.* [online]. [cit. 22 July 2020]. Available on the Internet: https://www.antidoping.sk/data/files/449_ada_skladacka_web.pdf
18. ANTIDOPING AGENCY SR. *S2. Rastový hormón*. online]. [cit. 23 July 2020]. Available on the Internet: https://www.antidoping.sk/data/files/433_s2-rastovy-hormon.pdf
19. ANTIDOPING AGENCY SR. *Zoznam zakázaných látok a metód.* [online]. [cit. 20 July 2020]. Available on the Internet: https://www.antidoping.sk/data/files/511_zoznam-zakazanych-latok-2020.pdf
20. WORLD ANTI-DOPING AGENCY. *Svetový antidopingový kódex 2015*. [online]. [cit. 19 July 2020]. Available on the Internet: https://www.wada-ama.org/sites/default/files/resources/files/wada-2015-code-slovak.pdf

ANALYSIS AND INTERPRETATION OF THE MICROMECHANICAL PROPERTIES MEASUREMENTS OF ELECTRODEPOSITED NICKEL COATINGS ON DIFFERENT SUBSTRATES

Ivana Mladenović[1]
ICTM – Department of Microelectronic Technologies, University of Belgrade, Serbia
Jovana Djorović Amanović[2]
Nebojša Nikolić[3]
ICTM – Department of Electrochemistry, University of Belgrade, Serbia
Dana Vasiljević Radović[4]
ICTM – Department of Microelectronic Technologies, University of Belgrade, Serbia
Vesna Radojević[5]
Faculty of Technology and Metallurgy, University of Belgrade, Serbia
Jelena Lamovec[6]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Fine-grained nickel coatings were electrodeposited by direct current (dc) regime onto different substrates: polycrystalline cold-rolled copper, polycrystalline brass and single crystal (100)-oriented silicon. These composite structures belong to different type of laminated composite systems. The influence of the substrate material and coating plating parameters on microstructural and mechanical properties, such as hardness and adhesion, was characterized by

1 ivana@nanosys.ihtm.bg.ac.rs
2 djorovic.jovana1993@gmail.com
3 nnikolic@ihtm.bg.ac.rs
4 dana@nanosys.ihtm.bg.ac.rs
5 vesnar@tmf.bg.ac.rs
6 jelena.lamovec@kpu.edu.rs

the Vickers microindentation test for different loads. Above critical indentation depth (usually around 10% of the coating thickness), the measured hardness is the so-called "composite hardness", because the substrate participates in the plastic deformations during indentation. Three composite hardness models (Korsunsky, Chicot-Lesage and Chen-Gao), constructed on different principles, were chosen for fitting the experimental results in order to determine the coating hardness and the critical reduced depth as the adhesion parameter. The coating hardness is mainly influenced by the current density, because increase in current density leads to decrease in grain size and increase in coating hardness. The critical reduced depth as the parameter of adhesion depends on the substrate material.

Keywords: Vickers microhardness; composite hardness; nickel electrodeposition; film adhesion, critical reduced depth

INTRODUCTION

Knowledge about the technology of manufacturing the desired material and its mechanical properties is extremely important when talking about the integrity of the material and the integrity of the devices that contain it. It enables the prediction or interpretation of fractures and the identification of the failure modes of materials and devices. The use of thin films and coatings has become very valuable in various engineering applications, such as improving wear and corrosion resistance, reducing electrical resistance or friction or in the fabrication of microelectromechanical devices, etc. (Mittal, 1976; Lewis, Reynolds & Gagg, 2004).

All technologies for obtaining thin coatings imply the existence of a substrate on which a coating will be formed and such structures can be considered as composite systems. The mechanical properties of these structures are specific and differ from the mechanical properties of bulk materials. For the characterization of these systems, composite hardness measurements and adhesion assessment are among the most important.

Since the thickness of the coatings is very small, the measured composite hardness is affected by a number of factors such as the microstructure of the coating and the substrate, the absolute hardness of the coating and the substrate and their relative hardness ratio, the thickness of the coating and its adhesion to the substrate, the indentation depth, etc. (Cammarata, 1994; Chicot & Lesage, 1995; Lamovec, Jovic, Randjelovic, Aleksic & Radojevic, 2008).

Electrodeposition (*ED*) is a reliable and widely used technology for obtaining the coatings on conductive substrates. It is low-temperature technique with high deposition rates, applicable to materials that differ greatly in their composition, crystallographic orientation or grain size. The microstructure and the mechanical properties of electrodeposited coatings are affected by the processing parameters (Ebrahimi, Bourne, Kelly & Matthews, 1999; Datta & Landolt, 2000).

The technology of obtaining nickel coatings by electrodeposition is known and very well developed. Electrodeposited nickel (ED Ni) coatings may have very good mechanical properties and be strengthened and hardened which is achieved by controlling the grain size and microstructure (Fritz, Mokwa & Schnakenberg, 2001).

Composite hardness and adhesion models

By applying the method of indentation to composite systems, the so-called composite hardness can be calculated, which contains the response of the film and the substrate to the plastic deformation. There is a need to obtain the hardness of the coating separately. There are several hardness models that are constructed on different principles.

Descriptive model of Korsunsky et al. is applicable to either plasticity- or fracture-dominated behavior with all scales measured relatively to the coating thickness. They introduced the term “the total work-of-indentation” during hardness testing, which consists of two parts: the plastic deformation in the substrate and the deformation and/or fracture energy in the coating. According to this model, the composite hardness, H_C, is expressed by Eq.1:

$$H_C = H_S + \left[\frac{1}{1+k'\left(d^2/t\right)}\right]\cdot\left(H_F - H_S\right),\quad k' = \frac{k}{49\cdot t} \tag{1}$$

where k is a dimensionless parameter of the material which expresses the response mode of the composite system to indentation, d is the indentation diagonal, t is the thickness of the coating, H_S is the substrate hardness and H_F is the coating hardness. This model does not allow the calculation of the composite hardness and film hardness for each individual load, but for the entire range of selected loads (Korsunsky, Gurk, Bull & Page, 1998).

The predictive model of Chicot-Lesage allows relatively simply calculation of the coating hardness from standard composite hardness measurements for every particular indentation load, knowing only the coating thickness and the substrate hardness. The model is constructed on the analogy between the variation of the Young modulus of reinforced composites as a function of the volume fraction of particles and the variation of the composite hardness between the substrate hardness and the coating hardness (Lesage & Chicot, 2005; Lesage, Pertuz, Puchi-Cabrera & Chicot, 2006).

Analogous to Meyer´s law, for each composite coating-substrate system, there is a similar relation between the measured indentation diagonal d and the applied load P:

$$P = a^* \cdot d^{n^*} \tag{2}$$

The hardness depends on the load, and the variable part of the hardness number with the load is expressed by the factor n^*. The authors adopt a function that connects the coating thickness t, indentation diagonal d and the factor n^*:

$$f\left(\frac{t}{d}\right) = \left(\frac{t}{d}\right)^m = f \quad where \quad m = \frac{1}{n^*} \tag{3}$$

The composite hardness H_C can be expressed as follows:

$$H_C = (1-f)/\left(1/H_S + f\cdot\left(\frac{1}{H_F} - \frac{1}{H_S}\right)\right) + f\cdot\left(H_S + f\cdot\left(H_F - H_S\right)\right) \tag{4}$$

The absolute hardness of the film H_F is calculated as the positive root of next equation:

$$A \cdot H_F^2 + B \cdot H_F + C = 0$$
with
$$A = f^2 \cdot (f-1)$$
$$B = (-2 \cdot f^3 + 2 \cdot f^2 - 1) \cdot H_S + (1-f) \cdot H_C \qquad (5)$$
$$C = f \cdot H_C \cdot H_S + f^2 \cdot (f-1) \cdot H_S^2$$

The Meyer´s composite index m is calculated by a linear regression performed on all experimental points obtained for analyzed coating-substrate system:

$$\ln d = m \cdot \ln P + b \qquad (6)$$

With a known value of m, the hardness of the film H_F can be calculated.

A method by Chen and Gao was developed for evaluation of the adhesion properties of the thin films and coatings. The method is based on a composite hardness model because adhesion was found to affect microhardness. The model introduces the depth weight factor function to estimate the contribution of local hardness to composite hardness. The equation used for the approximate calculation of composite hardness and adhesion parameter for the thin films and coatings is as follows:

$$H_C = H_S + \left[\frac{(m+1) \cdot t}{m \cdot b \cdot D} \right] \cdot (H_F - H_S) \qquad (7)$$

H_S and H_F are hardness of the substrate and the film, t is coating thickness, D is the indentation depth, m is the power index and b the critical reduced depth beyond which the material will have no effect on the measured hardness.

A low value of the critical reduced depth b (ratio between the radius of the plastic zone the indentation and the indentation depth) corresponds to poor adhesion while large value of the critical reduced depth b corresponds to good adhesion as shown in Fig.1.

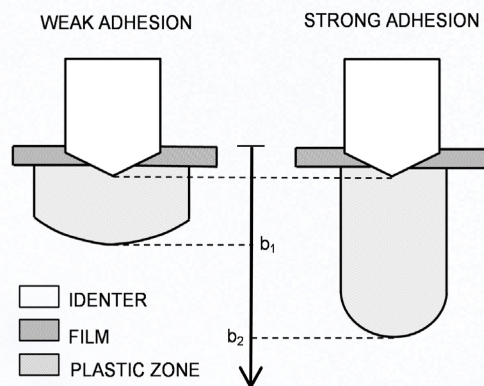


Fig. 1. *Schematic representation of deformation associated with indentation in a coated substrate for a weak adhesion (left) and strong adhesion (right).*

Using the indentation diagonal d instead of the indentation depth D, according to the expression $d = 7 \cdot D$, and introducing the relation $\Delta H = H_S - H_C$, the equation becomes:

$$\Delta H = \left[\frac{7\cdot(m+1)\cdot(H_S - H_F)}{m\cdot b}\right]\cdot(t/d) \tag{8}$$

It was found that the power index m is 1.2 for a system of hard film on soft substrate and 1.8 for a soft film on a hard substrate. The critical reduced depth b as the parameter for the assessment of adhesion can be calculated according to the Eq.8, together with experimental values of H_C, H_F and d, (Hou, Gao & Li, 1999; Chen & Gao, 2000).

Experimental procedure

The materials selected for the formation of the composite systems were electrodeposited by fine-grained nickel coatings on three different substrates: polycrystalline copper and brass foils and single crystal Si wafers with (100) orientation. Sputtered 100Å Cr and 1000Å Au layers were deposited on the Si semiconductor substrate as an adhesion and nucleation layer. Electrodeposition was performed by using the direct current galvanostatic regime from a sulfamate electrolyte consisting of 300 g/l Ni $(NH_2SO_3)_2\cdot 4H_2O$, 30 g/l $NiCl_2\cdot 6H_2O$, 30 g/l H_3BO_3 and 1 g/l saccharine, with pH-value and the temperature of the process maintained at 4.00 and 50°C, respectively. The current density values were maintained at 10 mA/cm^2 and 50 mA/cm^2 and the rates of the deposition for all the substrates were experimentally determined. The deposition time was determined according to the plating surface (2cm^2) and projected thickness of the deposit (10μm).

The mechanical properties of the substrates and the composite systems are characterized by a Vickers microhardness tester ″Leitz, Kleinharteprufer DURIMET I″ using up to 15 loads ranging from 4.9 N down to 0.049 N. Three indentations were made and the average value of the diagonal was determined by measuring six indentation diagonals for each load. With the average value of the diagonal, the mean value of the hardness was calculated. The experimental data were fitted with GnuPlot (http://www.gnuplot.info/).

RESULTS AND DISCUSSION

Absolute hardness of the substrates

Vickers microhardness measurements were performed on the uncoated substrates in order to calculate the absolute hardness of the substrates, and on the various coated substrates. With the average value of the indentation diagonal d and known applied load P, it is possible to calculate the composite hardness H_C using the Eq. (9):

$$H_C = 0.01854\cdot P\cdot d^{-2} \tag{9}$$

where the constant 0.01854 is the geometrical factor for the Vickers pyramid. Eq. (9) representing the classical Meyer law.

It was found that the proportional specimen resistance (*PSR*) model is suitable for calculation of the value of load-independent microhardness of the substrates (Li & Bradt, 1991).

$$P = a_1\cdot d + \left(P_c/d_0^2\right)\cdot d^2 \tag{10}$$

P_c is the critical applied load above which the microhardness becomes load independent and d_0 is the corresponding diagonal length of the indent. The slope of the straight line of dependence *P/d* against *d* gives the value for the calculation of the load independent microhardness. According to this model, the calculated values of load independent microhardness for the substrates, H_S, are 0.37 GPa for the copper foil, 1.41GPa for the brass foil and 6.49 GPa for the Si (100) wafers.

Composite hardness and film hardness were determined for the two different types of composite system according to different coating-substrate hardness ratio: hard electrodeposited Ni film on soft substrates of Cu, and brass and soft film of electrodeposited Ni on hard substrate of (100)-oriented Si.

Hard electrodeposited Ni coating on soft substrates of Cu and brass

The change of the composite hardness, H_C, with relative indentation depth, *h/t*, (indentation depth *h* through coating thickness *t*), is shown in Fig. 2. Nickel coatings on copper and brass substrates are 10-μm thick and were obtained with two current densities (10 and 50 mA/cm²).

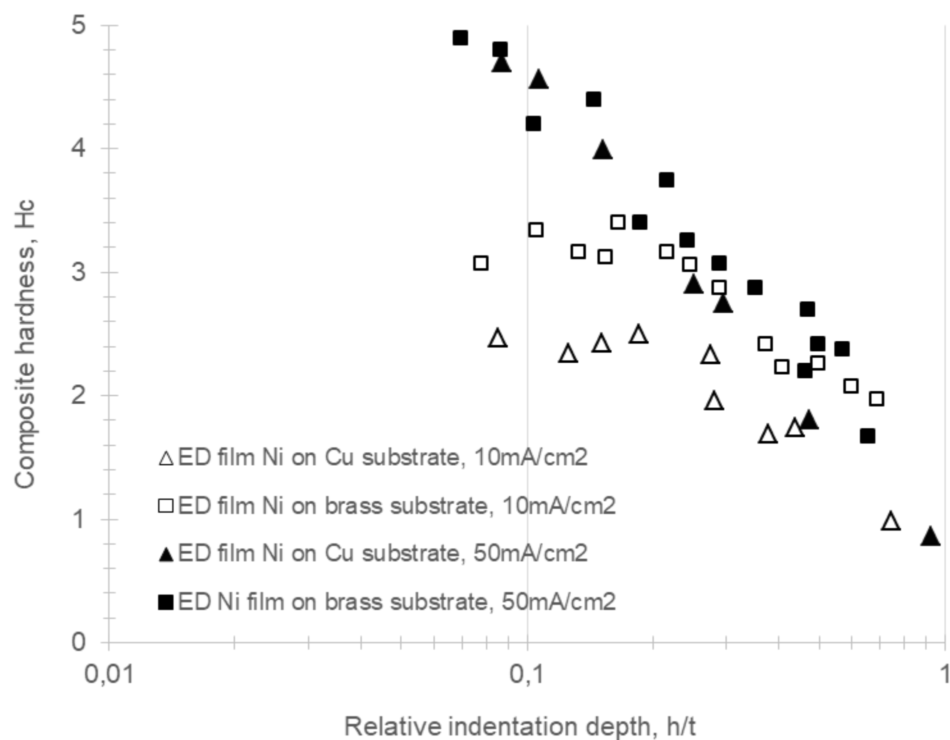


Fig.2. *Variation of the composite hardness H_C, with relative indentation depth, h/t, for electrodeposited Ni coatings on Cu and brass substrates. All coatings are 10μm thick. The dashed lines represent the hardness values of the copper (0.37 GPa) and brass (1.41 GPa) substrates.*

For the values of $h/t \leq 0.1$, the hardness response was found to originate only from the coating. The coatings obtained with a higher current density (50 mA/cm²) appeared harder than those deposited with 10 mA/cm². For hard coating on soft substrate composite systems, with increasing the relative indentation depth *h/t* ($0.1 \leq h/t \leq 1$), the composite hardness H_C decreases until the hardness of the substrate (H_S) is reached as shown by the dashed lines in Fig.2.

The experimental data for these systems were fitted by Eq. (1) which represents the composite hardness model of Korsunsky et al. Previous research has confirmed that the application of the Korsunsky model is adequate for this type of composite system (Lamovec, Jovic, Aleksic & Radojevic, 2009). H_S was taken as 0.37 GPa for the copper and 1.41 GPa for the brass substrate, according to the experimentally obtained values. Curve-fit data produced from the model validation process for four electrodeposited Ni coatings are given in Table 1.

Table 1. *Values of the fitting results according to the Korsunsky model for the 10-μm thick Ni coatings on Cu and brass substrates*

Quantity	K model	Asymptotic standard error
Electrodeposited Ni coating (10 μm, 10 mA/cm2) on Cu substrate		
H_F / GPa	2.68	±0.11
k′	0.0087	±0.0017
Electrodeposited Ni coating (10 μm, 50 mA/cm2) on Cu substrate		
HF / GPa	5.4	±0.12
k′	0.029	±0.002
Electrodeposited Ni coating (10 μm, 10 mA/cm2) on brass substrate		
HF / GPa	3.05	±0.185
k′	0.1976	±0.018
Electrodeposited Ni coating (10 μm, 50 mA/cm2) on brass substrate		
HF / GPa	5.74	±0.718
k′	0.259	±0.022

Higher values of the composite hardness for the Ni coating on brass substrate coating system come from the contribution of the hardness of brass as a substrate. The agreement of the hardness values of Ni coatings on different substrates according to the model of Korsunsky is very satisfactory.

Soft electrodeposited Ni coating on hard (100)-oriented Si substrate

The change of the composite hardness H_C, with relative indentation depth h/t, for the Ni coatings of 10-μm thickness on Si (100) substrate deposited with two different current densities 10 and 50 mA/cm^2 is shown in Fig.3.

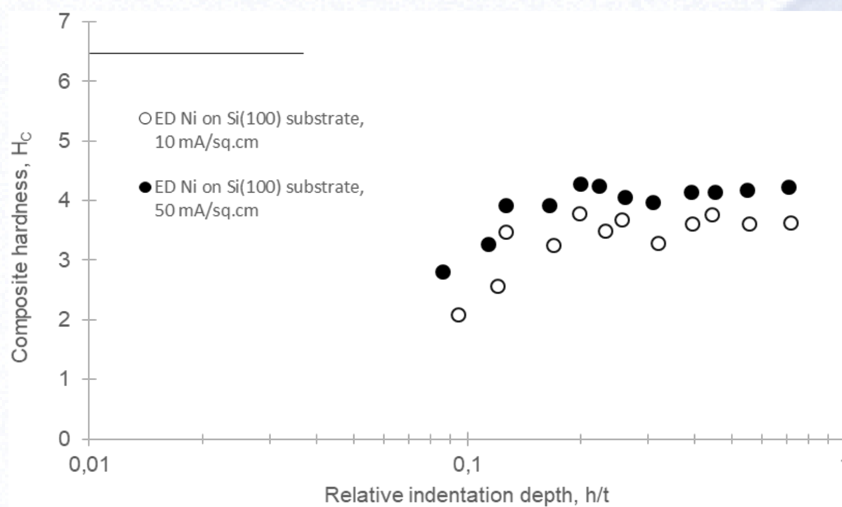


Fig.3. *Variation of the composite hardness H_C, with relative indentation depth h/t, for electrodeposited Ni coatings on Si (100) substrate. Ni coatings are 10 μm thick. The solid line indicates the hardness of the Si (100) substrate (H_S = 6.49GPa).*

It was found that for shallow penetration depths (*h/t* ≤ 0.1), the response is of the coating only. It is considered that the indentation response in the region 0.1 ≤ *h/t* ≤ 1, corresponds to the whole composite coating-substrate system. In contrast to the hardness response of the "hard coating on soft substrate" system (Fig.2), the system of the "soft coating on hard substrate" is characterized by an increase in composite hardness with relative indentation depth (Fig.3). Because deposition with a higher current density leads to a reduction in the grain size in the coatings (Lamovec, Jovic, Randjelovic, Aleksic & Radojevic, 2008), coatings obtained with the higher current density (50 mA/cm^2) have a higher composite hardness H_C than those deposited with the 10 mA/cm^2.

The experimental data for this system was fitted with the model of Chicot-Lesage (Eq.4). *Hs* was taken as 6.49 GPa, which is the experimentally determined hardness value for the Si (100) oriented substrate. The coatings are 10-μm thick. The results are shown in Fig.4.

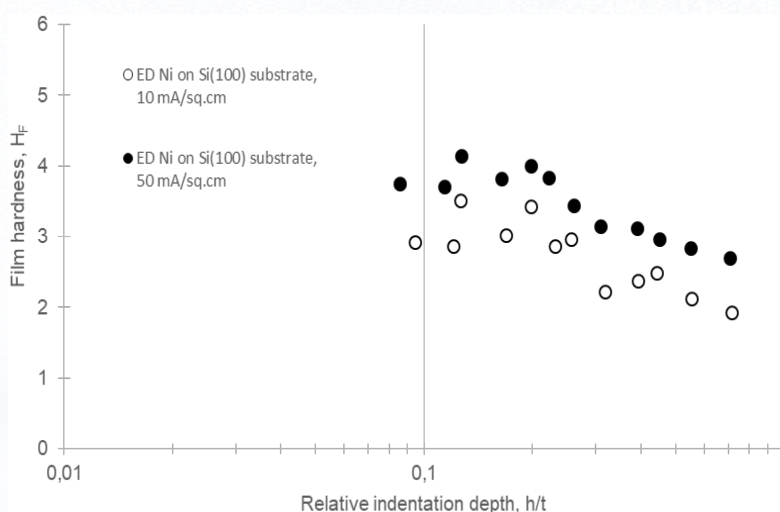


Fig.4. *Variation of the coating hardness H_F, with relative indentation depth h/t, for the system consisted of electrodeposited Ni coatings on Si (100) substrate according to the Chicot-Lesage composite hardness model.*

The values obtained for the coating hardness H_F, are not constant but depend on the applied load P, thickness of the coating t and the current density. These variations can be associated with various physical phenomena such as indentation size effect, the elastic contribution of the substrate for low loads, cracking the coating around the indent, etc. (Lesage et al., 2005).

Evaluation of coating adhesion

According to the model of Chen and Gao, adhesion affects the measured composite hardness (Chen & Gao; 2000; Magagnin, Maboudian, Carraro, 2003; Lamovec et al., 2019). This model was used to evaluate the adhesion of ED Ni coatings on copper, brass and Si (100) substrates, calculating the critical reduced depth b. The results for the coating hardness H_F, obtained using the models of Korsunsky and Chicot-Lesage, were used in the calculation. In Table 2, the results of the critical reduced depth b, are given.

Table 2. *Critical reduced depth values b, for the systems of electrodeposited Ni coatings on the Cu, brass and Si (100) substrates*

Sample		Critical reduced depth, b
ED Ni on Si (100) substrate	10 mA/cm^2	8.43
	50 mA/cm^2	8.95
ED Ni on Cu substrate	10 mA/cm^2	13.71
	50 mA/cm^2	15.44
ED Ni on brass substrate	10 mA/cm^2	14.08
	50 mA/cm^2	16.13

When increasing the indentation depth, the hardness difference decreases more rapidly due to poor adhesion and this is directly reflected in the value of critical reduced depth. Increasing values of the critical reduced depth correspond to increasing adhesion. The results show the dependence of the adhesion quality on the type of composite system, i.e. substrate type and microstructure of substrate and coating. The ED Ni coatings on Si (100) substrate show weaker adhesion compared to the ED Ni coatings on Cu or brass substrates, regardless of the existence of an adhesion sublayer. Increasing the current density leads to achieving a finer coating microstructure and improving the adhesion of the coatings to the substrates for all composite systems.

CONCLUSION

For the analysis of mechanical properties of different laminate composite systems, nickel coatings are electrodeposited on copper, brass and silicon substrates. These substrates differ in their chemical composition, microstructure and mechanical properties. The change in the microstructure and consequently the properties of the nickel coatings was achieved by changing the current density during electrodeposition (10 mA/cm^2 and 50 mA/cm^2). The thickness of the coatings was kept constant at 10-μm.

The tendency of the composite hardness to change depends on the type of the composite system. This means differences in the mechanical properties of Ni coatings and substrates (polycrystalline and ductile metals and monocrystalline brittle semiconductor): the hardness of the substrate, the hardness of the coating, their relative differences and thickness of the film.

Two important mechanical properties, hardness and adhesion, were analyzed by the Vickers indentation method. Adhesion of the coatings on the substrates influences the hardness values of the composite system.

Ni coatings on Cu and brass substrates represent composite systems of "hard coating on soft substrate" type. In order to obtain the absolute hardness of the Ni coatings H_F, according to earlier research, the composite model of Korsunsky was applied. The values of the composite hardness H_C, for the system ED Ni on brass are higher than for the system ED Ni on Cu substrate due to higher hardness value of the brass substrate (1.41 GPa for the brass and 0.37 GPa for the Cu substrate). The values of the coating hardness H_F, depend on the current density and are in good agreement for both substrates (2.68GPa and 3.05 GPa for 10 mA/cm^2 and 5.4GPa and 5.74 GPa for 50 mA/cm^2).

Nickel coatings on Si (100) substrate can be considered as "soft coating on hard substrate" composite system type. For hardness analysis, composite model of Chicot-Lesage was chosen and applied to experimental measurements of composite hardness in order to obtain the hardness of Ni coatings. The values obtained for the coating hardness H_F, depend on the applied load, i.e. indentation depth. With increasing the indentation depth and approaching the substrate, H_F had descending character.

Model of Chen and Gao, based on the composite hardness measurements, introduces the critical reduced depth *b*, as the adhesion assessment parameter. A large value of the critical reduced depth corresponds to good adhesion. The similar values of *b* are obtained for the Ni coatings on Cu and brass substrates, slightly larger for the brass substrate. Significantly lower values for *b* are obtained for the Ni coatings on Si substrates, which indicates a weaker adhesion of these coatings compared to the previously analyzed systems.

Acknowledgement

This work was financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia (Grant No. 451-03-68/2020-14/200026 and No. 451-03-68/2020-14/200135 and on the basis of the Contract on realization and financing of scientific research work of NIO in 2020, subprogram I15001).

REFERENCES

1. Cammarata, R.C. (1994), Mechanical properties of nanocomposite thin films, *Thin Solid Films*, 240:82-87, https://doi.org/10.1016/0040-6090(94)90699-8
2. Chen, M., Gao, J. (2000). The adhesion of copper films coated on silicon and glass substrates ,
Modern Physics Letters B, 14(3): 103-108, https://doi.org/10.1142/S0217984900000161
3. Chicot, D., Lesage, J., (1995), Absolute hardness of thin films and coatings, *Thin Solid Films*, 254:123-130, https://doi.org/10.1016/0040-6090(94)06239-H
4. Datta, M., Landolt, D. (2000). Fundamental aspects and applications of electrochemical microfabrication, *Electrochimica Acta*, 45: 2535-2558, https://doi.org/10.1016/S0013-4686(00)00350-9

5. Ebrahimi, F., Bourne, G.R., Kelly, M.S., Matthews, T.E. (1999). Mechanical properties of nanocrystalline nickel produced by electrodeposition, *Nanostructured materials*, 11(3): 343-350 https://doi.org/10.1016/S0965-9773(99)00050-1
6. Fritz, T., Mokwa, W., Schnakenberg, U. (2001). Material characterisation of electroplated nickel structures for microsystem technology, *Electrochimica Acta* 47: 55-60 https://doi.org/10.1016/S0013-4686(01)00576-X
7. Hou, Q.R., Gao & Li, S.J., (1999). Adhesion and its influence on micro-hardness of DLC and SiC films, *Eur.Phys.J.B.,* Vol.8, pp.493-496, https://doi.org/10.1007/s100510050716
8. Korsunsky, A.M., McGurk, M.R., Bull, S.J., Page, T.F. (1998), On the hardness of coated systems, *Surface and Coating Technology,* Vol.99, Issues 1-2, pp.171-183 https://doi.org/10.1016/S0257-8972(97)00522-7
9. Lamovec, J., Jovic, V., Aleksic, R. & Radojevic, V., (2009), Micromechanical and structural properties of nickel coatings electrodeposited on two different substrates, *J.Serb.Chem.Soc*., 74(7)817-831, https://doi.org/10.2298/JSC0907817L
10. Lamovec, J., Jović, V., Jaćimovski, S., Jovanov, G., Radojević, V., Šetrajčić, J. (2019), Hardness and assessment of adhesion of monolayer and multilayer nickel thin films electrochemically deposited on silicon substrates with and without the ultrasonic agitation, *NBP*, 24(1), pp.19-31, https://doi.org/10.5937/nabepo24-19682
11. Lamovec, J., Jović, V., Randjelovic, D., Aleksic, R., Radojevic, V. (2008). Analysis of the composite and film hardness of electrodeposited nickel coatings on different substrates, *Thin Solid Films*, 516: 8646-8654, http://dx.doi.org/10.1016/j.tsf.2008.06.035
12. Lesage et al. (2005), A model of hardness determination of thin coatings from standard micro-indentation tests, *Surface and Coatings Technology*, Vol.200, Issues 1-4, p.886, https://doi.org/10.1016/j.surfcoat.2005.01.056
13. Lesage, J., Pertuz, A., Puchi-Cabrera, E.S., Chicot, D. (2006). A model to determine the surface hardness of thin films from standard micro-indentation tests, *Thin Solid Films* 497: 232-238, https://doi.org/10.1016/j.tsf.2005.09.194
14. Lewis, P.R., Reynolds, K., Gagg, C., (2004). *Forensic Materials Engineering, case studies*. CRC Press, ISBN 0-8493-1182-9
15. Li, H., Bradt, R.C. (1993). The microhardness indentation load/size effect in rutile and cassiterite single crystals, *J. Mater. Sci.,* 28: 917- 926. https://doi.org/10.1007/BF00400874
16. Magagnin, L., Maboudian, R., Carraro, C. (2003). Adhesion evaluation of immersion plating copper films on silicon by microindentation measurements, *Thin Solid Films*, 434: 100-105, https://doi.org/10.1016/S0040-6090(03)00469-3
17. Mittal, K.L. (1976), Adhesion measurements of thin films, *Electrocomponent Science and technology*, vol.3, pp.21-42, https://doi.org/10.1155/APEC.3.21

TOWARDS THE DEVELOPMENT OF READINESS FOR THE APPLICATION OF THE PRINCIPLES OF ELECTRONIC BUSINESS FOR THE EXCHANGE OF BIOMETRIC DATA KEPT IN AUTOMATED SYSTEMS AS A BASIS FOR ESTABLISHING THE IDENTITY OF PERSONS

Snežana Stojičić[1]
Ministry of the Interior of the Republic of Serbia

Nataša Petrović[2],
Ministry of the Interior of the Republic of Serbia

Radovan Radovanović[3], **PhD**
University of Criminal Investigation and Police Studies, Belgrade

Abstract: Some of the classical methods of identification, which according to the general characteristics of biometrics, acquire a completely new meaning in the digital environment. Namely, the development aimed at achieving interoperability, standardization and application of the principles of electronic business in the environment of modern technological solutions enables identification methods based on biometric data to experience their flourishing and new affirmation. The technical technological solution of the system for AFIS (Automated finger identification system) and FIIS (Facial image identification system) are systems that are being developed as one of the answers to the need for quick identification of persons. The application of the system for automatic identification of persons with the help of fingerprints and photographs modernizes and improves performance and efficiency of the police work around the world and other investigative bodies in order to combat crime.

Keywords: identification, biometric data, AFIS and FIIS, interoperability, police cooperation, traces, data exchange

1 snezana.stojicic@mup.gov.rs
2 natasa.petrovic@mup.gov.rs
3 radovan.radovanovic@kpu.edu.rs

INTRODUCTION

To meet the development of readiness to apply the principles of electronic business for the exchange of biometric data which are kept in automated systems as a basis for determining the identity of persons, we consider systems which store this type of data and have become usual and necessary (Nilsson, 2019). AFIS and FIIS systems are specialist programs and technologies intended primarily for the criminal police for registration, identification, and verification of the identity of perpetrators of crimes that are prosecuted ex officio, and which are carried out on the basis of orders issued by the public prosecutor or the competent court (Biometric Standards for Law Enforcement, 2020). However, nowadays, the application of these systems is more and more widespread among private entities in the tasks of authorization of access and data protection (banks, access control ...) (Jasserand, 2016). Identification of a person in AFIS and FIIS involves the use of biometric data, fingerprints and / or facial photographs (Campbell, Chandler & Jones, 2020). The exchange of data between automated identification systems based on biometric data is one of the current challenges, especially in the field of international police cooperation (Guidance Biometric data-sharing, 2016; Biometric data-sharing process (FCC), 2016). The possibilities of these systems for the needs of the civil sector in the form of introduction of security systems, entrance control, secure identification of persons in the banking sector, etc. were also recognized. With the introduction of these systems in the Republic of Serbia and their improvement based on the application of the principles of electronic business, the preconditions for harmonization with standards and exchange of data according to European and world standards, as well as for preventing misuse of personal identity data are realized (Herr, & Podio, 2015). To meet the development of readiness to apply the principles of electronic business for the exchange of biometric data kept in automated systems as a basis for determining the identity of persons, the need to connect in existing systems for exchanging dactyloscopic and other data internationally such as Prum and EURODAC was recognized (Biometrics and the Schengen Information System – Fostering identification capabilities, 2020).

BIOMETRIC DATA AND IDENTIFICATION

The information which we are using to confirm the identity of the person is verified during the registration of the person and the acquisition of the necessary biometric data. The connection between a person and a print or photograph is unambiguous. There is a justified requirement for reliable and rapid identification of persons either perpetrators of crimes or other persons who are not from that category, and for whom such a need has arisen (mass accidents, identification of a person who does not know his identity or does not want to be identified, accidental death of persons who do not have identification documents on them, etc.). The systems, which are designed for the purpose of identification of persons using these data, consist of two components: the first is a component that processes biometric data of persons for the issuance of ID documents and the second is a component that processes data of persons in criminal-technical registration. Furthermore, apart from the purpose, they also differ in the number of data that are taken during the acquisition. Thus, in the first component, the acquisition of rolled and touch prints of one finger of the left and right hand and one face photograph is performed, and its task is to provide unambiguous biometric identification of citizens, providing preconditions for production of new identification documents for all citizens, control of access to facilities for the purpose of preventing access by persons without authorization. The purpose of the second component is to enable automation in the process of registration and biometric identification of perpetrators. There is an acquisition of fingerprints of all ten fingers, rolled and to the touch, both

palms and edges and photos of faces, full face, left profile, right half profile, tattoo, and scars. The data is stored in central databases and it is anticipated that the exchange of data with appropriate organizations will take place according to world standards.

The importance and need for the exchange of dactyloscopic data between countries (PRUM, PCC SEE, EURODAC)

The modern world is increasingly facing the problem of cross-border organized crime, terrorism and migration, and there is a need for rapid exchange of data between countries, so that every person belonging to these categories can be efficiently recognized and identified in the shortest possible time (Policy Framework for the Regional Biometric Data Exchange Solution, 2015; Campbell, Z. & Jones, C., 2020).

The countries of the European Union have established a system for the exchange of biometric, DNA and vehicle data, the so-called Prum Convention and the Prum Agreement. For the needs of combating illegal migration, the EURODAC system has been established.

The Prum Convention is a law enforcement agreement signed on 27 May 2005 by Austria, Belgium, France, Germany, Luxembourg, the Netherlands and Spain in the town of Prum, Germany, and is open to all EU members wishing to access this type of data. .

The key elements of the convention were gathered by the Council of the European Union Decision 2008/615 / JHA of 23 June 2008 on strengthening cross-border cooperation, in particular in the fight against terrorism and cross-border crime (Council Decision 2008/615/JHA, 2008; Council Decision 2008/616/JHA, 2008).

The Convention has been adopted to allow signatories to exchange data on DNA, fingerprints and data on registered vehicles. It also contains provisions on the deployment of armed celestial marshals on flights between States Parties, joint police patrols, the entry of (armed) police forces into the territory of another state to prevent imminent danger (hot search) and cooperation in the event of a mass event or disaster, but these provisions are not discussed below.

The Convention has been adopted outside the framework of the European Union (and its enhanced cooperation mechanism), and is open to accession by any EU Member State that meets the conditions for the provisions of this Convention to apply only if they are compatible with European Union law (Figure 1).

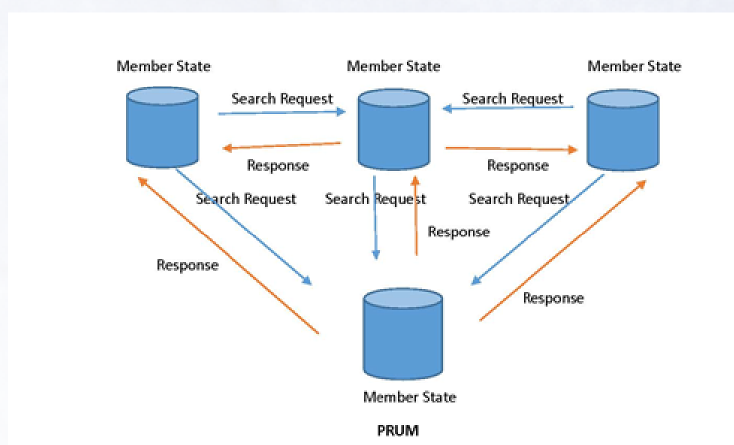


Figure 1. Scheme of data exchange transactions in the Prum Agreement

“European Dactyloscopy” (EURODAC) is a database of fingerprints that serves to identify asylum seekers and detect illegal border crossings in the European Union. Fingerprints are taken from asylum seekers and illegal migrants over the age of 14 on the basis of the EU law. In the following procedure, they are digitally sent to the central system of the European Commission and automatically checked against other fingerprints in the database (Figure 2). This makes it possible to determine whether the asylum seeker has already applied in another EU Member State or has illegally passed through another EU Member State in which he or she is registered (“first contact principle”). The automated fingerprint identification system is the first of its kind at the level of the European Union and has been operating since 2003.

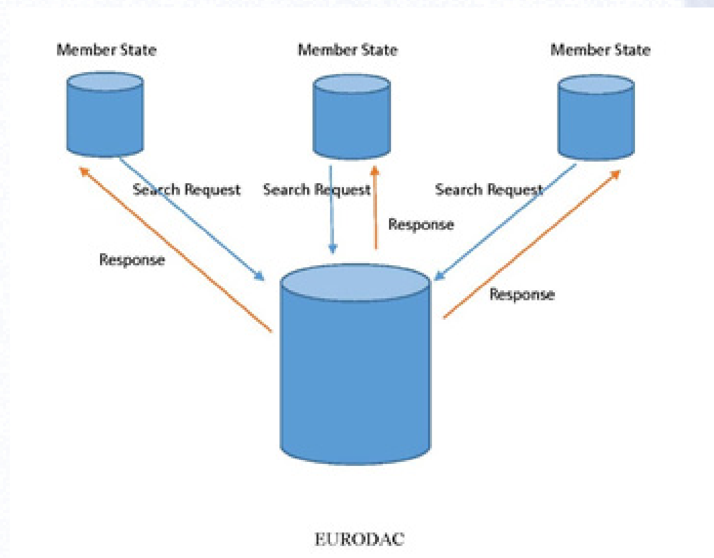


Figure 2. Image of data exchange transactions in the EURODAC system

In order for police and judicial cooperation between states to be effective, it is necessary that the essential information can be exchanged quickly and efficiently between the competent authorities of the Member States, and in order for such exchange to take place, it is necessary to establish appropriate systems. The data shared in cross-border cooperation should guarantee the accuracy and security of data during transmission, processing and storage, recording and exchange of data, as well as guarantee the limited use of data exchanged, according to the Data Protection Act of the country whose data are processed (Biometric data and data protection regulation, 2020).

AFIS AND FIIS DATA STORAGE

Storing paper documents in endless archives that contained demographic and dactyloscopic data on faces, the so-called dactyloscopic cards, is a thing of the past. The AFIS and FIIS systems allow demographic and biometric data to be stored in central databases and processed at high speed and reliability. Databases are standardized and adapted to the needs of data exchange. The data are distributed in the corresponding databases, namely in the ten-fingered database - the database for registered perpetrators of crimes, the two-fingered database - the database of persons requesting the issuance of identification documents, the database of palms, the database of unresolved cases of fingerprints, and fingerprints and the database of photographs. The ten-person database of registered persons contains demographic data, ten fingerprints, palms, control prints, edges, troposal photographs, photographs

of tattoos, birthmarks and scars. The two-fingered database contains demographic data for all persons with two forefingerprints (valid and tactile), or some other two fingers if the forefingers are not available. The palm database contains demographic data of faces and prints of their palms and edges. The database of unresolved traces of palms and fingers contains fingerprints found at the crime scene. The database of demographics contains demographic data and one full-face photograph of a person, and 1: N fast search based on a photograph is enabled for persons who are particularly interesting and who need to be identified in this way. Basic demographic data for AFIS and FIIS databases can also be downloaded from other systems in which data for persons are stored. In the Republic of Serbia, they are taken over from the Unified Information System, which is also updated daily with changes from the AFIS and FIIS systems. Decentralized uniform entry, control, verification, identification and search are enabled. Database administration is performed centrally.

AFIS AND FIIS – DATA TYPES AND DATABASES

The primary objectives of the AFIS and FIIS systems include:

(a) Transferring and processing dactyloscopic evidence, as well as fingerprints of citizens and persons deprived of their liberty, as well as performing fingerprint and image searches in order to identify individuals.

(b) Acquisition, processing and comparison of fingerprint and palm prints - nn traces from the spot with indisputable prints from the corresponding databases.

(c) Acquisition, processing and comparison of fingerprints and photographs for the purpose of issuing identification documents.

The configuration of the AFIS and FIIS systems consists of a central system and workstations with appropriate peripherals positioned at remote locations. At the central location of the AFIS system, there are servers that manage the complete system and databases, as well as communication with workstations, i.e. system users. There is also a server that manages the match subsystem on which electronic characteristics of the prints are searched. The speed of the search depends on the number and strength of the swordsmen. To establish the system is necessary to provide all network connections. That will connect remote workstations to the central system. Remote workstations include workstations for registration of perpetrators of criminal offenses and identification of traces from the scene, as well as workstations that serve for the acquisition of biometric data for the production of identification documents (Libert, Grantham, Bandini, Ko, Orandi, & Watson, 2020; Libert, Grantham, Bandini, Wood, Garris, Ko, Byers, at al., 2018)

AFIS and FIIS, which are used for the registration of persons and the identification of perpetrators of criminal acts using nn traces from the scene, the so-called "The criminal component" consists of 5 databases:

1. TPF -Ten Print Finger,
2. PP - Palm Print,
3. ULF – Unsolved Latent Finger,
4. ULP – Unsolved Latent Palm and
5. Face.

Databases numbered above as 1, 2 and 5 are also related to personal data such as: identification number (JMBG), name, surname, name of father, mother, date of birth, date of registration, etc.

Databases numbered above as 3 and 4 are related to a specific crime offence and data related to the date and place of the crime offence, the injured party, the contact number, etc. This data depend on state legislation where systems are in use.

The database of undisputed fingerprints consists of 10 rolled prints and control prints - control thumbs and 4 control fingers of the right and left hand (Figure 3).

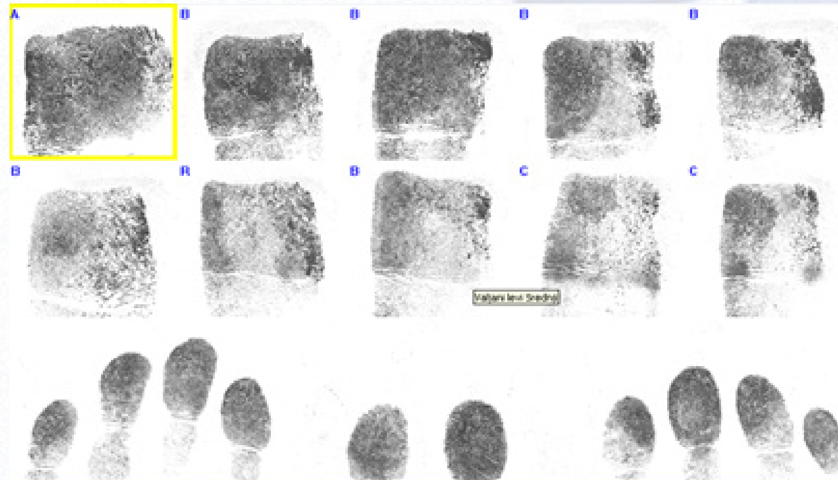


Figure 3. Fingerprint database

The database of undisputed palm prints consists of palm prints and edge prints of both hands. The database of undisputed photographs of faces consists of photographs of faces taken from the front, left profile and right semi profile, image of the whole figure and photograph of tattoos, scars and marks.

Bases of nn traces from the site consist of images of traces caused and processed by dactyloscopic methods (Latent Print AFIS Interoperability Working Group, 2020).

The so-called "The civilian component" consists of two types of databases:

1. Fingerprint database (2FF) and
2. Face.

The fingerprint database consists of rolled and touch fingerprints of both index fingers. The database of photographs consists of one photograph of a face taken from the front (Figure 4). If the index fingers of the person to whom the identification document is issuing are not available (one or both) due to amputation or permanent damage, a sweetening fingerprint is taken according to a predetermined schedule: thumb, middle finger, ring finger and little finger. The ordinal number of the finger is stored as data in the central system (NIST Study Measures Performance Accuracy of Contactless Fingerprinting Tech, 2020).

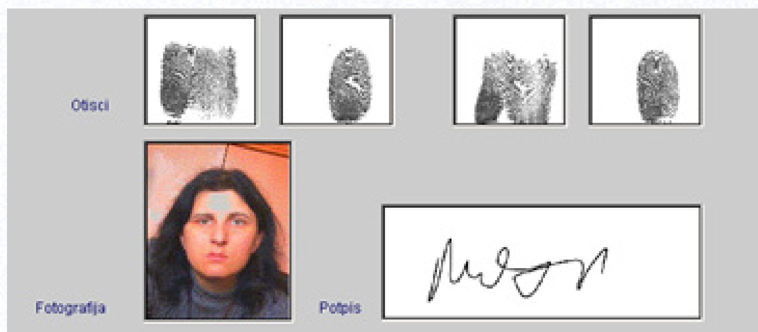


Figure 4. Biometric data taken for the purpose of issuing ID documents

TYPES OF SEARCH

Searches were also performed on such systems on the basis of the identification number. In the Republic of Serbia, a PERSONAL ID or a CASE ID might be used. The search filter might be set to be the number of processed items, fingerprints, traces and photographs. It should be noted that the reliability of identification using the AFIS system (97%) is higher compared to the FIIS system (80%) due to the higher number of coded characteristics (ID System Statement of Work for MOI AFIS and FIIS, 2003).

Searches can be: one to one (1:1) and one to many (1: N).

Searching or more accurately comparing 1:1 fingerprint means verifying a person's identity (Figure 5). This search takes place with the person present and compares the acquired biometric data with the data on the document (for example, ID card, passport, etc.), or when we have fingerprints of the person in the system and submitted fingerprints in electronic or paper form with the request to a person's identity verification (readmission operations and requests forwarded through Interpol).

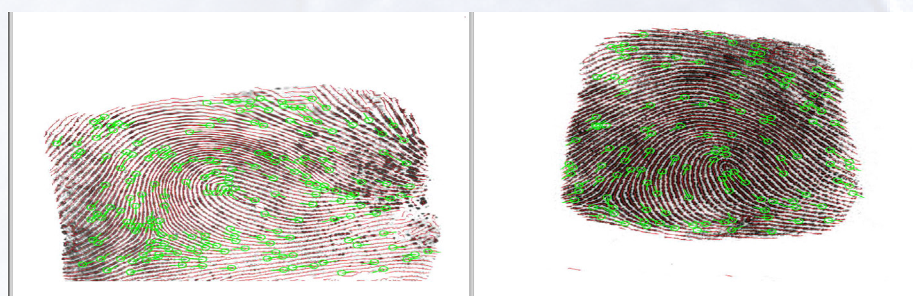


Figure 5. Search 1: 1 - comparison and verification

Search 1: N indicates the identification of an unknown person. The identification compares the biometric data of an unknown person with the biometric data stored in the databases. This type of search is used in the Prum and the EURODAC systems through electronic biometrical data exchanges.

Searching with an identification number consists of retrieving data ("Fetch") for a specific person who is located in the database under that number. In data exchanges, this search is used when the person is identified by fingerprints and it is needed to exchange personal data with the requesting party.

POSSIBILITY AND NEED TO CONNECT AFIS AND FIIS SYSTEMS WITH EUROPEAN DATA EXCHANGE SYSTEMS

Given that there is a constant need for rapid exchange of information between the EU member states and non-EU countries, as well as with non-EU countries that need to exchange data with each other, the Convention on Police Cooperation in Southeast Europe on automatic exchange of DNA data, dactyloscopic data and data on registered vehicles (hereinafter: KPS SEE) was made with the aim of strengthening cross-border cooperation, in particular in the fight against terrorism, cross-border crime and illegal migration and in an effort to implement KPS SEE, sending and comparing DNA profiles, dactyloscopic data and data on registered vehicles where all signatory states have successfully passed evaluations in the field of personal data protection and accordingly met the preconditions for the exchange of personal data, while taking into account common European principles and standards of data protection. For this purpose, it is necessary to adapt the national AFIS systems for interstate data exchange, to be, as it was called "Prum ready". The Republic of Serbia is also a signatory to this Convention (Law on Ratification of the Agreement between the Parties to the Convention on Police Cooperation in Southeast Europe on Automatic Exchange - Agreement, Official Gazette RS, - International Agreements, No. 15/2018).

To this end, all parties signed this agreement shall ensure the availability of reference data from the databases of the national AFIS systems established with the possibility to automatic exchange biometrical data for the purpose of identification of crime offenders, missing persons and corpses (Agreement, Official Gazette RS, International Agreements, No. 15/2018).

Relevant data for automatic exchange includes only dactyloscopic data and a reference number - a number used to link the data in the database with the data being sent. This data do not contain personal data on the basis of which the identity of the person can be directly determined (Data protection, Immigration Enforcement and Fundamental Rights, 2019). Reference data that cannot be used for person's identity verification linked to any person has to be send as dactyloscopic data for unknown person whom identity needed to be determined.

The rules for data exchange system which have to be defined and followed by all parties are:

1. Searches may be carried out only in individual cases and in accordance with the national law of the requesting State. Confirmation of the coincidence of dactyloscopic data with the dactyloscopic data of the country whose database was searched is performed by the national contact point of the state requesting the data, by automatically submitting the reference data necessary for an unambiguous hit. If there is a discrepancy between dactyloscopic data, the submission of additional available personal data and other information in addition to the basic personal data in relation to the reference data shall be governed by the national law of the country in whose database the dactyloscopic data are requested. Appropriate measures shall be taken to ensure the confidentiality and integrity of data transmitted to other Parties, including their encryption. States Parties shall take the necessary measures to guarantee the integrity of dactyloscopic data made available or transmitted to other Parties for comparison and to ensure that such measures comply with international standards.

2. The requested State may process the data of an identified person only for the purpose for which the data were transmitted. Processing for other purposes is permitted only with the prior approval of the requesting State and only in accordance with the national law of the requesting State. The submitted data is deleted immediately after comparing the data or sending automatic responses to searches unless further processing is required.

3. Electronic exchange of DNA data, dactyloscopic data and data on registered vehicles between the signatory states of the Convention is done through secure private communication networks with encryption. Technical details of the communication network and contact details and the availability of technical contact points are given in the user manual.

4. States Parties shall take all necessary measures to ensure that automatic search or comparison of DNA data, dactyloscopic data or data on registered vehicles is available 24 hours a day, seven days a week. In the event of a technical failure, the national contact points shall immediately inform each other and agree on temporary alternative arrangements for the exchange of information in accordance with the applicable legal provisions. Automatic data exchange is re-established as quickly as possible.

5. Digitization of dactyloscopic data and their sending is done in accordance with the adopted data format.

6. Each Party, both the one requesting the data and submitting the search request to the data submitter, shall ensure that the dactyloscopic data it sends are of sufficiently good quality for comparison using the AFIS system.

7. Each Party shall ensure that its search requests do not exceed the search capacities specified by the requested Party. The Parties shall submit statements establishing maximum daily search capacities for dactyloscopic data of identified persons and dactyloscopic data of persons whose identity has not yet been established.

8. The requested Party shall, without delay, check the quality of the dactyloscopic data sent by a fully automated procedure. In the event that the data are unsuitable for automated comparison, the requested Party shall promptly notify the requesting Party.

9. The requested Party shall carry out searches in the order in which the requests are received. Requests are processed within 24 hours by a fully automated procedure. The requesting Party may, if required by its national law, request that its requests be expedited and that the requested Party conduct such inquiries without delay. If the deadlines cannot be met due to force majeure, the comparison shall be made without delay as soon as the obstacles have been removed.

CONCLUSION

Towards the development of readiness for the application of the principles of electronic business for the exchange of biometric data kept in automated systems, the existing systems have to be enhanced. This enhancement should provide a complete solution for data acquisition (alphanumeric and biometric data), processing, integration with existing databases, and exchange through a telecommunications interconnection platform for secure information exchange. Modern systems offer effective person identification based on biometric data in a reliable and secure way. The systems have to be designed and developed to enable through simpler and more reliable manner easier work, as well as compliance with international norms and standards. On the other hand, those systems dedicated to support biometric identification of criminals might significantly contribute to the fight against terrorism and organized crime, with automatic exchange of data with other countries and other systems of the same or similar purpose. Furthermore, an efficient and effective person's identification is the foundation of the digitalisation of administrative procedures and in the end national security.

REFERENCES

1. Council Decision 2008/615/JHA of 23 June 2008 on the stepping up of cross-border cooperation, particularly in combating terrorism and cross-border crime, http://data.europa.eu/eli/dec/2008/615/oj
2. Council Decision 2008/616/JHA of 23 June 2008 on the implementation of Decision 2008/615/JHA on the stepping up of cross-border cooperation, particularly in combating terrorism and cross-border crime, http://data.europa.eu/eli/dec/2008/616/oj
3. Zakon o potvrđivanju sporazuma između strana potpisnica konvencije o policijskoj saradnji u jugoistočnoj Evropi o automatskoj razmeni DNK podataka, daktiloskopskih podataka i podataka o registrovanim vozilima, sa sporazumom o sprovođenju sporazuma između strana potpisnica konvencije o policijskoj saradnji u jugoistočnoj Evropi o automatskoj razmeni DNK podataka, daktiloskopskih podataka i podataka o registrovanim vozilima, Službeni glasnik RS - Međunarodni ugovori, broj 15/2018., http://www.parlament.gov.rs/upload/archive/files/lat/pdf/zakoni/2018/3419-18-lat.pdf
4. Biometric data and data protection regulations, (2020). Thales, Accessed 15th May 2020, https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/biometrics/biometric-data
5. Latent Print AFIS Interoperability Working Group, (2020). Accessed 6th March 2020, https://www.nist.gov/programs-projects/latent-print-afis-interoperability-working-group
6. Biometric Standards for Law Enforcement, https://www.nist.gov/industry-impacts/biometric-standards-law-enforcement, Accessed 20th May 2020.
7. Nilsson, P. (2019). Face off: the perils of sharing your biometric data, Special Report Cyber Security, Financial Times, Accessed 14th May 2020. https://www.ft.com/content/90d4c8a2-02ba-11e9-bf0f-53b8511afd73
8. Policy Framework for the Regional Biometric Data Exchange Solution, (2015). The Bali Process, on People Smuggling, Trafficking in Persons and Related Transnational Crime, the Governments of Australia and Indonesia and comprising over 45 member countries and organizations.https://www.baliprocess.net/UserFiles/baliprocess/File/Policy%20Framework%20for%20the%20RBDES.pdf
9. Guidance Biometric data-sharing, (2016). UK Visas and Emigration, https://www.gov.uk/government/publications/biometric-data-sharing-fingerprint-matching-process-and-diagram
10. Biometric data-sharing process (Five Country Conference (FCC) data-sharing process) (2016). Home Office UK https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/557896/biometric-data-sharing-v7.0.pdf
11. Campbell, Z. & Jones, C., (2020). Leaked reports show EU police are planning a pan-European network of facial recognition databases, The proposal to link the EU's facial recognition databases would likely connect them to the U.S. as well, in a massive consolidation of biometric data, https://theintercept.com/2020/02/21/eu-facial-recognition-database/
12. Campbell, Z., Chandler L. C. & Jones, C. (2020). Brussels considers pan-EU police searches of ID photos, Polotico, https://www.politico.eu/article/eu-police-facial-recognition-surveillance-report/
13. Jasserand, C. (2016). Legal Nature of Biometric Data: From 'Generic' Personal Data to Sensitive Data', University of Groningen, Research Gate, https://www.researchgate.net/publication/308890225_Legal_Nature_of_Biometric_Data_From_'Generic'_Personal_Data_to_Sensitive_Data'

14. Data Protection, Immigration Enforcement and Fundamental Rights: What the EU's Regulations on Interoperability Mean for People with Irregular Status, (2019). PICUM, the Centre for European Policy Studies (CEPS) and European Migration Law, https://picum.org/wp-content/uploads/2019/11/Data-Protection-Immigration-Enforcement-and-Fundamental-Rights-Full-Report-EN.pdf
15. NIST Study Measures Performance Accuracy of Contactless Fingerprinting Tech, National Institute of Standards and Technology, U.S. Department of Commerce, https://www.nist.gov/news-events/news/2020/05/nist-study-measures-performance-accuracy-contactless-fingerprinting-tech, Published 19th May 2020
16. Libert, J., Grantham, J., Bandini, B., Ko, K., Orandi, S., &Watson, C. (2020). Interoperability Assessment 2019: Contactless-to-Contact Fingerprint Capture, National Institute of Standards and Technology, U.S. Department of Commerce, https://nvlpubs.nist.gov/nistpubs/ir/2020/NIST.IR.8307.pdf
17. Libert, J., Grantham,J., Bandini B., Wood, S., Garris, M.,Ko, K., Byers, F. at al. (2018). Guidance for Evaluating Contactless Fingerprint Acquisition Devices, National Institute of Standards and Technology U.S. Department of Commerce, https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.500-305.pdf
18. Butler, M. J., Iyer, H., Press, R., Taylor, K. M., Vallone M. P. &Willis, S. (2018). NIST Scientific Foundation Reviews, National Institute of Standards and Technology U.S. Department of Commerce, https://nvlpubs.nist.gov/nistpubs/ir/2018/NIST.IR.8225-draft.pdf
19. Herr, F., & Podio, F. L. (2015). Common Biometric Exchange Formats Framework Standardization, The National Institute of Standards and Technology (NIST), U.S. Department of Commerce, Accessed on 25th March 2020. https://tsapps.nist.gov/publication/get_pdf.cfm?pub_id=914210
20. Biometrics and the Schengen Information System – Fostering identification capabilities, EU Science Hub, Accessed on 10th May 2020. https://ec.europa.eu/jrc/en/news/biometrics-and-schengen-information-system-fostering-identification-capabilities
21. ID System Statement of Work for MOI AFIS and FIIS, (2003). Ministry of Interior

THE ROLE OF SOFTWARE TOOLS IN RISK ASSESSMENT GOT FROM AN ACCIDENT AND EMISSIONS OF HAZARDOUS MATERIALS

Venezija Ilijazi[1]
Ministry of the Interior of the Republic of Serbia

Slobodan Miladinović, PhD[2]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: The development of atmospheric dispersion models is an important step in the process of predicting, assessing and managing the risk of potential disasters. They are of particular importance in defining and analyzing risk zones in order to prevent endangering a large number of people, property, the environment and natural resources. Today, making a model is almost unthinkable without the use of appropriate software solutions. Numerous software tools for atmospheric dispersion modeling have been developed, the primary role of which is risk assessment, which includes the analysis of accident and emission pollution models used to simulate the transport and diffusion of various pollutants. As many industrial and development projects potentially cause unwanted consequences in the environment, by applying such tools the harmful consequences could be minimized. The development of sensor and computer technology has enabled the development of complex algorithms for the development of models that can be executed in real time, which enables their active role in managing the process of responding to an incident that has occurred.

This paper presents the possibilities of modelling software tools through the example of the impact of chemicals on the environment in the case of emissions of hazardous gases due to an accident. The characteristics of the mathematical model and the simulation scenario made in the *Aloha* software tool are presented.

Keywords: accident simulation, modelling, risk assessment, ALOHA

1 venezija.ilijazi@mup.gov.rs
2 slobodan.miladinovic@kpu.edu.rs

INTRODUCTION

Releases of dangerous gases into the atmosphere, whether accidentally due to human negligence, plant failures, transport of dangerous substances, natural disasters, or intentionally in terrorist attacks, pose a great danger to the population and infrastructure. Risk (hazard) is defined as an action that has the potential to cause harm to human health or the environment.

Physical, chemical, chemical-physical and electrochemical methods are used to measure the concentration of hazardous gases. The limit value of hazardous gases is the prescribed flow or concentration of harmful and hazardous components at the accident site. The measurement results can be displayed as mass per unit volume of gas or as mass flow per unit time (mg/h, gr/h, etc.). Continuous methods (continuous, for a longer period of time) and discontinuous methods (measurement of gas concentration in a shorter time interval) are used to determine the emission of hazardous gases. Measurement is of great importance for determining the impact of the concentration of hazardous gases on the health of the population and the environment, as well as modelling the emission of hazardous gases in the event of accidents. In case of emissions of hazardous gases into the atmosphere, the expert teams of the Sector for Emergency Situations need to provide the necessary and relevant data in a very short time, in order to take adequate and effective actions to cause as little damage to the population and infrastructure.

Regardless of the fact that the information obtained by the measuring stations maintains the real state of the atmospheric air in the places where the measurement is performed, the causes of air pollution remain unknown. Also, this information shows the level of pollution only at certain points and cannot give an adequate picture of the state of the air in the entire desired territory. To solve these problems, modelling of the spread of air pollution is performed, which enables the assessment of the degree of pollution at the observed point without performing the appropriate measurements. In addition, the use of modelling can predict changes in atmospheric air over time, various hypothetical situations can be modelled (for example, the construction of a new factory that would represent a potential pollutant) and pre-planned measures to prevent air pollution. Modelling requires complex consideration of many factors, such as the parameters of the source of pollution, the current meteorological state of the atmosphere, the conditions of scattering of pollutants at a given place, the properties of pollutants, etc.

Numerous dispersion models have been developed to estimate the motion and propagation of air pollutants after their release into the atmosphere, which are divided into physical models and mathematical models. Physical models simulate the real phenomenon of significantly reduced values in laboratory conditions. They reveal the dispersion mechanism and provide validation of the data obtained by mathematical models. Mathematical models that describe the movement of pollutants in the air under the influence of wind (transmission) and turbulent movement of the atmosphere (diffusion) are called models of atmospheric dispersion. They can be further divided into deterministic and statistical models. Deterministic models are based on a fundamental mathematical description of atmospheric processes and all cause-and-effect relationships that affect the dispersion process. Statistical models are based on semi-empirical statistical relationships derived from the existing data and measurements.

An example of a deterministic model is a diffusion model in which the output (concentration matrix) is calculated on the basis of mathematical operations of specific input parameters (emission rate, atmospheric parameters). An example of a statistical model is a weather forecast for a specific area. Here, the concentration level for the next few hours represents a statistical function of the currently available measurements and the previous correlation between the measurements and the trends of concentration change. Hazardous gas dispersion models can assess the consequences of scenarios,

as well as the effectiveness of applied strategies, to reduce pollution. The development of information technologies has contributed to the accelerated development of dispersion models, which have made them increasingly complex, with more input parameters. In the global market, a large number of these systems are available (Stojanović, 2011).

MATHEMATICAL MODELS OF DISPERSION OF POLUTANTS

The atmosphere is a very complex physicochemical system, so the modelling of that system is extremely complex. The process of spreading a fluent and its concentration depends on the movement of atmospheric masses (winds), mixing of air masses in height, chemical reactions of dangerous gases and/or radioactive decay in the atmosphere and the rate of deposition of pollutants (Kovačević, 2003).

Starting from the method of mathematical description of the impurity scattering process, three classes of air pollution analysis models can be distinguished: Lagrange, Euler and Gaussian (Stockie, 2011). In the Lagrange and Euler method, the concentrations of dangerous gases can be obtained by different methods of solving the turbulent diffusion equation. They belong to the class of deterministic models, while the Gaussian model belongs to the class of statistical models. The Gaussian method is most often used and it is implemented in most software applications, which are used in practice today. Therefore, only the Gaussian model will be presented in the paper.

GAUSSIAN MODEL

The simplest model for calculating the ground concentration of pollution is the statistical Gaussian model. Precisely in most countries, models of this type are mostly used in normative documents for the practical realization of air quality. The basis of this model is the assumption that the impurities emitted by a continuous point source form a smoke column in which a symmetrical distribution of the particle concentration in relation to the axis of the smoke column is observed. The basic equation of the statistical Gaussian model is composed of two probability density functions of the normal distribution law and has the following form (Stepanenko, 2009; Lazaridis, 2011):

$$C(x,y,z) = \frac{Q\, f_F\, f_W}{2\pi\sigma_y(x)\sigma_z(x)\bar{u}} \exp\left(-\frac{y^2}{2\sigma_y^2(x)}\right)\left\{\exp\left[-\frac{(z-h)^2}{2\sigma_z^2(x)}\right] + \exp\left[-\frac{(z+h)^2}{2\sigma_z^2(x)}\right]\right\} \quad (1)$$

where Q is the mass flow (source power); C - impurity concentration at a given point in space; $\sigma_y(x)$, $\sigma_z(x)$, diffusion dispersions in the direction of the respective axes, which depend on the meteorological conditions of the distance that the particle travels from the source to the point with the x coordinate, assuming that the direction of the $0X$ axis coincides with the direction of the wind vector; $\bar{u}$ - average wind speed at the level of measurement; h - effective height of the source; f_F and f_W - corrections to the reduction of impurity clouds due to dry deposition of impurities.

In equation (2), σ_y, σ_z are the horizontal and vertical dispersion of the impurity distribution. The following relations are used to determine these dispersions (Hanna, 1982):

$$\sigma_y = A\,x^a; \quad \sigma_z = B\,x^b \tag{2}$$

where A, a, B, b are the coefficients that depend on the stability of the atmosphere and the surface relief and they are determined experimentally.

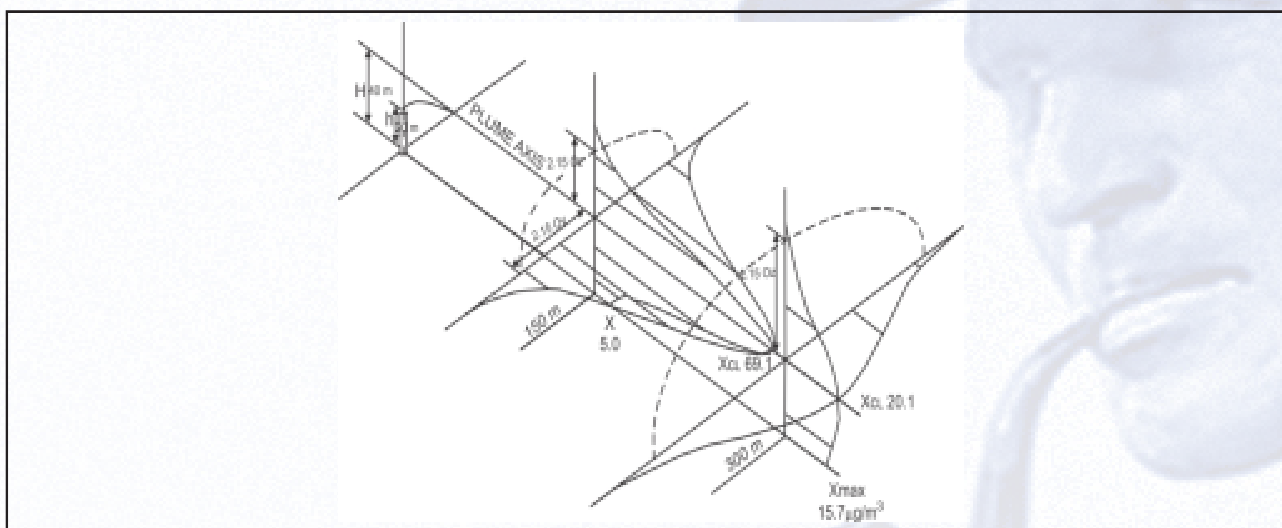


Figure 1 - Graphical representation of air pollution spread assumptions in the Gaussian model (Lazaridis, 2011)

		A	a	B	b
Very unstable	A	0,527	0,865	0,28	0,90
Unstable	B	0,371	0,866	0,23	0,85
Weakly unstable	C	0,209	0,897	0,22	0,80
		A	a	B	b
Neutral	D	0,128	0,905	0,20	0,76
Stable	E	0,098	0,902	0,15	0,73
Very stable	F	0,065	0,902	0,15	0,67

Table 1 - Parameters for calculating the dispersion (Lazaridis, 2011)

HAZARDOUS GAS EMISSION MODELING SOFTWARE

The existing software applications for gas pollution modelling such as MET, ALOHA, SCREEN, BREEZE, TRACE, SAMS provide only a partial solution to the dispersion problem. A large percentage of these software applications do not work in real time, with the simultaneous acquisition and processing of the recorded data, but only analyse the collected data and display the concentration of hazardous substances in two dimensions. Zones of different concentrations of hazardous substances

are static and do not take into account the dynamics of the process, the primary change in atmospheric conditions and the change in the strength of pollution sources (Kantar, 2003).

When calculating the danger zones, different types of emission sources (point, surface, volume and pipelines), meteorological conditions at the incident site (wind speed, wind direction and temperature), as well as different types of terrain (urban and rural) are taken into account. The calculated danger zones are displayed on the Web GIS browser from where the danger assessment is performed and actions are taken. As a mechanism for connecting dispersion models and VEB GIS browser, it uses KML (Keyhole Markup Language) protocol which can be accessed via any Internet browser (IE, Opera, Google Chrome, Mozilla Firefox, etc.) and using many devices (smartphone, tablet, desktop and laptop) that have an internet connection.

SOFTWARE APPLICATIONS USED IN THE WORK

The aim of this paper is to present a simple and reliable system for simulation and GIS visualization of accidents caused by the emission of hazardous gases from production, transport and storage facilities based on “open” technologies (Kovačević, 2014). These systems include free modelling software, recommended by relevant global institutions, and widespread and open GIS-based visualization platforms. All this is accompanied by the design of the appropriate software interfaces and “user-friendly” integration (Nikezić, 2016).

CAMEO (Computer-aided Management of Emergency Operations) is a software product created in cooperation with two American organizations - the Environmental Protection Agency - the Office for Prevention and Preparedness in Emergencies (US Environmental Protection Agency - Chemical Emergency Preparedness and Prevention Office EPA OEP -PR), based in Washington, and the National Oceanic and Atmospheric Administration (NOAA), based in Seattle. CAMEO includes a number of software applications with the basic function of increasing operability in planning and responding to accident situations. The program consists of a set of databases with two accompanying modules - the model for dispersion of toxic gases ALOHA and the program for electronic cartographic support MARPLOT. All programs are supported by Microsoft Windows. CAMEO consists of three integrative compatible components, schematically shown in Figure 2.

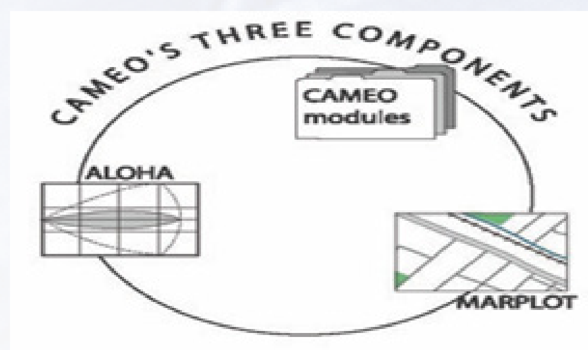


Figure 2 - Basic components of the CAMEO program

CAMEO can be used in cases of quick access to the stored data, and processing of these data to assess the specific accident situation and transmit information to the competent authorities, which are necessary for an adequate response to the accident event, especially in the prevention and preparedness

phases. The program is in use in many European countries and has been translated into English, Spanish and French. CAMEO was selected by the United Nations, Environmental Protection Program to support the development of national programs for the preparation and response to chemical accidents and is part of the UNEP program for emergency preparedness at the local level (Pollutant Dispersion in Urban Areas, 2016).

Each defined route can be displayed in electronic form, on a map using the MARPLOT program. Roads, railways and routes in water transport are presented on MARPLOT maps in the form of graphic lines, as shown in Figure 3.

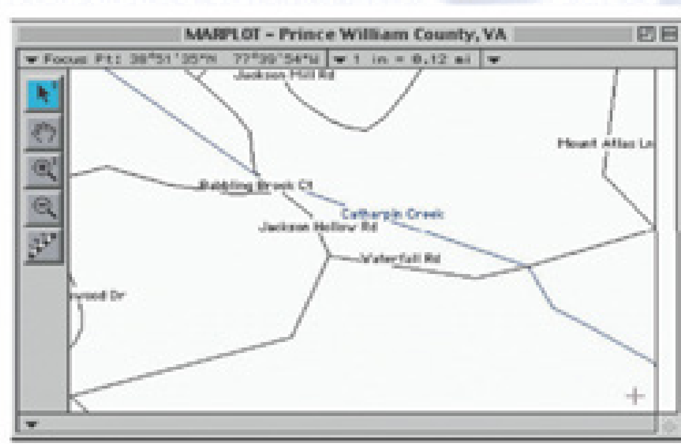


Figure 3 - Demonstration of a routine network for the transport of dangerous goods in the form of the MARPLOT program

All data from the Chemicals in Inventory module can be used and combined with the data from the Routes module. The data on stored hazardous substances in the facilities along it, by which they are transported, can be linked to each route.

When the data on all hazardous substances stored along the transport route are created, the possibility of using the Screening and Scenarios module is opened, in order to investigate the potential danger that may arise in the event of an accident on a certain part of the route.

Figure 4 - Display of the spread of the contamination zone along the transport route using the Screening and Scenarios module

ALOHA (Areal Locations of Hazardous Atmospheres) is a model for displaying the dispersion (expansion) of gases. It is used to estimate the spread (dispersion) of the contamination cloud in the direction of wind blowing. The assessment is based on the physicochemical properties of the substance that caused the accident, the meteorological conditions at the time of the accident and the circumstances under which the uncontrolled emission or release occurred.

The main characteristics of the program are:

- The program generates a number of specific output scenarios, including the drawings of hazard zones, hazards at a specific point and a graph of source strength.

- It calculates the rate of leakage of chemicals coming out of tanks, pipelines, etc., and predicts how that rate changes over time.

- It assesses different types of hazards (toxicity, flammability).

- It models several release scenarios (cloud of poison gas, fire jet, and steam explosion).

- It minimizes the entry of incorrect data by cross-checking the entered values and warns the user when the value is incorrect or not physically possible.

- It contains its own chemical library with physical characteristics for about 3000 common hazardous chemicals so the user does not have to enter that data.

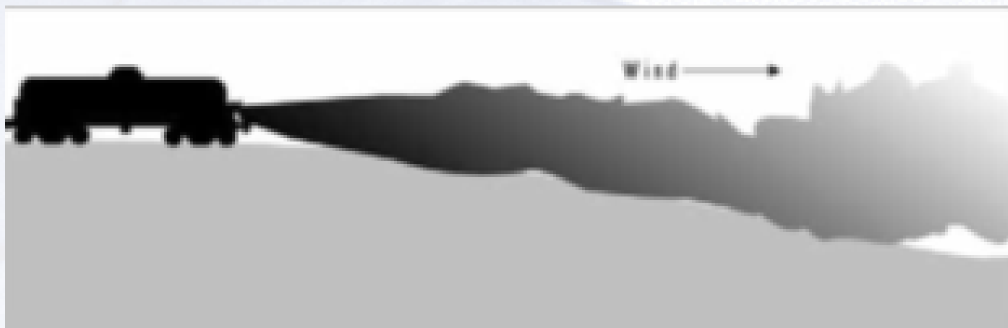


Figure 5 - The spread of clouds of hazardous substances in accidents

RISK MANAGEMENT METHODOLOGY FOR TRANSPORT OF DANGEROUS GOODS

Managing the risk of an accident situation in the transport of dangerous goods is a process that consists of several sub-processes that are interdependent, i.e. making mistakes within one of the sub-processes directly affects the next sub-process, i.e. the quality of the output results (Filipović, 2000).

The methodology for managing the risk of an accident includes identifying possible hazards, determining the mechanisms of its occurrence and development, and considering the possible consequences.

The stages that make up the Accident Risk Management Methodology are:

1. Accident risk analysis;
2. Planning measures for prevention, preparedness and response to the accident situation;
3. Planning measures for elimination of consequences from the accident situation (rehabilitation).

Each of these phases, within the Accident Risk Management Methodology, consists of several steps (phases) aimed at increasing the level of safety, which is achieved by reducing the level of risk and reducing the consequences for the population and the environment.

According to the prescribed methodology, the analysis of the danger of an accident situation (the first phase) takes place through three phases, as follows:

- the first phase - hazard identification,
- the second phase - consequence analysis, and
- the third phase - risk assessment.

The priority in the analysis of the danger of an accident situation should be focused on the identification of the danger (the first phase), which includes the collection of all necessary data and consideration of potentially dangerous factors of all kinds. This phase is the most important element of risk management and the starting point for further work on the implementation of other phases.

In the second phase of accident risk management, preparations are made to eliminate the possibility of an accident (accident) so that the risk of dangerous activities and dangerous substances in a certain area would be acceptable.

Within this phase, the management of the risk of an accident takes place through the following steps:

1. the first step - prevention,
2. the second step - readiness, and
3. the third step - response to an accident.

Planning measures to eliminate the consequences of an accident situation (remediation) is the third (last) phase within the Risk Management Methodology.

Measures to eliminate the consequences of the accident situation (accident) are aimed at monitoring the situation after the accident situation, restoring and rehabilitating the environment, returning to the original state, as well as eliminating the danger of recurrence of the accident situation (Miljuš, 2003).

CASE ANALYSIS

On a bend of the transit road (coordinates 43° 49` 27`` N/20° 35` 12`` E, altitude 211 m), a tanker carrying 18.6 tons of liquid methyl mercamptan overturned on January 17, 2015, at 13:35 (and on July 25, 2015 at 13:49). The paper analyses two simulation scenarios of accidents in different weather conditions and different seasons in the same geographical area. The accident analysis was performed using the Gaussian gas dispersion model, which is used in any similar simulation, when it comes to vapours of liquids or gases.

For the first scenario, the measured current air temperature was -5° C, the humidity was 25%, the clouds were 7/10, and the north wind was blowing at a speed of 7 m/s. During the overturning, an opening 2 cm wide and 40 cm long appeared on the body of the tank, 30 cm from the ground.

In the second scenario, the measured current air temperature was +39° C, the humidity was 75%, the clouds were 7/10, and the northwest wind was blowing at a speed of 3 m/s. During the overturning, an opening 2 cm wide and 40 cm long appeared on the body of the tank, 30 cm from the ground.

Methanethiol (Methyl-mercaptan) is a chemical compound whose formula is CH_4S. It is a colourless gas, very harmful and poisonous, extremely flammable and dangerous to the environment, with a strong smell similar to rotten cabbage.

The expressed power of the source (Figure 6) decreases with time, but the concentration on a relatively small area is significantly increased. Despite the weak influence of the wind, the power of the spring is relatively low with a small concentration on a much larger area.

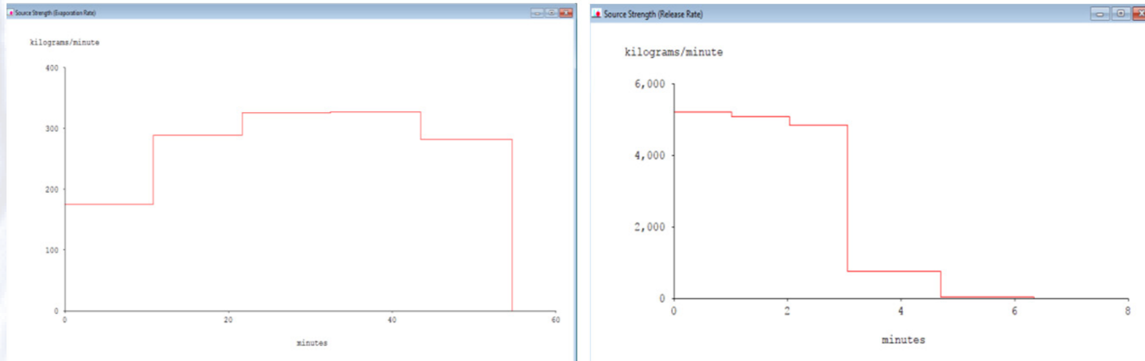


Figure 6 - Source power as a function of time

The spill pressure is 0.64 atm in the first scenario, or 1 atm in the second. Atmospheric stability is determined based on air temperature and wind speed profiles. According to this classification, the stability class is D for both scenarios (neutral). The maximum amount of chemical released is 327 kg/minute in the first scenario and 5200 kg/minute in the second scenario. The total amount of chemical spilled and the duration of the discharge is 15,299 kg for 55 minutes in the first scenario and 16,761 kg for 6 minutes in the second scenario.

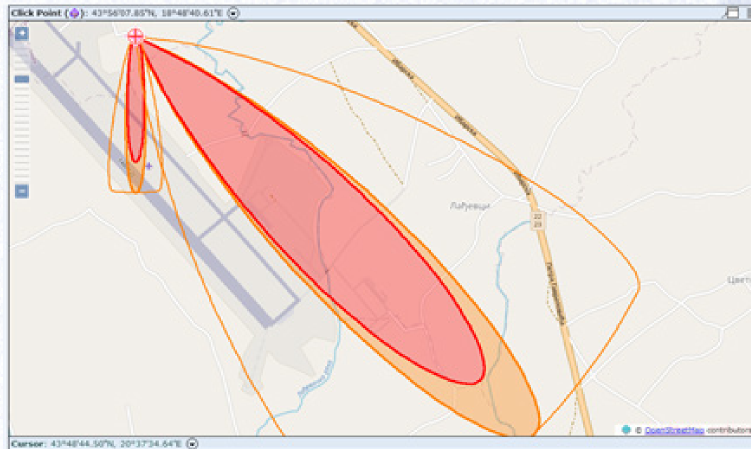


Figure 7 - Geographical presentation of population vulnerability on satellite and terrain maps in relation to both scenarios

Figure 7 illustrates the geographical presentation of the vulnerability of the population on the terrain map. Based on the software simulation and analysis, the ground-level pollutant concentrations at different distances were calculated for both scenarios. The analysis was done in accordance with the capabilities of the ALOHA program in relation to the integrated application in the ArcGIS tool used for modelling and spatial display of data analysis results.

Different concentrations of pollution due to accidents are presented in different colours and refer to a time period of 60 minutes.

The most dangerous pollution (marked in red) in the first scenario extends up to 400 m from the source, and in the second up to 3 km. Very large polluted (marked in orange) range is up to 500 m in the first scenario, and up to 4 km in the second scenario. Relatively low pollution (marked in yellow) extends up to 600 m in the first scenario, and up to 5 km in the second scenario. All pollution marked in red leaves serious consequences on the health of all residents. Pollution represented by orange is a problem for certain populations such as children, the elderly and chronic lung and heart patients. The population will probably not be endangered by the degree of pollution marked in yellow.

The maximum value of methanethiol concentration is 65.6% (656,317 ppm^3) in the first scenario and 100% in the second. The limit values for the concentration of chemical pollution are 21.8% (218,000 ppm) for the red area, 13.08% (130,800 ppm) for the orange area and 2.18% for the yellow area in the first scenario. In the second scenario, the concentration limit is 3.9% (39,000 ppm) for the red, 2.34% (23,400 ppm) for the orange and 0.39% (3,900 ppm) for the yellow area.

Figure 8 presents the threat diagrams for scenarios I and II. According to the first scenario (winter conditions - low temperatures), very high concentrations of pollution due to accidents are noticeable at a maximum distance of about 500 m in the wind direction and an accident zone width of 100 to 150 m. According to the second scenario (summer conditions - high temperatures), lower concentrations of pollution are noticeable at a maximum distance of about 6 km in the direction of wind action and an accident zone width of 3 km. Therefore, the potential terrain endangerment area in the first scenario is about 0.075 km^2, while in the second it is about 8 km^2.

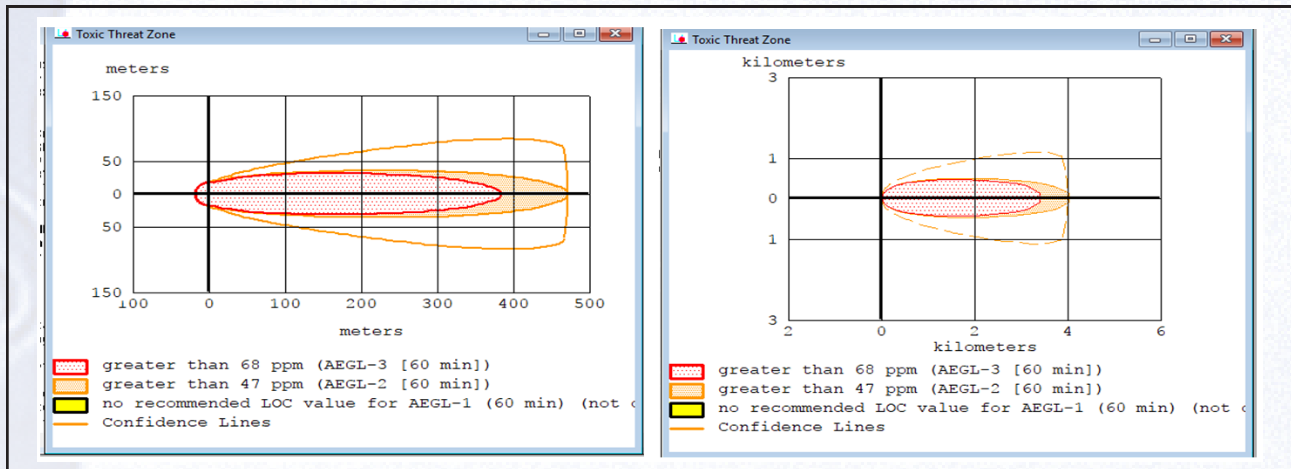


Figure 8 - Population vulnerability diagram for scenario I (left), and scenario II (right)

CONCLUSION

The paper presents the important role of software tools for modelling atmospheric dispersion through adequate presentation of the problem, i.e. approaching the situation to the real scenario, in order to better and more successfully manage risk in crisis situations and accidents. The analysis of mathematical-physical models of dispersion of hazardous substances affects the perception of the severity and magnitude of the problem as well as potentially negative consequences for the environment, both for the population and for plant and animal species.

Chemical accidents are probably the most dangerous of all accidents. They cannot be predicted in advance, and can lead to very serious consequences. Therefore, it is necessary to analyse all places in the technological process of production, transport and technological process of exploitation and, based on the analysis, work on prevention. Prevention can reduce the consequences, but there is always a risk of an accident. It is never possible to predict absolutely all cases and scenarios of accidents.

The results tell us that the number of victims in the cases described in the simulations would be large if the evacuation did not begin immediately after the accident. The final results show that at least 70% of the inhabited observed area would be exposed to a lethal dose of the chemical. Also, in the first simulation, a toxic cloud is seen, where an increased amount of methanethiol would be registered and evacuation of up to 30% of the population would be required. The second simulation shows that an increased amount of methyl mercaptan would be registered in the surrounding areas, which would cause the need to evacuate up to 60% of the population. When we talk about methyl mercaptan, it must be said that it is an extremely toxic gas, and deadly if monitoring, evacuation and remediation are not started in time.

All actions that are carried out must have only one single goal, and that is to reduce the long-term consequences for the environment to a minimum. Man, as a part of nature, must understand that this is his priority and not cut the branch on which he is sitting.

When it comes to accident prevention, it is not enough just to prepare so that the accident does not happen, but it is also necessary to practice all segments of the defence before the accident. A good

team for solving such situations is always well-coordinated. You need to be prepared for everything, because every accident is a new challenge.

When all the facts are taken into account, a person can be recognized as a direct or indirect factor causing the accident. For that reason, it is necessary to educate people, the employees (those who manipulate dangerous substances and those who can influence their movement), as well as ordinary citizens. They need to be educated as dangerous substances are not called that for any reason. Sometimes it is just one breath that separates a person from death. Therefore, it is necessary to explain to people that they have to take care of the environment, because in that way they take care of themselves.

REFERENCES

1. Filipović D. (2000), Geoprostorno modelovanje rizika u životnoj sredini, doktorska disertacija, Geografski fakultet, Beograd.
2. Hanna, S.R., Briggs, G.A., Hosker, R.P., (1982), Handbook on Atmospheric Diffusion. DOE/TIC 11223, Department of Energy)
3. Harvey D. (2000), Modern Analytical Chemistry, McGraw Hill.
4. Kantar S. (2003), Akcidenti pri transportu opasnih materija - primeri iz prakse i pouke, Beograd.
5. Kovačević J., Stojanović R., Karadaglić D., Ašanin B, Kovačević Ž, Bundalo Z., Softić F., (2014), FPGA low-power implementation of QRS detectors, 3rd Mediterranean Conference on Embedded Computing (MECO), pp: 98- 101.
6. Kovačević Ž, Stojanović R, Nikolić G. (2003), Modelling and Simulation of Accidental Air, Beograd.
7. Lazaridis M. (2011), First principles of Meteorology and Air Pollutant, Springer, pp.201-232, New York.
8. Miljuš, M., Vidović M. (2003), Rizik u transportu opasnih materija, Beograd.
9. Nikezić, D.P. (2016), Matematičko modelovanje rasprostiranja zagađujućih materija u vazduhu u okolini nuklearnih i industrijskih objekata, Doktorska disertacija, Tehnološko-metalurški fakultet Univerziteta u Beogradu, Beograd
10. Pollutant Dispersion in Urban Areas – an Approach Suitable for Developing Countries, Works in Progress in Embedded Computing, Vol 2, No 1, June 2016, ISSN 2337-0343.
11. Stockie, J. M. (2011), The Mathematics of Atmospheric Dispersion Modeling. SIAM Review, 53(2), pp. 349–372.
12. Степаненко С.Н., Волошин В.Г., Типцов С.В. (2009), Новая формула оценки уровня загрязнения атмосфры промышленными выбросами, Украинский гидрометеорологический журнал, Но 4, ст. 227-237.

DETECTION AND ENHANCEMENT OF LATENT FINGERPRINTS USING DEXTRAN-BASED BIOPOLYMER POWDERS OBTAINED FROM LIQUID ANTHOCYANIN EXTRACT

Nemanja Vučković, MSc

Stefan Dimitrijević

Nikola Milašinović, PhD[1]

University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Dextran is extensively exploited in medicine and pharmacy, but, currently no studies using this biopolymer as a powder system for enhancement of latent fingerprints were published. In this paper four different formulations of dextran-based biopolymer powders, obtained by simple precipitation of dextran within anthocyanin solution, were synthetized and characterized in order to determine potential of these biopowders in forensic application. Since detrimental effect on humans is often present while routinely employing commercial dusting methods, the main advantage of prepared dextran-based biopowders are their non-toxic properties, contributing to the safer/healthier operating conditions. The interactions between components of the systems were confirmed by FT-IR analysis. Optical microscopy was used to determine the size of the prepared biopowders, while simultaneously confirmed the interaction between powders and the sweat/lipid residues present in the latent trace. The results demonstrated the potential of novel dextran-based biopowders to supplement routinely employed physical systems in visualizing latent fingerprints.

Keywords: Latent Fingerprints, (Bio)polymers, Dextran, Brassica oleracea var. capitata f. rubra, Anthocyanins, Forensic Science.

1 nikola.milasinovic@kpu.edu.rs

INTRODUCTION

Fingerprints possess unique features, specific for each person and, thus they are one of the most valuable forensic evidence that could be found at the crime scene (Bumbrah, Sharma, & Jasuja, 2016). They often remain as random prints on surfaces of different objects, when the fingertip comes in contact with the surface. Fingerprint features are classified as loops, arches and whorls. On the other hand, fingermarks contain some tiny, specific and distinguishing characteristics called minutiae points, which were necessary for reliable identification of persons (Mitrović, 1998). The papillary line traces are transferred by the sweat (eccrine) glands, which secrete sweat and other components through the sweat pores, leaving a trace characteristic for each person. Other compounds, such as blood, oil, ink, dye, etc. can often be found and transferred from finger surface to the substrate along with the fingerprint (Champod, Lennard, Margot, & Stoilovic, 2004). Therefore, three particular types of fingerprint could be found in forensic practice: patent, plastic and latent. From the forensic point of view, latent fingermarks are of particular interests. These traces are imperceptible and (when freshly deposited) consist of sweat and lipid secretions, where sweat contains, approximately, water (98%), minerals (0.5%), organic compounds (0.5%) and the 1.0% of other residuals (Färber, Seul, Weisser, & Bohnert, 2010). Therefore, these traces must be visualized first, which is why different optical, physical and chemical methods have to be employed. After visualization process is completed, these fingerprints can be processed in the same manner as visible ones (Färber, Seul, Weisser, & Bohnert, 2010; Trapecar & Balazic, 2007).

Chemical methods imply chemical reactions between chemical species and fingerprint residues, followed by the formation of steady complexes (Datta, Lee, Ramotowski, & Gaensslen, 2001; Milašinović & Koturević, 2016), and many are routinely employed on porous surfaces (ninhydrin, silver nitrate, iodine fuming), and non-porous surfaces (cyanoacrylate fuming, iodine fuming) (Wanga, Yang, Wanga, Shi, & Liu, 2009). Nevertheless, these methods have disadvantages commonly related to their toxicity and potential formation of complexes (thus disabling further examination of fingermarks). On the other hand, physical methods include physical interactions or binding of certain powders or dyes to some particular residues from the (latent) prints. Commonly used powder formulations are regular, metallic, luminescent and thermoplastic, while their choice depends on the surface and its characteristics: illumination, texture, color, porosity, etc. (Bumbrah, Sharma, & Jasuja, 2016; Datta, Lee, Ramotowski, & Gaensslen, 2001; Milašinović & Koturević, 2016).

By marking toxicity and detrimental effect on human health as the biggest drawbacks of current approaches, scientists are aiming at developing some novel systems (or even methods) that will overcome the mentioned problem and, additionally, satisfy cost-benefit demands. This paper deals with dextran-based biopolymer powders, obtained by the precipitating method, using potassium periodate (KIO_4) as an initiator, *N*,*N*'-methylenebisacrylamide (MBA) as a crosslinking agent and methanol as a precipitation solvent. Dextran is a complex (yet cheap and non-toxic water soluble), branched and hydrophilic polysaccharide composed of anhydroglucose rings, obtained from bacteria (particularly from *Lactobacillus*, *Leuconostoc* and *Streptococcus* species), widely used in medicine and pharmacy, as a component of drug-delivery (nanoparticle) systems, material that reduces blood viscosity and prevents the formation of blood clots, etc. (Wang, Dijkstra, & Karperien, 2016; Wasiak, et al., 2016). KIO_4 is an oxidizing agent and it was used to obtain aldehyde functionalities of dextran chains, in order to improve interactions with fingerprints trace residues (Maia, Carvalho, Coelho, Simões, & Gil, 2011). In this paper, four dextran-based biopolymer powder formulations were prepared, and their potential in developing latent fingerprints was tested.

MATERIALS AND METHODS

Materials

Dextran powder was purchased from Sigma-Aldrich (USA), KIO_4 from Merck (Germany), MBA from Acros Organics (USA) and methanol from Centrohem (Serbia). Distilled water was used for all buffer solutions preparation. Acetate buffers of various pHs were prepared by dissolving sodium acetate and acetic acid in distilled water, in order to obtain buffer solution of desired pH value. Buffer solutions were used to extract anthocyanins from *Brassica oleracea* (var. *capitata*, f. *rubra*) and afterwards, the obtained liquid anthocyanin extract was used to dissolve dextran powder, the initiator and the crosslinking agent. Besides *B. Oleracea* (var. *capitata*, f. *rubra*), all materials were used without further treatment or purification.

Preparation of Dextran-based Biopowders

Acetate buffer solution (pH ~ 3.52) (dissolving medium) was prepared by modifying experimental procedures described by Chandrasekhar et al (2012). This medium was used to extract anthocyanins from *B. Oleracea* (var. *capitata*, f. *rubra*). Briefly, 50 g of *B. Oleracea* (var. *capitata*, f. *rubra*), ground with blender *Bosch* (180W power, Germany), were added to 200 mL of acetate buffer solution, then mixed using a magnetic stirrer *Velp Scientifica* (~600 rpm) and heated (~30 min) until boiling of the mixture was achieved. After cooling, the obtained mixture containing anthocyanins' extract was filtered using a metal sieve and the filtrate was kept in a refrigerator at 4 °C until further use. The obtained anthocyanin mixture was used to obtain different color of desired powders, as well for better enhancement through complexing with fingerprint sweat and lipid residues, since it was demonstrated that anthocyanins have indicator chemical properties (i.e. color change in accordance with change in pH value) (Chandrasekhar, Madhusudhan, & Raghavarao, 2012).

Furthermore, four different formulations of dextran-based biopowders were prepared in order to determine their capability in visualizing latent fingermarks. Briefly, 2.0000 g of dextran powder was dissolved in 200 mL of prepared mixture containing anthocyanins' extract. Afterwards, the obtained mixture was divided into 4 equal parts (volume of each was 50 mL). The first mixture was left as blank; in the second mixture the initiator in ratio 10:1 (dextran:KIO_4) was added; in the third mixture the crosslinking agent MBA (8 w/w.% by mass of biopolymer) was added; in the fourth mixture both KIO_4 and MBA were added taking the same ratios as was already stated. The mixtures were stirred at low speed (~200 rpm) and at room temperature using a magnetic stirrer. After homogenization, methanol in 1:3 v/v ratio (mixture:methanol) was added, in order to precipitate polymer from the mixtures. When the precipitate was formed, the mixtures were filtered using a filter paper. After air-drying at room temperature for ~24h, dry precipitate was kept in the drying oven at 37 °C for additional few hours. Finally, the obtained dry formulations were ground with pestle and mortar to fine powders and kept in desiccator until further application.

CHARACTERIZATION OF THE PREPARED POWDER FORMULATIONS

FT-IR Analyses

The formulations of synthetized biopowders were recorded in dry and solid state, using the *Bomem MB* 100 FT-IR spectrophotometer. Powders in amount of 1.5 mg were mixed and ground with 75 mg

of potassium bromide and then compressed into pallets at pressure of 11 t for about a minute, using the *Graseby Specac* model: 15.011. The spectra were obtained in the wavenumber range between 4000 to 400 cm^{-1}, at 25 °C and at 4 cm^{-1} resolution spectra.

Optical microscopy

The obtained powder formulations were recorded with optical microscope Leica FS C Comparison Macroscope, equipped with The Leica IM Matrox Meteor II Driver Software Module. Powders were tested in dry state, with and without backlight. Prior to imaging under the microscope, latent fingerprints left on the microscope glass slides were developed using prepared powder formulations and pure dextran powder (control powder).

Development of latent fingerprints

In order to estimate the ability and performances of the prepared powders, three male donors deposited sebaceous and dry fingerprints onto a paper (porous), rubber (semi-porous) and glass (non-porous) surface using only a thumb of their right hand. Following the guidelines proposed by the International Fingerprint Research Group (IFRG), sebaceous (oily) and dry fingerprints were deposited on the mentioned surfaces using a technical scale, in order to simulate real manipulating procedures and determine the pressure on surfaces (force applied to accommodate 100-150 g, per fingerprint), and the prints were then left under laboratory (humid) conditions for a short period of time. That period allowed the traces to dry and reduce the residues, by the time the latent fingerprints were developed with synthetized powders and two control powder formulations, using BVDA Squirrel hair brush (BVDA, The Netherlands).

Optical microscopy was used in order to approximate the size and uniformity of prepared powders, as well to assess their performances in visualizing latent fingermarks on glass surface (on which the best results were obtained). Therefore, according to the already described procedure, sebaceous and dry fingerprints randomly deposited onto the glass microscopic slides (properly labeled), were left for a few minutes and then 4 prepared powder formulations and pure dextran powder (control powder) were used for their visualization. After the short period of time, fingerprints were halved with the thick slide barrier and 2 different powders were applied on the same fingerprint – synthetized powders were applied to the left and pure dextran powder was applied to the right barrier side, using BVDA Squirrel hair brush. Such type of visualization enabled direct comparison between applied powder formulations with the aim at evaluating their size range, uniformity and efficiency in developing latent fingerprints.

Additionally, the prints were left under dry (desiccator) and humid (laboratory) conditions (relative humidity around 60%) and afterwards, fingerprints were developed in different time intervals – after 24 hours, 7 days and 1 month. The exception is the first series with 60 fingerprints (explained above), developed immediately after deposition used as a pretest to determine the direction of subsequent experiments. That resulted in total of 204 fingerprints, with 72 fingerprints per storage condition (and 60 additional fingerprints used as a pretest), where 180 were enhanced from a glass,12 from a rubber and 12 from a paper surface.

The IFRG recommends the implementation of 4 phases in order to estimate new detection and visualization techniques and systems. By conducting the experimental procedures as stated above, Phase 1 (*Pilot Studies*) was completed, in order to determine the functionality of the prepared powders (International Fingerprint Research Group (IFRG), 2014).

RESULTS AND DISCUSSION

The synthetized powders were labeled as S(Dex/KIO_4/MBA), where "Dex" refers to dextran, "KIO_4" to the initiator and "MBA" to the crosslinking agent content used to prepare the desired powders. The obtained powder formulations were tested on paper, rubber and glass surface. The powders were applied at least on 20 different fingerprints on each of the surfaces, in order to determine the possibility and reproducibility of their application, i.e. to achieve the desired visualization results. The best results were obtained with the sebaceous fingerprints deposited onto the glass surface. On the other hand, when applied onto the white paper surface with latent prints, it was not possible to achieve the satisfying contrast between the fingermark and the background, due to the white powder color appearance. Additionally, the development of fingerprints on rubber surface was poor, since that surface contains many bulges and indentations, thus disabling the binding of the prepared powders to the fingerprint residues. Therefore, the prepared powders did not provide satisfactory results on paper and rubber surface and additional research in order to improve this system should be conducted.

Figure 1 shows sebaceous and dry fingerprints of one donor, developed with four prepared powder formulations and two control powders (BVDA Magnetic silver and pure dextran powder). The prints were then photographed under visible light with a 12 MP camera (aperture ƒ/2.2, pixel size 1.22 μm) using black background surface in order to achieve adequate contrast. When observing dry fingermarks, it was evident that their visualization was poor and the satisfactory results were not obtained with none of the applied powders. It is already well known that dry prints pose a great challenge in forensic investigation of fingerprints (Lennard, 2007). On the other hand, the development of sebaceous fingermarks was far better, since all powders have developed full fingerprint images, while at the same time visualizing the basic pattern type (double loop), the papillary lines (without disruption in their flow) and some minutiae points, as well.

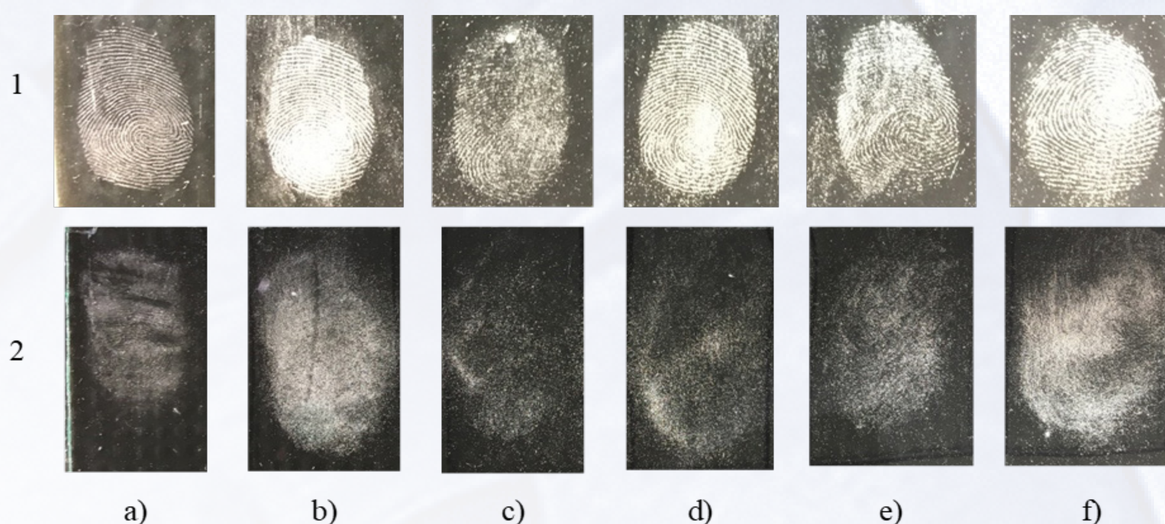


Figure 1. Sebaceous (1) and dry (2) fingerprints developed on glass surface, using the following powder formulations: a) BVDA Magnetic silver powder; b) Pure dextran powder; c) S(1/0/0); d) S(1/1/0); e) S(1/0/1) and f) S(1/1/1); and recorded under visible light using black background surface for adequate contrast.

When compared with control powders (Figure 1, 1-a) and 1-b)), the best results are obtained with formulation S(1/1/0) (Figure 1, 1-d)), while other tested formulations showed relatively satisfying results as well, which may be associated with diameter size of powders' particles. As confirmed by optical

microscopy, smaller particles better adhere and bind to sweat and lipid fingerprint residues, which was noticeable with synthetized powder formulations. On the contrary, pure dextran powder somewhat “over powdered” a fingerprint due to larger and non-uniform distribution of particles’ size (Gürbüz, Özmen Monkul, İpeksaç, Gürtekin Seden, & Erol, 2015).

FT-IR Analyses

FT-IR analyses were performed in order to evaluate interactions between the components of prepared systems. Figure 2 shows the spectra of pure dextran and the prepared powder formulations S(1/0/0), S(1/1/0), S(1/0/1) and S(1/1/1). All spectra in Figure 2 contain some characteristic bands: 3385 cm^{-1} due to O–H stretching and 2360 cm^{-1} due to the stretching of C–H (Carp, et al., 2010; Mehta, Rucha, Bhatt, & Upadhyay, 2006; Mitić, Cakić, & Nikolić, 2010). The band at 1154 cm^{-1} can been assigned to stretching vibrations of the C–O–C bond and glycosides bridge, while band at 1017 cm^{-1} can be associated with stretching of C–O–H (Chiu, Hsiue, & Chen, 2004; Mehta, Rucha, Bhatt, & Upadhyay, 2006; Mitić, Cakić, & Nikolić, 2010). The weak band at 1110 cm^{-1} can be ascribed to the vibration of the C–O bond at the C4 position of the glucopyranose units (Mitić, Cakić, & Nikolić, 2010). Peaks at 905, 841, and 758 cm^{-1} can be assigned to α-glucopyranose ring deformation modes (Cakić, Nikolić, Ilić, & Stanković, 2005; Carp, et al., 2010). Additionally, weak shoulder peak at 1077 cm^{-1} may be due to complex vibrations involving the stretching of the C6–O6 bond with participation of deformational vibrations of the C4–C5 bond (Guerrero, Kerry, & de la Caba, 2014; Nikolić, Cakić, Mitić, & Ilić, 2008). However, according to Mitić, et al. (Mitić, Cakić, & Nikolić, 2010), peaks at 1041 and 1017 cm^{-1} present in all spectra are related to the crystalline and amorphous phases respectively, and can be responsible for more or less ordered structures of dextran chains. Finally, the band at 3830 cm^{-1}, slightly more intense in spectra 4 and 5 (Figure 2) when compared with others, can be related to N–H stretching frequency of the acrylamide (in MBA) (Fan, Zhang, & Feng, 2005).

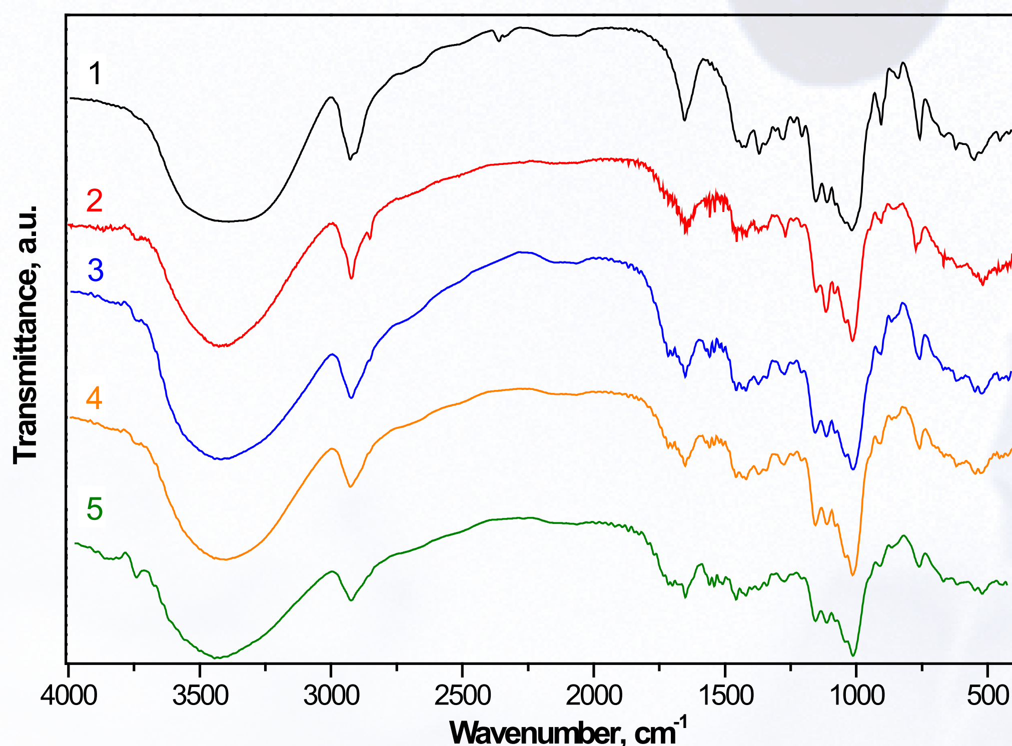


Figure 2. FT-IR spectra: 1) pure dextran; 2) S(1/0/0); 3) S(1/1/0); 4) S(1/0/1) and 5) S(1/1/1).

Optical microscopy

Figure 3 shows the images of prepared powders taken by Leica FS C Comparison Macroscope, equipped with the Leica IM Matrox Meteor II Driver Software Module, using magnification ×30 and dark-field contrast technique (backlighting). Since the best results were obtained on non-porous (glass) surface, the same surface was used for further analyses. The powder formulations were deposited onto microscopic glass slides in the form of a fine (thinner) and amassed (thicker) layer, in order to compare the uniformity and size of the particles.

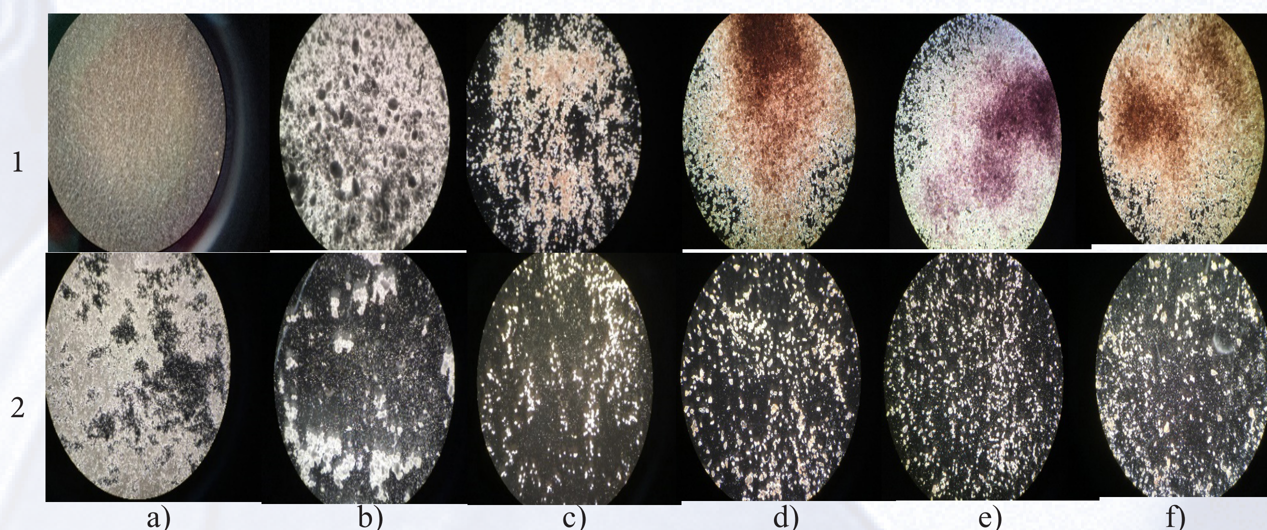


Figure 3. Microscopic images of prepared powders, deposited onto microscopic slides and recorded with optical microscope (magnification ×30, using dark-field contrast technique): a) BVDA Magnetic silver powder; b) Pure dextran powder; c) S(1/0/0); d) S(1/1/0); e) S(1/0/1) and f) S(1/1/1) Numbers 1 and 2 denote the images with powders in the form of amassed (thicker) and fine (thinner) layer respectively.

When comparing both thick and thin layers, it is evident that BVDA Magnetic silver powder (Figure 3, a) 1 and 2) contains more uniform and smaller particles than all other powder formulations. However, thicker layer of pure dextran powder (Figure 3, b) 1) possesses many irregular and non-uniform particles when compared to the prepared powder formulations (Figure 3, c)-f) 1), which can be related to "over powdering" of fingerprints when pure dextran powder is being applied. When observing thinner layers, these characteristics are even more obvious (Figure 3, b)-f) 2).

Subsequently, in order to confirm the previous presumptions, pure dextran and prepared powder formulations were used to develop latent fingerprints on glass surface. Therefore, sebaceous and dry fingerprints randomly deposited onto the labeled glass microscopic slides using technical scale were left for a few minutes and then 4 prepared powder formulations and pure dextran powder (control powder) were used for their visualization. After a short period of time, the fingerprints were halved with a thick slide barrier and 2 different powders were applied on the same fingerprint – synthetized powders were applied to the left and pure dextran powder was applied to the right barrier side, using BVDA Squirrel hair brush. Afterwards, the samples of enhanced fingerprints were recorded under the optical microscope (magnification ×15), using dark-field (Figure 4, 1) and bright-field (Figure 4, 2) contrast techniques. Three male donors have left fingerprints and their visualization and scanning were repeated several times (only sebaceous fingerprints were shown within the manuscript for practical reasons).

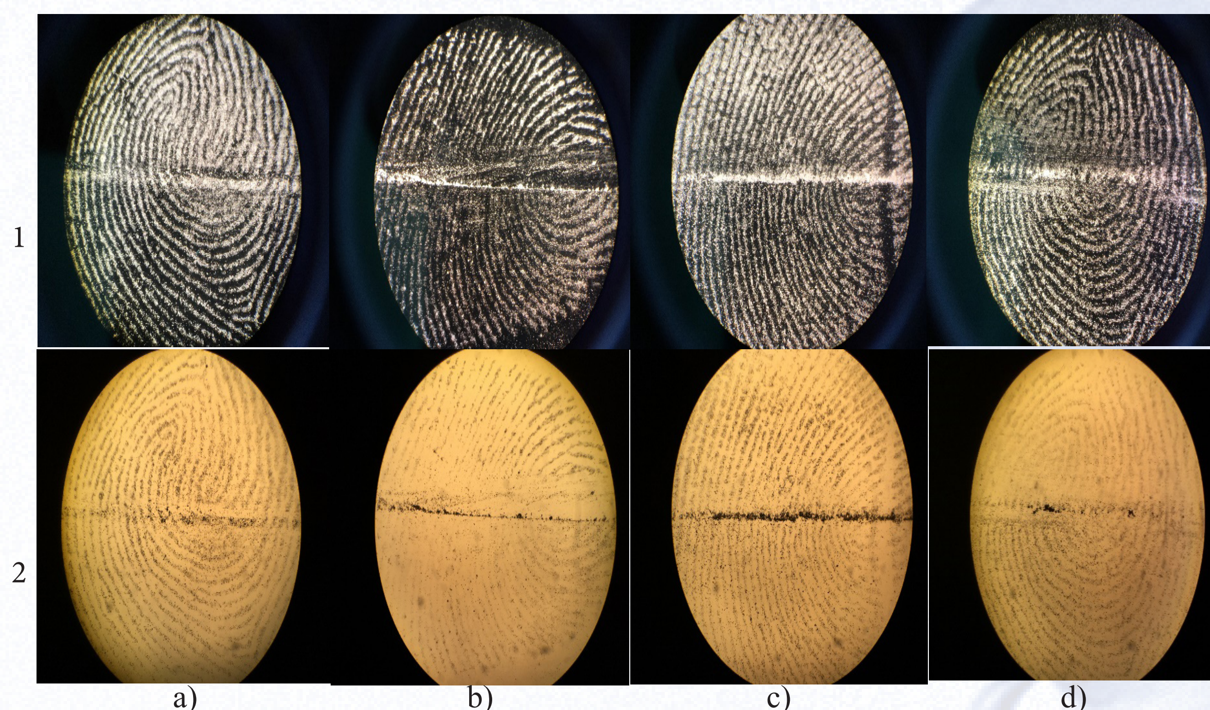


Figure 4. Sebaceous fingerprints deposited onto glass microscopic slides, left for a few minutes and developed using the prepared powders: a) S(1/0/0); b) S(1/1/0); c) S(1/0/1) and d) S(1/1/1) (left-half side of the images) and pure dextran powder as a control powder (right-half side of the images), recorded with optical microscope (magnification ×15), using: 1) dark-field and 2) bright-field contrast techniques.

When compared to the pure dextran powder (control powder), all prepared powder formulations showed better results in terms of developing latent fingermarks, which was reflected in visualizing the papillary lines with their continuous flow and making perceptible some minutiae as well. As we hypothesized previously, this may be associated with smaller diameter size of the prepared powders' particles, when compared to pure dextran powder, which enabled their better adhesion and binding to fingerprint sweat and lipid residues (Gürbüz, Özmen Monkul, İpeksaç, Gürtekin Seden, & Erol, 2015). Additionally, when applied with a brush, the prepared powdered formulations bonded with fingerprint residues and did not remain in the interpapillary space, when compared with the control powder. On the other hand, pure dextran powder has also developed fingerprints with persuasive results, but with noticeable "over powdering" of traces. Formulation S(1/0/0) (Figure 4, a), left-half side of the images) showed as good results as S(1/1/1) (Figure 4, d), left-half side of the images) and even better results than formulations S(1/1/0) and S(1/0/1) (Figure 4, b) and c), left-half side of the images), which was very promising, since that formulation contains only dissolved dextran powder precipitated with methanol, without initiator and/or crosslinker (KIO_4 and MBA show toxic, detrimental and irritating effect, while MBA is also potentially carcinogenic, as already explained and confirmed by Lent et al. (Lent, Crouse, & Eck, 2017; George, et al., 1998)). Therefore, very satisfying visualization of sebaceous fingerprints was achieved using glass surface as substrate, and with readily available, cheap and innoxious dextran-based powdered system.

However, it was evident that dry fingerprints could not be developed with applied powders, due to the lack of lipid and sweat residues deposition onto different substrates. Those prints must still be continuously and thoroughly investigated in order to overcome one of the main problems in forensic examination of fingerprints (Lennard, 2007).

CONCLUSIONS

In this paper, four different dextran-based powder formulations were obtained by simple precipitating method and were characterized in order to determine their potential application in development of latent fingerprints. Dextran was used due to its availability and low price, water solubility and non-toxic properties. The initiator and the crosslinking agent were used in order to obtain aldehyde functionalities of dextran chains and their crosslinking respectively, with the aim at enhancing the interactions with fingerprint residues. However, KIO_4 and MBA showed toxic and detrimental effect, which is unfavorable for the desired bio-based powder system. Based on the obtained results, formulation S(1/0/0) showed the best properties, with small and uniform particles, good binding to the fingerprint residues and their clear visualization, and the system is less harmful and satisfies the cost-benefit requirements. Additionally, all prepared powders showed better results in terms of developing latent fingermarks when compared to the pure dextran powder (control powder). However, the obtained results did not meet the expectations regarding color appearance, since the color of applied powders was not appropriate to visualize fingerprints on (white) paper surface and the hypothesized complexing of anthocyanins has not contributed to the enhancement of fingerprints on a rubber surface. On the other hand, as many commercial dusting formulations, these powders are easily handled and applicable, requiring no prior knowledge and the method itself is non-destructive, avoiding irreversible loss of traces. Finally, the additional research should include other (bio)polymers or addition of bio-based dyes and indicators, in order to expand the application of these systems on other surfaces and under different conditions, with the aim at supplementing some of the routinely employed physical methods in visualizing and enhancing latent fingerprints.

REFERENCES

1. Bumbrah, G. S., Sharma, R., & Jasuja, O. (2016). Emerging latent fingerprint technologies: a review. *Research and Reports in Forensic Medical Science, 6*, 39-50.
2. Cakić, M., Nikolić, G., Ilić, L., & Stanković, S. (2005). Synthesis and FTIR Characterization of Some Dextran Sulphates. *CI&CEQ, 1*(2), 1-5.
3. Carp, O., Patron, L., Culita, D. C., Budrugeac, P., Feder, M., & Diamandescu, L. (2010). Thermal analysis of two types of dextran-coated magnetite. *Journal of Thermal Analysis and Calorimetry, 101*(1), 181–187.
4. Champod, C., Lennard, C. J., Margot, P., & Stoilovic, M. (2004). *Fingerprints and Other Ridge Skin Impressions* (2nd ed.). Boca Raton, Florida: CRC Press, Taylor & Francis.
5. Chandrasekhar, J., Madhusudhan, M. C., & Raghavarao, K. S. (2012). Extraction of anthocyanins from red cabbage and purification using adsorption. *Food and Bioproducts Processing, 90*(4), 615–623.
6. Chiu, H.-C., Hsiue, T., & Chen, W.-Y. (2004). FTIR-ATR measurements of the ionization extent of acrylic acid within copolymerized methacrylated dextran/acrylic acid networks and its relation with pH/salt concentration-induced equilibrium swelling. *Polymer, 45*(5), 1627-1636.
7. Datta, A. K., Lee, H. C., Ramotowski, R., & Gaensslen, R. E. (2001). *Advances in Fingerprint Technology* (2nd ed.). CRC Press, Taylor & Francis.

8. Fan, Y., Zhang, M., & Feng, Y.-Q. (2005). Poly(acrylamide-vinylpyridine-*N,N'*-methylene bisacrylamide) monolithic capillary for in-tube solid-phase microextraction coupled to high performance liquid chromatography. *Journal of Chromatography A, 1099*(1-2), 84-91.

9. Färber, D., Seul, A., Weisser, H., & Bohnert, M. (2010). Recovery of latent fingerprints and DNA on human skin. *Journal of Forensic Sciences, 55*(6), 1457-1461.

10. George, J. D., Price, C. J., Marr, M. C., Myers, C. B., Schwetz, B. A., & & Heindel, J. J. (1998). Evaluation of the developmental toxicity of methacrylamide and *N,N'*-methylenebisacrylamide in Swiss mice. *Toxicological Sciences, 46*(1), 124-133.

11. Guerrero, P., Kerry, J. P., & de la Caba, K. (2014). FTIR characterization of protein–polysaccharide interactions in extruded blends. *Carbohydrate Polymers, 111*, 598-605.

12. Gürbüz, S., Özmen Monkul, B., İpeksaç, T., Gürtekin Seden, M., & Erol, M. (2015). A systematic study to understand the effects of particle size distribution of magnetic fingerprint powders on surfaces with various porosities. *Journal of Forensic Sciences, 60*(3), 727-736.

13. International Fingerprint Research Group (IFRG). (2014). *Guidelines for the Assessment of Fingermark Detection Techniques*. Accessed on July 10, 2020. https://ifrg.unil.ch/wp-content/uploads/2014/06/IFRG-Research-Guidelines-v1-Jan-2014.pdf.

14. Lennard, C. (2007). Fingerprint detection: current capabilities. *Australian Journal of Forensic Sciences, 39*(2), 55-71.

15. Lent, E. M., Crouse, L. C., & Eck, W. S. (2017). Acute and subacute oral toxicity of periodate salts in rats. *Regulatory Toxicology and Pharmacology, 83*, 23–37.

16. Maia, J., Carvalho, R. A., Coelho, J. F., Simões, P. N., & Gil, M. H. (2011). Insight on the periodate oxidation of dextran and its structural vicissitudes. *Polymer, 52*(2), 258–265.

17. Mehta, R. V., Rucha, D., Bhatt, P., & Upadhyay, R. V. (2006). Synthesis and characterization of certain nanomagnetic particles coated with citrate and dextran molecules. *Indian Journal of Pure and Applied Physics, 44*(7), 537-542.

18. Milašinović, N. (2016). Polymers in Criminalistics: Latent Fingerprint Detection and Enhancement – From Idea to Practical Application. *NBP – Journal of Criminalistics and Law*, 133-148.

19. Milašinović, N., & Koturević, B. (2016). *Uvod u hemiju: praktikum za laboratorijske vežbe.* Belgrade: Academy of Criminalistic and Police Studies.

20. Mitić, Ž., Cakić, M., & Nikolić, G. (2010). Fourier-Transform IR spectroscopic investigations of Cobalt(II)–dextran complexes by using D_2O isotopic exchange. *Spectroscopy, 24*, 269–275.

21. Mitrović, V. (1998). *Kriminalistička identifikacija: teorija i praksa.* Belgrade.

22. Nikolić, G. S., Cakić, M., Mitić, Ž., & Ilić, L. (2008). Deconvoluted Fourier-transform LNT-IR study of coordination copper(II) ion compounds with dextran derivatives. *Russian Journal of Coordination Chemistry, 34*(5), 322–328.

23. Trapecar, M., & Balazic, J. (2007). Fingerprint recovery from human skin surfaces. *Science & Justice, 47*(3), 136-140.

24. Wang, R., Dijkstra, P. J., & Karperien, M. (2016). Dextran. In Neves N. M., & Reis R. I. (Eds.), *Biomaterials from Nature for Advanced Devices and Therapies* (pp. 307-316). New Jersey: John Wiley & Sons, Inc.

25. Wanga, Y. F., Yang, R. Q., Wanga, Y. F., Shi, Z. X., & Liu, J. J. (2009). Application of CdSe nanoparticle suspension for developing latent fingermarks on the sticky side of adhesives. *Forensic Science International, 185*, 96-99.

26. Wasiak, I., Kulikowska, A., Janczewska, M., Michalak, M., Cymerman, I. A., Nagalski, A., Kallinger, P., Szymanski, W. W., & Ciach, T. (2016). Dextran Nanoparticle Synthesis and Properties. *PLOS ONE, 11*(1), 1-17.

OPTIMIZATION OF THE POLLEN EXTRACTION PROCESS FOR IMPROVEMENT OF IDENTIFICATION

Anja Zlatanović
Ana Branković, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Forensic palynology uses microscopic evidence that is resistant to external influences and displacement from the scene. Most suspects may overlook pollen as evidence because they do not know its importance. Pollen provides a myriad of opportunities in forensics: determining the time of year, locality, primary and secondary event venue, connecting participants in a single criminal event, etc. Pollen analysis consists of determining the species and estimating the percentage that each plant species represents in the evidence sample. All methods require preliminary preparation (pollen extraction). A couple of methods for pollen extraction are used, but they are usually either suitable for large samples or require expensive equipment. We tried to optimize some of the existing methods to improve yield. Best results have been achieved using water incubated samples combined with modified acetolysis. Further development and implementation of forensic palynology depend on the simplified procedure and involvement of forensic botanists.

Keywords: forensic palynology, identification, extraction optimization, microscopy

INTRODUCTION

It has been established that trace evidence can be very important in forensic investigations and pollen evidence in particular since it can provide valuable temporal information. Most of the time, the cases where pollen evidence was used represent cases of identification of a crime scene based on the pollen assemblages present on a suspect or victim or refuting an alibi. Palynology, which is the study of pollen and spores in an archaeological or geological context, has become a well-established research tool leading to many significant scientific developments. The term palynomorph includes pollen of spermatophytes, spores of fungi, ferns, and bryophytes, as well as other organic-walled microfossils,

1 ana.brankovic@kpu.edu.rs

such as dinoflagellates and acritarchs (Babcock & Warny, 2014). Pollen is the male fertilizing agent of flowering plants, trees, grasses, and weeds. It is also a major allergen that causes symptoms of seasonal allergic rhinitis. While most people think of pollen only in terms of allergies, its story is much more interesting. Pollen carries the male sex cells from one plant to another of the same species. Pollination presents the precursor to fertilization and allows gene flow among plants.

Today, palynology is a tool that is necessary for various applied sciences such as systematics (Dransfield et al., 2008; Doyle and Endress, 2010), melissopalynology (Jones & Bryant 1996), and forensics (Mildenhall et al. 2006; Bryant 2014; Weber and Ulrich 2016), but should also be considered a basic, stand-alone scientific field. In general, compared to the sporophyte, the male gametophyte in seed plants is investigated rather poorly. Out of c. 260.000 to 422.000 plant species (Thorne, 2002; Govaerts, 2003; Scotland & Wortley, 2003) - The Plant List currently accepts 350.699 species - only about 10% have been studied for pollen grain morphology and an even smaller percentage regarding pollen ultrastructure. Therefore, we can conclude that it is of great importance to continue classical and more advanced palynological studies (Halbritter et al., 2018).

Pollen grains are utilized for forensic purposes because they are exceptionally impervious to chemical attacks. They can remain at a crime scene for a long time after the event under investigation has happened. Furthermore, they give one source of regularly moved material, which is frequently traded inside the setting of an exchange of mud, soil, and/or residue particles (Mildenhall et al., 2006). Moreover, pollens can also be transferred by direct contact with a part of a plant containing spores or pollen. Pollen grains are ideal forensic trace materials since they are small, highly variable and found on things that have been exposed to air, or interact with it. Pollen isolation from most things can be accomplished by submitting samples for forensic examination. Such samples may include soil, ropes and twines, clothing and fabrics, drugs, air filters, plant material, and animal and human material, such as fur, hair and stomach contents (Milne et al., 2005; Alotaibi et al., 2020)

RESEARCH

Scientific pollen studies have resulted in important breakthroughs not only in the world of forensic palynology but in the understanding of the history of Earth's vegetation as well. By using fossilized palynomorphs retrieved from sediment cores off the coast of Antarctica, geologists have been able to reconstruct the continent's climate from millions of years ago (Warny et al., 2009). Pollen's usefulness in forensic investigation, as well as the reconstruction of Earth's past, comes from its unique characteristics. Since it is small and produced in great numbers, it can be picked up by items associated with a crime (such as clothing, tools, or other objects) and transported without a perpetrator being aware of it, let alone being able to eliminate it (Babcock & Warny, 2014). Some types of pollen grains have characteristic hook-like structures on their exine wall that can attach themselves to the legs of pollinators, which lets them travel long distances even more easily. Just as every geographic location has its specific vegetation and ecosystem, it also possesses a unique pollen "fingerprint", allowing palynologists to ascertain where certain objects have been.

Pollen has had numerous applications in forensic crime investigation, starting in the 1930s in North America when samples of honey were studied in order to differentiate between the various types and their origins (Auer, 1930). Another one began in the 1950s in an Austrian murder mystery. A man went missing while travelling. The mud on the suspect's boots contained 20-million-year-old fossilized pollen grains that could have come only from a specific area of the Danube River. After seeing the

evidence, the suspect confessed to the crime and led the police to the body, which was exactly where the pollen suggested it would be found (Alotaibi et al., 2020)

Experimental pollen studies demonstrated certain inconsistencies in the persistence of tulip, lily, and daffodil pollens when exposed to high temperatures for periods between 0.5 min and 24 h. It was possible to identify all three pollen types after 30 min of exposure to 400°C. After shorter time frames the threshold for successful identification was 700°C after 0.5 min for all pollen types tested, and 500°C for lily and daffodil after a 5-minute heat exposure. For times longer than 18 h, all three pollen types were discovered to continue in a suitable structure for identification at 50°C (tulip), 200°C (daffodil), and 300°C (lily). These results proved the value and importance of seeking and collecting pollen as evidence even from extreme crime scenes such as vehicular fires (Morgan, Flynn, Sena & Bull, 2014)

METHOD AND MATERIALS

In this experiment, the process of acetolysis for pollen extraction was optimized to allow better extraction from a small sample. The species used in this experiment is *Delphinium Balcanicum*. This is one of the endemic species found in the Pčinja-Vražji Kamen area, in the southern part of Serbia.

Delphinium is a genus of about 300 species of perennial flowering plants in the family *Ranunculaceae*, native to the Northern Hemisphere, as well as the high mountains of tropical Africa.

All members of the genus *Delphinium* are toxic to humans and livestock.

The leaves are deeply lobed with three to seven toothed, pointed lobes in a palmate shape. The main flowering stem is erect, and varies greatly in size between the species, from 10 centimeters in some alpine species, up to 2 meters tall in the larger meadowland species.

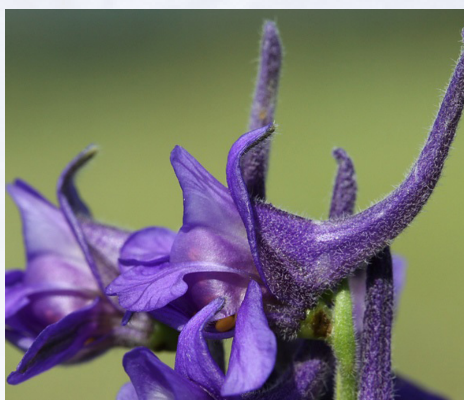


Image 1. *Flowers of Delphinium Balcanicum*

In June and July (Northern Hemisphere), the plant is topped with a raceme of many flowers, varying in color from purple and blue, to red, yellow, or white. In most species, each flower consists of five petal-like sepals which grow together to form a hollow pocket with a spur at the end, which gives the plant, usually more or less dark blue, its name. Within the sepals are four true petals, small, inconspicuous, and commonly colored similarly to the sepals. The eponymous long spur of the upper sepal encloses the nectar-containing spurs of the two upper petals. (https://www.britannica.com/plant/Ranunculales, https://www.wildflowers-and-weeds.com/Plant_Families/Ranunculaceae.htm)

Class: Magnoliopsida

Ordo: Ranunculales

Familia: Ranunculaceae

Subfamilia: Ranunculoideae

Genus: Delphinium

Species: *Delphinium Balcanicum*

In this experiment we used 5 individual plants of *D. Balcanicum* and 5 flowers from each plant. We removed anthers from all the flowers using tweezers and distributed the pollen equally into 6 tubes (3 tubes as 3 samples for standard acetolysis and 3 tubes for optimized acetolysis). In the following section, we will take a brief look at standard acetolysis, as well as the optimized one.

The standard acetolysis procedure:

1. The anthers are preserved either in 70% aqueous solution of acetic acid or 70% ethyl alcohol.
2. The anthers are transported from the solution (aqueous solution of acetic acid or ethyl alcohol) to a centrifuge tube and washed with distilled water. The anthers are then transported to the watch glass and crushed with a glass rod. The crushed anthers are transported to the new tube with distilled water and the mixture is filtrated through cheesecloth. The mixture that passes through the cheesecloth contains washed pollen.
3. A freshly prepared acetolysis solution consisting of acetic anhydride and concentrated H_2SO_4 in the ratio of 9:1 (v/v) is poured in the centrifuge tube containing washed pollen. Before the solution is poured into the centrifuge tube with washed pollen, distilled water is discarded and glacial acetic acid is added. The acetolysis solution reacts violently with water. Glacial acetic acid wash is necessary to replace water. After washing the pollen with glacial acetic acid the acetolysis solution is added.
4. The centrifuge tube containing pollen in the suspension of the acetolysis solution (v/v) is placed in a water bath (Vims Electric, WKP-9) and heated at 70°C for 5-10 min, while the contents are stirred with a glass rod intermittently.
5. Acetolyzed pollen suspension is centrifuged and the supernatant liquid is decanted. (Bio-Rad Mini Centrifuge, #1660603,6000 rpm)
6. Pollen sediment in a centrifuge tube is immersed in glacial acetic acid for a few minutes and the superfluous liquid is decanted after 5 min of centrifugation (6000 rpm). This is washed with distilled water 2-3 times.
7. The pollen material is ready for mounting on the slides for microscopic examination. Alternatively, it can be stored in this condition in vials containing 50% glycerine.
8. Acetolyzed pollen material is mounted in glycerine jelly, polyvinyl alcohol, Canada balsam, etc.
9. Edges of the cover glass are sealed with paraffin wax.

Optimized procedure:

1. The anthers are preserved in 70% ethanol.
2. Anthers are transferred to a centrifuge tube with ethanol and centrifuged for 1 min. (6000 rpm)
3. After centrifugation, the top layer (supernatant) is decanted and pollen is emerged in water solution of acetic acid (70%; v/v) for a few min (2-5).

4. Pollen suspension with water solution of acetic acid is vortexed for 1 min. (Bio-Rad, BR-2000 Vortexer, #1660610)

5. The centrifuge tube that contains pollen and the water solution of acetic acid is pierced with a medical needle that was previously heated on a spirit lamp. Then the centrifuge tube with a pollen mixture is placed inside a new centrifuge tube and centrifuged for a few seconds (6000 rpm). This allows the acetic mixture with pollen to go through a hole into a new centrifuge tube.

6. The mixture is centrifuged for 3 min (6000 rpm) and the supernatant is decanted.

7. A freshly prepared acetolysis solution consisting of acetic anhydride and concentrated H_2SO_4 in the ratio of 9:1 (v/v) is poured in the centrifuge tube containing washed pollen.

8. The centrifuge tube containing pollen in the suspension of the acetolysis solution is placed in a water bath and heated at 75°C for 5-10 min, while the contents are stirred with a glass rod intermittently.

9. Acetolyzed pollen suspension is centrifuged and the supernatant liquid is decanted. (6000 rpm)

10. Pollen sediment in a centrifuge tube is immersed in glacial acetic acid for a few minutes and the superfluous liquid is decanted after 5 min centrifugation (6000 rpm).

11. After centrifugation, the supernatant is decanted and distilled water is added and centrifuged again for 2 min. (6000 rpm)

12. The supernatant is decanted again and the sample is dried at 65°C for 20 min in the incubator. (Vims Electronic, IT-33)

13. The pollen material is ready for mounting on the slides for microscopic examination.

14. Acetolyzed pollen material is mounted in glycerine jelly, polyvinyl alcohol, Canada balsam, etc.

15. Edges of the cover glass are sealed with paraffin wax.

RESULTS

As mentioned before, the optimized acetolysis process allows better extraction from a small sample. Better extraction is possible because the number of washings of the samples with acetic acid and distilled water is reduced to the minimum. This prevents excessive washing out of our samples, and it does not damage or have any bad effects on our pollen. Crushing anthers with a glass rod did not give expected results, since the anthers are too small, so very few of them are actually crushed because of this, and most of them tend to be difficult to handle due to their round shape, often causing them to end up outside the glass surface. Vortex and centrifugation break them faster and more easily. Filtration through cheesecloth gave a much smaller amount of pollen, since most of it stayed on the cheesecloth, so using a medical needle allowed us to filtrate more of our sample into the next tube. Bringing the drying step into optimized acetolysis allowed easier pollen collection from the tube with the glass rod or tweezers, since water residue was an obstacle for easier collection of our samples.

In the final results, the optimized process of acetolysis gave approximately 4 times more pollen per microscope field, than the standard acetolysis (Figure 1) (Figure 2).

Table1. *Comparison of the standard and optimized acetolyses*

<table>
<tr><th>Standard acetolysis</th><th>Optimized acetolysis</th></tr>
<tr><td>The anthers are preserved either in 70% aqueous glacial acetic acid or 70% ethyl alcohol.</td><td>The anthers are preserved in 70% ethanol</td></tr>
<tr><td rowspan="6">Anthers are transported from the solution (aqueous solution of acetic acid or ethyl alcohol) to a centrifuge tube and washed with distilled water. The anthers are then transported to the watch glass and crushed with a glass rod. The crushed anthers are transported to the new tube with distilled water and the mixture is filtrated through a piece of cheesecloth. The mixture that went through cheesecloth contains washed pollen.</td><td>Anthers are transported to a centrifuge tube with ethanol and centrifuged for 1 min. (6000 rpm)</td></tr>
<tr><td>After centrifugation, the top layer (supernatant) is decanted and pollen is emerged in water solution of acetic acid for a few min (2-5).</td></tr>
<tr><td>Pollen suspension with water solution of acetic acid is vortexed for 1 min.</td></tr>
<tr><td>The centrifuge tube that contains pollen and the water solution of acetic acid is being pierced with a medical needle that was previously heated on a spirit lamp. Then the centrifuge tube with a pollen mixture is placed inside a new centrifuge tube and centrifuged for a few seconds (6000 rpm). This allows the acetic mixture with pollen to go through a hole into a new centrifuge tube.</td></tr>
<tr><td>The mixture is centrifuged for 3 min and the supernatant is decanted. (6000 rpm)</td></tr>
<tr></tr>
<tr><td>A freshly prepared acetolysis solution consisting of acetic anhydride and concentrated H2SO4 in the ratio of 9:1 (v/v) is poured in the centrifuge tube containing washed pollen. Before the solution is poured into the centrifuge tube with washed pollen the distilled water is discarded and glacial acetic acid is added. The acetolysis solution reacts violently with water. Glacial acetic acid wash is necessary to replace water. After washing the pollen with glacial acetic acid the acetolysis solution is added.</td><td>A freshly prepared acetolysis solution consisting of acetic anhydride and concentrated H2SO4 in the ratio of 9:1 (v/v) is poured in the centrifuge tube containing washed pollen.</td></tr>
<tr><td>The centrifuge tube containing pollen in the suspension of the acetolysis solution is placed in a water bath and heated at 70°C for 5-10 min, while the contents are stirred with a glass rod intermittently.</td><td>The centrifuge tube containing pollen in the suspension of the acetolysis solution is placed in a water bath and heated at 75°C for 5-10 min, while the contents are stirred with a glass rod intermittently.</td></tr>
<tr><td>Acetolyzed pollen suspension is centrifuged and the supernatant liquid is decanted. (6000 rpm)</td><td>Acetolyzed pollen suspension is centrifuged and the supernatant liquid is decanted. (6000 rpm)</td></tr>
</table>

Pollen sediment in a centrifuge tube is immersed in glacial acetic acid for a few minutes and the superfluous liquid is decanted after 5 min of centrifugation (6000 rpm). This is washed with distilled water 2-3 times.	Pollen sediment in a centrifuge tube is immersed in glacial acetic acid for a few minutes and the superfluous liquid is decanted after 5 min centrifugation (6000 rpm).
	After centrifugation, the supernatant is decanted and distilled water is added and centrifuged again for 2 min. (6000 rpm)
	The supernatant is decanted again and the sample is being dried at 65°C for 20 min.
The pollen material is ready for mounting on the slides for microscopic examination. Alternatively, it can be stored in this condition in vials containing 50% glycerine. Acetolyzed pollen material is mounted in glycerine jelly, polyvinyl alcohol, Canada balsam, etc. Edges of the cover glass are sealed with paraffin wax.	The pollen material is ready for mounting on the slides for microscopic examination. Acetolyzed pollen material is mounted in glycerine jelly, polyvinyl alcohol, Canada balsam, etc. Edges of the cover glass are sealed with paraffin wax.

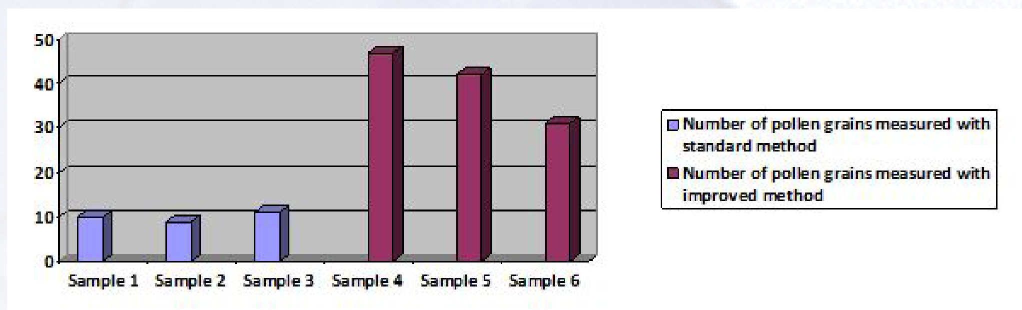


Figure 1. *Comparison of number of pollen grains*
Improved method in the legend refers to the optimized acetolysis method

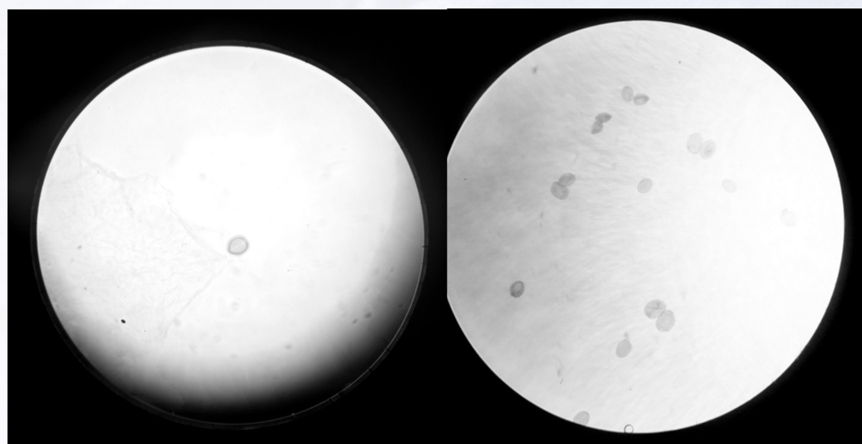


Figure 2. *Pollen of Delphinium balcanicum under a microscope: left – standard acetolysis procedure; right – optimized acetolysis procedure*

CONCLUSIONS

Pollen has been increasingly used in forensic investigations over the last couple of years and it is recognized as valid court evidence in countries such as New Zealand and the USA (Bryant 2014). Since sample quantities are usually limited, it is necessary to optimize the extraction process to ensure the highest possible yield. In this paper, we presented the optimized procedure of pollen extraction from one of the plant species that we treated in this experiment. In all of the samples, several times higher pollen yield was obtained. In the next phase, it is necessary to test the method on pre-prepared forensic samples, and finally on samples collected at the crime scene. We think there is a possibility of using this extraction method in forensic labs and since the ecosystems and vegetation have unique 'fingerprints', pollen investigation could have a significant place in common forensic and crime solving in the near future. However, for pollen identification to become a part standard forensic investigations we need to educate more crime scene investigators of its significance and to employ more botanists in forensic teams.

REFERENCES

1. Alotaibi, S.S., Sayed, S. M., Alosaimi, M., Alharthi, R., Banjar, A., Abdulqader, N., & Alhamed, R. (2020). Pollen molecular biology: Applications in the forensic palynology and future prospects: A review. *Saudi journal of biological sciences*, *27*(5), 1185–1190. DOI:10.1016/j.sjbs.2020.02.019

2. Auer, V., 1930. Botany of the interglacial peat beds of Moose River Basin. Geological Survey of Canada Summary Report for 1926, Part C, 45-47.

3. Babcock, S.L. & Warny S. (2014) Forensic Palynology as Classroom Inquiry, *Science Activities*, 51:4, 116-128. DOI: 10.1080/00368121.2014.931270

4. Berry, P.E. & Sampson, B.F. (February 19, 2019). *Encyclopædia Britannica*, London. Accessed on July 25, 2020. https://www.britannica.com/plant/Ranunculales

5. Bryant, V.M. (2014) Pollen and Spore Evidence in Forensics, In: Jamieson, A. & Moenssens, A. (Eds), *Wiley encyclopedia of forensic science* (Vol. 5, pp. 1 – 16.), John Wiley & Sons. DOI: 10.1002/9780470061589.fsa085.pub2

6. Bryant, V.M., Holloway, R.G., Jones, J.G., Carlson, D.L. (1994) Pollen preservation in alkaline soils of the American southwest. In: Traverse A. (ed) *Sedimentation of organic particles* (pp. 47–58), Cambridge University Press, Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, Sao Paolo. DOI: 10.1017/CBO9780511524875

7. Doyle, J.A. & Endress, P.K. (2010), Integrating Early Cretaceous fossils into the phylogeny of living angiosperms: Magnoliidae and eudicots. *Journal of Systematics and Evolution*, 48: 1-35. DOI:10.1111/j.1759-6831.2009.00058.x

8. Elpel, T.J. *Ranunculaceae* Plants of the Buttercup Family. *Wildflowers-and-Weeds.com*, Pony, Montana. Accessed on July 26, 2020. https://www.wildflowers-and-weeds.com/Plant_Families/Ranunculaceae.htm

9. Govaerts, R. (2003) How many species of seed plants are there? – a response. *Taxon* 52: 583–584. DOI: 10.2307/3647457

10. Halbritter, H. (2018) Palynology: History and Systematic Aspects. In: Halbritter, H., Ulrich, S., Grímsson, F., Weber, M., Zetter, R., Hesse, M., Buchner, R., Svojtka, M., & Frosch-Radivo, A. (Eds) *Illustrated Pollen Terminology* (2nd ed., pp.15-16), Springer International Publishing, 6330 Cham, Switzerland. DOI:10.1007/978-3-319-71365-6
11. Harley, M.M. (2008) Palm Pollen. In: Dransfield, J., Uhl, N.W., Asmussen, C.B., Baker, W.J., Harley, M.M., Lewis, C.E. (eds) *Genera Palmarum. The Evolution and Classification of Palms* (pp.41-54), Kew Publishing, Kew. DOI: 10.34885/92
12. Mildenhall, D. C., Wiltshire, P. E., & Bryant, V. M. (2006). Forensic palynology: why do it and how it works. *Forensic science international*, *163*(3), 163–172. DOI:10.1016/j.forsciint.2006.07.012
13. Milne, L., Bryant Jr, V.M., Mildenhall, D.C. (2005). Forensic Palynology. In: Coyle, H.M. (Ed.), *Forensic Botany: Principles and Applications to Criminal Casework* (pp. 217–252), CRC Press, Boca Raton, USA. DOI: 10.1201/9780203484593
14. Morgan, R. M., Flynn, J., Sena, V., & Bull, P. A. (2014). Experimental forensic studies of the preservation of pollen in vehicle fires. *Science & justice: journal of the Forensic Science Society*, *54*(2), 141–145. DOI:10.1016/j.scijus.2013.04.001
15. Scotland, R.W. & Wortley, A.H. (2003) How many species of seed plants are there? *Taxon* 52: 101–104. DOI: 10.2307/3647306
16. Thorne, R.F. (2002) How many species of seed plants are there? *Taxon* 51: 511–522. DOI: 10.2307/1554864
17. Weber, M. & Ulrich, S. (2016) Forensic Palynology: How pollen in dry grass can link to a crime scene. In: Kars, H. & van den Eijkel, L. (eds) *Soil in Criminal and Environmental Forensics: Proceedings of the Soil Forensics Special, 6th European Academy of Forensic Science Conference* (pp. 15–23), The Hague, Springer. DOI: 10.1007/978-3-319-33115-7

EXTRACTION AND IDENTIFICATION OF ATROPINE FROM "LEGAL HIGH" PLANT SPECIES

Marija Pejić
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Milica Janković
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Snežana Djordjević, PhD
National Poison Control Centre; Medical Faculty,
Military Medical Academy, University of Defense, Belgrade, Serbia

Biljana Koturević, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Atropine from herbs has been used in traditional medicine over centuries, mainly because of its hallucinogenic properties. When administrated orally through abusing of *Datura stramonium* (DS) seeds, atropine is quickly absorbed causing dilatation of the pupil, tachycardia, hyperthermia, dizziness, nausea, extreme confusion, deliriant hallucinations and in some cases death. Knowing that *Datura stramonium* is one of the "legal high" plants with a high risk of toxicity for humans and animals, forensic analysis of such a material is of high importance. This work aimed at developing a fast and simple method for extraction and determination of the atropine content as the main alkaloid in *DS* seeds. Optimization of parameters for conventional heated solid-liquid extraction of atropine from *DS* seeds were obtained by varying the particle size (8.6 mm-1.7 mm), temperature (40°C-60 °C), and ethanol concentration (48.0-96.0 % v/v). The extracts were analyzed by Acquity UPLC HSS C18 1.8 µm column with mobile phase acetonitrile and formate buffer pH 3.6 (75:25) and flow rate of 0.4 mL/min. Quantitation was done in MRM mode using m/z 290→ 124 and 290→ 93 transitions.

Keywords: *Datura stramonium*, drug, atropine, extraction, MS-MS spectrometry

1 biljana.koturevic@kpu.edu.rs

INTRODUCTION

The abuse of psychoactive substances is one of the biggest challenges faced by legal authorities in modern society. Although the abuse of synthetic drugs produced in illegal laboratories around the world is particularly widespread among the youth population, teenagers are not unfamiliar with the drugs they can find in nature, such as plant *Datura Stramonium L (D. Stramonium)*.

D. Stramonium also known as *Jimson weed* is an annual summer plant widely distributed and usually found in abandoned areas, along roads and in cultivated fields. The plant particularly prefers sandy soil or a calcareous loam and open sunny position, while nitrogen-enriched soil, such as fertilized soils, contributes to a richer alkaloid content (Chopra, 2006). *D. Stramonium* is a cylindrical branched plant that can reach a height of 0.5 to 1.5 m. During the summer the plant is veiled with the solitary, white, trumpet-shaped flowers that open at night, emitting a pleasant fragrance. In the period of blooming, each flower is replaced by a dry, pointed and oval-shaped fruit. The immature fruit is green coloured and covered with soft spines, and when riped it becomes brown coloured, covered with sharp spines and splits into four chambers which contain small, black seeds (Figure 1). Up to 200 seeds can be found in capsules (Gaire & Subedi, 2013; Krenzelok, 2010). *D. Stramonium* is a well-known plant used in Eastern medicine to treat ulcers, wounds, inflammation, fever, asthma and sinus infections, rheumatism, etc. (Kuete, 2014). However, the frequent recreational abuse of the plant mostly among adolescents and young adults has resulted in toxic syndromes.

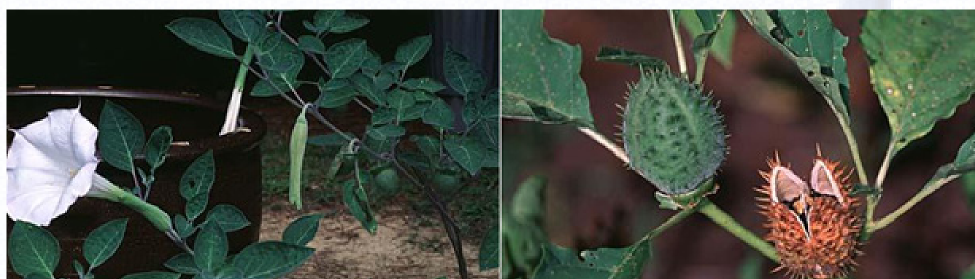


Figure 1. *Datura Stramonium L. a) flower (left), b) the mature fruit with seeds (right)*

D. stramonium contains saponins, tannins, steroids, alkaloids, flavonoids, phenols and glycosides. Although all parts of the *D. stramonium* plant contain tropane alkaloids ((hyoscine (scopolamine), atropine (dl-hyoscyamine)), which are classified as deliriants, the ripe seeds contain the highest concentration (Kuete, 2014; Soni et al., 2012). One seed contains about 0.1 mg of atropine (Trancă, Szabo, & Cociş, 2017) and the initial symptoms can appear several hours after oral ingestion of the seeds (Artal, 2015). It can significantly affect heart function and cause tachycardia, tachypnea, hypertension, urinary retention, but also several neurological symptoms such as agitation, delirium, dilated pupils, disorientation, hallucinations, seizures, photophobia, and coma (Kohnen-Johannsen & Kayser, 2019; Stellpflug, Cole, Isaacson, Lintner & Bilden, 2012). Atropine is a competitive antagonist of muscarinic receptors, so it can cause the effects which the psychoactive substance users seek to achieve, such as euphoria and hallucinations. In large doses, tropane alkaloids are toxic, and death is often caused by the ingestion of large amounts of seeds of the plant *D. Stramonium* (Grynkiewicz & Gadzikowska, 2008).

Bearing in mind the fact that plants from *Datura* genus contain significant amounts of tropane alkaloids to which particular attention should be given due to toxic effects on human and animal health, extraction and analysis of alkaloids from such plant material are highly important for forensic science.

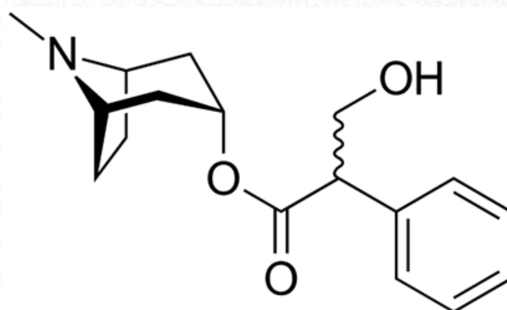


Figure 2. *Chemical structure of atropine*

The extraction of tropane alkaloids from *D. Stramonium*, the type of plant that belongs to the family *Solanaceae* was carried out using different techniques including supercritical fluid extraction (Brachet et al., 1999), ultrasonic extraction (Djilani & Legseir, 2005), solid-liquid membrane extraction (Noori & al-Hemiri, 2009), microwave-assisted extraction (Ciechomska et al., 2016), column extraction with ultrasonic bath (Abbaspour, Khadiv Parsi, Khalighi-Sigaroodi & Ghaffarzadegan, 2016), and column liquid-liquid extraction (Śramska et. al, 2017). For the analysis of atropine and scopolamine in the plant extracts the gas chromatography-mass spectrometry (Ciechomska et al., 2019), liquid chromatography-mass spectrometry (Jakabová et al., 2012), high-performance liquid chromatography coupled ether with UV-Vis spectrophotometer or diode-array detector (Sawabe et al., 2011) or with mass spectrometry (Steenkamp, Harding, Van Heerden & Van Wyk, 2004), and capillary electrophoresis-mass spectrometry (Gao, Tian & Wang, 2005) were used.

Although there are many techniques used for extraction of tropane alkaloids, their isolation from the complex plant matrix is challenging and often time-consuming task, not typically preferred in forensic chemistry. So, this paper aims at presenting the relatively fast and simple method for extraction and determination of the atropine content as the main alkaloid found in *D. Stramonium* seeds.

MATERIALS AND METHODS

The ripe fruits of *D. Stramonium* were collected during the period of blooming from different localities of central Serbia. The fruits were dried immediately after harvesting at room temperature in a well-ventilated space and then stored in a dark place in a paper bag until use. Before extraction, the seeds were taken from the dried capsules and then ground in an electrical mill (*Bosch electric grinder Germany*, power 180W). For optimization study, the plant seeds (~2 % moisture content) were ground for the predetermined period in order to obtain the different particle sizes. The average size of the seed particles was measured by sieving, using different size meshes.

Ethanol (p.a., Zorka Pharma, Serbia) was used as a solvent for the extraction. The solvent of certain concentration (% v/v) was prepared before each experiment. For preparation of mobile phase, the LC grade solvents (Sigma Aldrich) were used. The pure atropine (≥ 99 %) was purchased from Sigma Aldrich.

Conventional solid-liquid extraction of atropine from D. Stramonium seeds

Ground seeds of *D. Stramonium* (5 g) were suspended in a solvent (75 ml) in Erlenmeyer flask which was placed in a water-filled baker and continuously stirred (300 rpm) using a magnetic stirrer (Velp Scientifica, Italy) for 90 min at constant temperature. The temperature of the reaction suspension was monitored by a digital thermometer immersed in an Erlenmeyer flask.

To optimize the atropine extraction process, extraction was performed by changing the particle size of *D. Stramonium* seeds (dp=8.6 mm (denoted as m_1); dp=3.3 mm (m_2); dp=2.2 mm (m_3); dp=1.7 mm (m_4)), temperature (40 °C, 50 °C and 60 °C (± 1 °C)), and ethanol concentration (48.0 % v/v , 72.0 % v/v , 96.0 % v/v). After extraction, the ethanol extracts were cooled using the ice bath and filtered through the filter paper and the obtained extracts were subjected to analysis.

Preliminary tests of ethanolic extracts of D. Stramonium

For the preliminary test which tends to indicate the presence of atropine in the obtained extracts, an alkaloid detecting reagent (Dragendorff's reagent) was used. Dragendorff's reagent was prepared according to Ameh et al. (2010). In short, two solutions were prepared as follows: Solution A (1.7 g basic bismuth nitrate dissolved in 100 ml of water: acetic acid solution (4:1)), and Solution B (40.0 g potassium iodide was dissolved in 100 ml of water). Two solutions were then mixed to yield 100 ml of reagent (Solution A (5 ml), Solution B (5 ml), acetic acid (20 ml) and water (70 ml)). The ethanolic extracts (3 mL) obtained within each of the individual experiments were evaporated and then the solid residues were dissolved in methanol. The aliquots of extracts (1 mL) were transferred into the test tubes and treated with the prepared Dragendorff's reagent (1 mL). The development of red to orange colour indicated the presence of atropine.

Analysis and quantification of atropine in ethanolic extracts of D. Stramonium

Ultra-performance liquid chromatography–tandem mass spectrometry (UPLC/MS/MS) method was used for the determination of atropine in ethanolic extracts of *D. Stramonium*. The obtained extracts from each individual experiment were analysed on Acquity UPLC HSS C18 1.8 μm column with mobile phase acetonitrile and formate buffer pH 3.6 (75:25) and flow rate of 0.4 mL/min. Positive ionization tandem MS detection in the multiple reaction monitoring (MRM) mode was used for quantification, using m/z 290→ 124 and 290→ 93 transitions.

RESULTS AND DISCUSSION

The obtained extracts were firstly preliminary tested for presence of tropane alkaloids. Figure 3 shows aliquots of different ethanol extracts tested with Dragendorff's reagent.

Figure 3. Extracts of D. Stramonium seed obtained at different temperatures (40 - 60 °C) and when using ground seeds of different particle size (m_1 - m_4) before (a), and after adding the Dragendorff's reagent (b); standard of atropine in methanol (left) and standard solution of atropine in methanol tested with Dragendorff's reagent (right) (c)

As it can be seen from Fig. 3b in all of the tested extracts the orange-reddish precipitate was formed, also noticed in an aliquot of atropine standard (Fig. 3c right). This result can be considered as a positive result for presence of alkaloids in the obtained ethanolic extracts. By using LC/MS/MS, in all the obtained ethanolic extracts the presence of atropine is confirmed.

The effects of different parameters on extraction of atropine from *D. Stramonium* seeds are presented in Fig. 4.

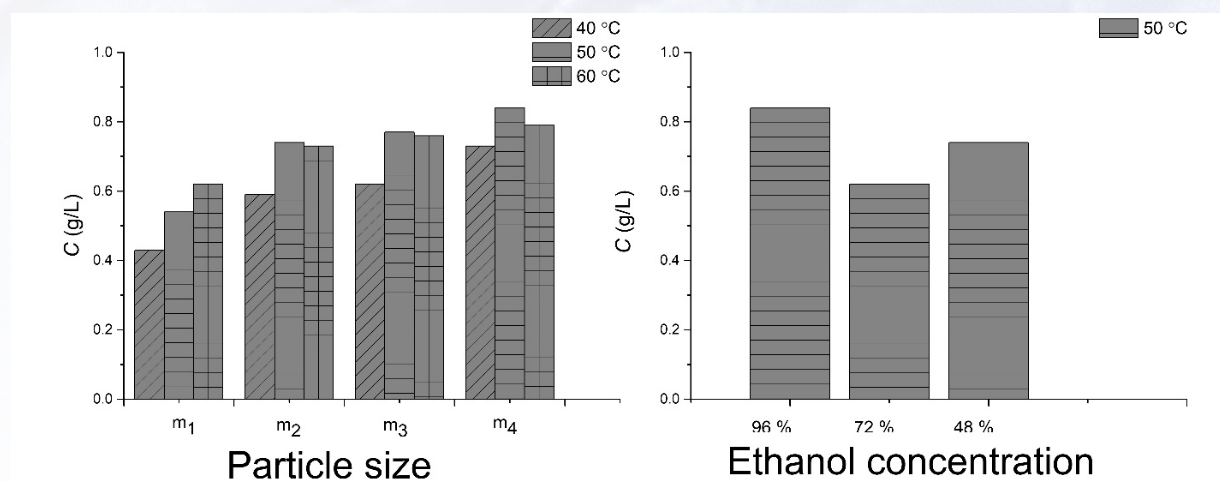


Figure 4. *Effects of different parameters on extraction of atropine from D. Stramonium seeds*

As it can be seen from the results presented in Fig. 4 (left), the concentration of atropine increases with a decrease in particle size (from m_1 to m_4) at all temperatures (40 °C, 50 °C and 60 °C) with 96.0 % v/v ethanol as a solvent. The highest concentration of atropine is obtained by extraction at the temperature of 50 °C, while the lowest concentration of atropine is observed at the temperature of 40 °C. After determining the most favourable extraction conditions in terms of particle size (dp=1.7 mm (m_4)), and the temperature of extraction (50 ° C), further optimization of the extraction process was performed by varying the ethanol concentration. As it can be seen from Fig. 4 (right), in terms of ethanol concentration, using 96.0 % ethanol as a solvent was found to be the most favourable for the atropine extraction.

By perceiving the results of this work and the time required for preparation, the extraction and analysis of atropine in extracts, it is indisputable that the hereby presented conventional heated solid-liquid extraction with tandem mass spectrometry can be a promising tool for forensic analysis of atropine from *D. Stramonium* seeds and various similar plant materials.

CONCLUSION

The conventional heat-assisted solid-liquid extraction of atropine from *D. Stramonium* seeds was investigated. The effect of temperature, the particle size, and ethanol concentration on the extraction rate of atropine was evaluated, and the optimal conditions were found to be: particle size (dp=1.7 mm), the temperature of extraction (50 °C), and the concentration of ethanol (96.0 % v/v).

The Dragendorff's reagent confirmed the presence of alkaloids in the extracts of *D. stramonium* seeds and proved to be a good preliminary test for atropine. A high concentration of atropine was determined in all of the obtained ethanolic extracts by LC/MS/MS method, which was found to be a sensitive and reliable method for analytical determination of atropine.

Although it is necessary to improve the experimental design and in time to come examine more variable parameters for the optimisation of atropine extraction, the method of the extraction and detection of atropine from *D. Stramonium* seeds presented in this work demonstrated to be fast and efficient. Therefore, this work may be a useful contribution to the future improvement of the methods used for the extraction and analysis of tropane alkaloids in forensic chemistry.

REFERENCES

1. Abbaspour, A., Khadiv Parsi, P., Khalighi-Sigaroodi, F., & Ghaffarzadegan, R. (2016). Optimization of atropine extraction process from atropa belladonna by modified bubble column extractor with ultrasonic bath. *Iranian Journal of Chemistry and Chemical Engineering (IJCCE)*, 35(4), 49-60.
2. Ameh, S., Obodozie, O., Inyang, U., Abubakar, M., & Garba, M. (2010). Quality control tests on Andrographis paniculata Nees (Family: Acanthaceae)–an Indian 'Wonder'plant grown in Nigeria. *Tropical Journal of Pharmaceutical Research*, 9(4), 387-394.
3. Artal, F. J. C. (2015). Adverse Neurological Effects Caused by the Ingestion of Plants, Seeds, and Fruits. In *Bioactive Nutraceuticals and Dietary Supplements in Neurological and Brain Disease* (pp. 215-219). Academic Press.

4. Brachet, A., Mateus, L., Cherkaoui, S., Christen, P., Gauvrit, J. Y., Lanteri, P., & Veuthey, J. L. (1999). Application of central composite designs in the supercritical fluid extraction of tropane alkaloids in plant extracts. *Analusis*, *27*(9), 772-778.

5. Chopra, I.C. (2006). *Indigenous Drugs of India*. Academic Publishers. p. 143. ISBN 9788185086804.

6. Ciechomska, M., Woźniakiewicz, M., Nowak, J., Świadek, K., Bazylewicz, B., & Kościelniak, P. (2016). Development of a microwave-assisted extraction of atropine and scopolamine from Solanaceae family plants followed by a QuEChERS cleanup procedure. *Journal of Liquid Chromatography & Related Technologies*, *39*(11), 538-548.

7. Ciechomska, M., Woźniakiewicz, M., Machlowska, K., Klepacki, P., & Kościelniak, P. (2019). Differentiation of Solanaceae psychoactive plants based on GC-MS analysis supported by chemometric tools. *Microchemical Journal*, *150*, 104098.

8. Djilani, A., & Legseir, B. (2005). Extraction of atropine by ultrasounds in different solvent systems. *Fitoterapia*, *76*(2), 148-152.

9. Gaire, B. P., & Subedi, L. (2013). A review on the pharmacological and toxicological aspects of Datura stramonium L. *Journal of Integrative Medicine*, 11(2), 73–79

10. Gao, Y., Tian, Y., & Wang, E. (2005). Simultaneous determination of two active ingredients in Flos daturae by capillary electrophoresis with electrochemiluminescence detection. *Analytica chimica acta*, *545*(2), 137-141.

11. Grynkiewicz G., Gadzikowska M. (2008). Tropane alkaloids as medicinally useful natural products and their synthetic derivatives as new drugs. *Pharmacological Reports*, 60(4): 439-63

12. Jakabová, S., Vincze, L., Farkas, Á., Kilár, F., Boros, B., & Felinger, A. (2012). Determination of tropane alkaloids atropine and scopolamine by liquid chromatography–mass spectrometry in plant organs of Datura species. *Journal of Chromatography A*, *1232*, 295-301.

13. Kohnen-Johannsen, K., Kayser, O. (2019). Tropane Alkaloids: Chemistry, Pharmacology, Biosynthesis and Production. *Molecules*, 24(4), 796.

14. Krenzelok, E. P. (2010). Aspects of Datura poisoning and treatment. *Clinical Toxicology*, 48(2), 104–110

15. Kuete, V. (2014). Physical, hematological, and histopathological signs of toxicity induced by African medicinal plants. In *Toxicological survey of African medicinal plants* (pp. 635-657). Elsevier.

16. Noori, W. O., & al-Hemiri, A. (2009). Extraction of atropine from Datura innoxia using liquid membrane technique. *Iraqi Journal of Chemical and Petroleum Engineering*, *10*(1), 23-27.

17. Sawabe, Y., Yamasaki, K., Tagami, T., Kawaguchi, M., & Taguchi, S. (2011). Rapid determination of atropine and scopolamine content in scopolia extract powder by HPLC. *Journal of natural medicines*, *65*(2), 395-399.

18. Soni, P., Siddiqui, A. A., Dwivedi, J., & Soni, V. (2012). Pharmacological properties of Datura stramonium L. as a potential medicinal tree: an overview. *Asian Pacific journal of tropical biomedicine*, *2*(12), 1002-1008.

19. Śramska, P., Maciejka, A., Topolewska, A., Stepnowski, P., & Haliński, Ł. P. (2017). Isolation of atropine and scopolamine from plant material using liquid-liquid extraction and EXtrelut® columns. *Journal of Chromatography B*, *1043*, 202-208.

20. Steenkamp, P. A., Harding, N. M., Van Heerden, F. R., & Van Wyk, B. E. (2004). Fatal Datura poisoning: identification of atropine and scopolamine by high performance liquid chromatography/photodiode array/mass spectrometry. *Forensic Science International*, *145*(1), 31-39.

21. Stellpflug, S., Cole, J., Isaacson, B., Lintner, C., & Bilden, E. (2012). Massive Atropine Eye Drop Ingestion Treated with High-Dose Physostigmine to Avoid Intubation. *Western Journal of Emergency Medicine*, 13(1), 77-79.

22. Trancă, S. D., Szabo, R., & Cociş, M. (2017). Acute poisoning due to ingestion of Datura stramonium–a case report. *Romanian journal of anaesthesia and intensive care*, 24(1), 65-68.

FINANCING AND PROTECTION OF STEM CELLS RESEARCH RESULTS IN EUROPE AND THE USA

Gordana Damjanović, PhD[1]
Faculty of Law, University of Priština, Kosovska Mitrovica, Serbia

Abstract: Stem cell research is the foundation of the construction of the entire human organism, that is, life arises from them. Research should provide a better understanding of stem cell differentiation and development, with possible implications for the cure of hitherto incurable diseases. The therapeutic possibilities of stem cells are enormous, as are the funds that are invested in their research. Researchers, but mostly biotechnology companies, are committed to securing a monopoly over research results in the form of patents. The number of granted patents related to stem cells has dropped significantly in the last decade, not only in Europe but also in the United States. The question arises as to whether the restrictive stem cell patent policy in Europe or the restrictive public funding policy for research in the United States, has contributed more to this. The issue of who finances the inventor's efforts in this sensitive area is extremely important and has a great influence on the issue of who controls and who is the owner, i.e. the right holder over the patent-protected research results. The stagnation of university research and leaving the leading role to the private sector in this area is not in the interest of the social community. The social community must not allow private companies to play a leading role in investing, then reaping the benefits, but also in the exclusive competence over therapies. Public funding and "opening up research results" will help efficient, ethically responsible, and law-based progress in stem cell research and patenting.

Keywords: *biotechnology, stem cells, researchers, financing, patents.*

INTRODUCTION

Stem, or pluripotent cells, are isolated in the blastocyst stage out of a human embryo for the first time by the researchers from the Wisconsin University in the USA. In November, that same year (1998), in the American Advanced Cell Technology research institution (ACT), a human embryo is cloned for

1 gordana.damjanovic@pr.ac.rs

the first time. In the blastocyst phase, an embryo's development is stopped so stem cells could be extracted and so that cell lines for cells like nerve cells, bone marrow cells, muscle, and blood cells could be developed. The most important thing for scientists is that stem cells can grow and differentiate into any kind of cell of a human body. Precisely those characteristics provide huge potential for research and treatment of serious diseases like Alzheimer's or Parkinson's disease or diabetes. Stem cell's possibilities are practically unlimited because they can encourage organ regeneration or regeneration of a damaged immune system. It should be emphasized that stem cell research is still in its infancy and that scientists are still working on better understanding the role of those cells in normal human development and disease development as well. Because of that, further research is needed that is, actually, slowed down if not completely stopped after European Justice Court, in the case of o. Brustle vs. Greenpeace C-34/10, ruled that stem cell patents are banned because their origin is predicated on destroying embryos, which represents their commercial use by the EU Directive regarding biotechnological inventions legal protection 98/44. (Directive 98/44/EC of European Parliament and the Council as of July 6, 1998 on the legal protection of biotechnological inventions, OJ L, 227).

RESEARCH AND INTELLECTUAL PROPERTY RIGHTS

Biotechnology and intellectual property rights are two areas that played a significant role in research transformation. Intellectual property is generally considered an important impeller of innovation in science and technology because it allows for researchers, institutions, and inventors to regain their investments in the period of monopoly rights ownership. A monopoly enables them to recover from financial and intellectual investments. The patent system protects an inventor from economic failure by giving them intellectual property rights over their invention. That is accomplished by allowing an inventor to forbid other people to manufacture, use, or sell a protected invention for a certain period. These exclusive rights are granted only for a limited period (in Europe, this period is 20 years since the application has been submitted) as well as a geographically limited area; in principle, that is the country in which or for which a patent is approved. European patents could be approved for up to 38 countries (countries party to the European Patent Convention), but they must be confirmed in every country in which the patent owner asks for legal protection.

Despite the contestation that the copyright exclusivity can limit public access to some very important products like medicine or crops, economic studies have shown that biotechnological inventions without patents wouldn't be placed in the market. Patenting biotechnological inventions is necessary primarily because of slow development in biotechnology, and huge resources that are being invested in research and development are regained very slowly. Patent rights and, in general, intellectual property rights, provide the basis for regaining resources previously invested in research and development while getting patent protection becomes the key element in the strategy of biotechnological companies (Burrone, 2014).

PUBLIC FINANCING OF STEM CELL RESEARCH

In Europe, social-economic, therefore political changes, primarily affected patent policy change that refers to stem cells, while in the USA changes were mainly referring to the availability of federal research funding. The number of patents approved that refer to stem cells significantly dropped in the last decade, not only in Europe but in the USA as well. The question then arises whether the restrictive

stem cells patent policies attributed to that situation more, or it was restrictive public research funding policies in the USA.

It is necessary to point out that the significant drop in patent applications in Europe does not imply less interest in stem cell research. Science publication analysis has shown that there have been changes in the research approach and that researchers have started relying more on other sources of funding rather than patents (Bregman, *et al*, 2014:270). Research will enable the discovery of new medication, and it is possible that thanks to the embryonic stem cell research the problem of chronic sufficiency of transplant tissue that is used in the treatment of degenerative diseases will be solved.

Thoughts on the legitimacy of experiments that use embryos are divided across different ethnic, religious, and philosophical traditions in which they are rooted in. Because of that research on embryonic stem cells is regulated differently in Europe. The law mostly regulates the question of acquiring embryos for research, as well as the question of deriving embryonal cell lines from IVF embryos and embryos created for research purposes. Despite the difference in the view of legislation about stem cell research, the ethical concern is what unites them. Therefore research of primarily embryonal stem cells is allowed in all European countries according to basic ethical principles and human rights regulations. Fundamental right that is protected is the right to defend human life, certain political rights are protected afterward, and finally social and economic rights. That tells us that the research has to put the interests of society and science first.

STEM CELL REASEARCH FUNDING IN EUROPE

Europe has shown a liberal policy in terms of funding stem cell research. In the year 2000 a research program has been formed as a part of the European Research Area (ERA). One of the main challenges of this program was exactly stem cell research development, mainly because of the existing differences between European countries regarding research policies. The EU's stance was to enable a unique legal framework for stem cell research so "health tourism" and eventual business speculation would not emerge.

Sixth and seventh framework programs (FP6 and FP7) were the main legal and financial instruments for the implementation of the ERA Program. Seventh framework program was designed by the Group of Ethics in Sciences and New Technologies, which constituted Guidelines for ethical human embryonal stem cell research. According to those Guidelines, research can be conducted only on "overabundant" embryos. The Group of Ethics in Sciences and New Technologies consisted primarily of encouraging responsible research funded by the mentioned program (Eschet, *et al.* 2014:255). In the FP6 and FP7 program, later on, funding was forbidden for research that has created embryos for research purposes and reproductive cloning funding as a goal.

Even though there is little data about patents that emerged from research projects funded by the EU, it is fairly certain that the ruling of the European Justice Court (*Brustle vs Greenpeace*) from 2011 made future research uncertain. Opponents of stem cell research used that ruling right away to stop funding stem cell research by the next research funding program in the EU, which is The Horizon 2020. Considering that the ruling abolished patents on inventions that imply destroying embryos in any development phase, Parliament's Committee on Legal Affairs and the EU Committee thought that funding the research whose results cannot be patented should not be approved (Barrow, 2017:676). However, the EU Parliament decided in 2011 to continue with stem cell research funding. European Committee continued with the application of strict ethical rules and limitations regarding the men-

tioned research, for which Europe spent $156.7 million in the period between 2007 and 2013 on 27 projects in the areas of healthcare that include stem cell use (Cassidy, 2017:756).

PUBLIC FUNDING OF STEM CELL RESEARCH IN THE USA

On the ground of the USA, many different opinions overlapped regarding stem cell patent protection, and above all else regarding granting federal funding to the research related to stem cells. The USA also has a significant number of opponents of stem cell patent protection, and they believe that the benefits of the research shouldn't justify the action necessary for acquiring embryonal stem cells. Starting from the stance that an embryo possesses life from the moment it is fertilized it would be "deeply disturbing" if political officials approve and fund the research. Certain authors because of that insist on finding other ways to promote economic interest while keeping human dignity. They believe that is the responsibility of science to find new sources of stem cells without destroying embryos (Harris C, 2005:129*)*

Supporters of funding approval and patent protection, on the other hand, believe that it would be immoral to suppress research by limiting the funding and by disapproving patent protection because that path would discourage or even smother research in that perspective area, and many patients would be left without any hope in recovery (Wang, 2005:40).

The patent system in the USA is very complex. The main organization that deals with patents is USPTO, which controls the process of patent approval on the USA territory. The main legal regulation is The Patent Act, which has been incorporated in the Title 35 of United States Code, and in the court decision in the case of *Diamond vs. Charabarty* (447 United States 303, 206 USPQ 193(1980)) living organism patent period started. In the time of the Supreme Court of the United States ruling, no one could predict what the pace of the development of the biotechnological industry would be, so it can be freely claimed that the Court took the futuristic approach in understanding biotechnological development, which will take place in the future. It is understood that there were also religious and other interest groups in the USA that were opposed to that idea. However, those questions had less to do with patent rights and more with the ethical limitation definition in science development. The biotechnology industry is vital for the American economy and this area in general greatly depends on the stimulus that the patent protection provides. Because of that the patent protection of biotechnological inventions in general, and particularly stem cell patent protection, is recognized for practical reasons. However, as the time went by, problems were starting to arise in the USA Patent System, regarding stem cell patent protection. There was a significant increase in patent applications which led to an increasing number in the cases that were falling behind because of the patent office workload and the increasing complexity of patent applications. Low quality of patents and increased number of litigations have additionally increased uncertainty in stem cell patent area. Because of that, today it is more and more insisted on narrowing the scope of patent requests regarding stem cells, and on avoiding conflict between free access to scientific discoveries on one side, and the protection of inventor's rights on the other. That is out of key significance in moving science progress forward, because as science progresses, the law must keep up with it, in order to keep stability. On the other hand, the article about intellectual property in the USA Constitution gives courts the freedom to interpret patent consistency, not only mechanically, with the legislative provision, but with explicit political goals that animate the patent system.

President Obama issued The Executive Order (13.505) in March 2009 that removed all limitations for funding stem cell research. Since the moment The Executive Order has been issued, federal financial

resources for embryonal stem cell research became available. The Executive order is being considered as an important step in the development of the USA because the country secured world leadership in scientific development. Funding, however, has been exclusively for stem cell research on "overabundant" embryos which originate from artificial insemination clinics and which were created for reproductive purposes and thus the research on stem cells that have been derived from other sources (like SCN technique or parthenogenesis) was not suitable for funding.

Since 2011 Weldon Amendment has become a component of the America Invents Act (AIA) of 2011, Pub L. No. 112-29 - 2011, and it represents an integral part of American patent law. Amendment forbids issuing patents for human embryos (Article 33. AIA), however, the stance on stem cell patents remained liberal.

It needs to be pointed out that not all of the USA states do not regulate the question of research in the same way. Some of them, like Arizona, Nebraska, or Virginia, passed laws that forbid funding stem cell research from the state funds, while California, New Jersey, and Massachusetts have taken the opposite view and they allow stem cell research funding. As a response to restrictive policies of President George Bush, in California, Proposition 71 has been adopted, which set aside $3 billion for stem cell research, and the California Institute for Regenerative Medicine (CIRM) was formed. The California Act provided $295 million in bonds each year, while funding should be directed in the direction of research centers and universities. California is, therefore, the first state in the USA in which the main patron of research was the state. California Institute for Regenerative Medicine is in charge of awarding all companies and institutions that participate in creating inventions.

Question about who funds researchers' efforts in that sensitive area is of extreme importance and has a great influence on the question of who owns and who controls, that is, who is the holder of patent-protected research results. Based on everything that is mentioned so far, we conclude that financial resources for those expensive and complex research could not be provided from a single source. It seems like the private companies will take a lead role in investing, and consequentially, harvesting fruit, but they will be in the exclusive control over therapies as well! It is quite certain that the stagnation of universities and research centers, like yielding a leading role in that sensitive area to the private sector, is not in the social community's best interest. Therefore, a higher level of engagement of universities and research centers is necessary, as well as "sorting out" ownership claims in such a way that reflect funding sources. (*O Connor, 2005:702*).

People who hold power have to consider that when creating policies on stem cell research funding. Current American president, Donald Trump, hasn't taken any stance regarding embryonal stem cell research funding, although he promised that he "will cancel all unconstitutional executive orders, memorandums, and other orders that were issued by the former president of the USA". President's Obama Order stimulated biotechnological companies and researchers to continue stem cell research.

ACADEMIC RESEARCH

The road of creating innovative therapies and the medication based on stem cells is very difficult, long and it requires the cooperation of academic researchers, industry, and patent organizations. Academic institutions became "main players" in the patent arena, considering that a sudden increase in academic patents that protects mainly biotechnological inventions is obvious. In the USA for example, the number of patents granted to academic institutions is constantly increasing, so that in the last decade 50% of all patents are granted for research centers in the science field. Europe does not fall

behind judging the numbers on academic patents, so, for example, on average, 75% biotechnological approved by European Patent Organization (EPO) in the period between 1958 and 1999 were for Belgian universities. The number of Italian university patents has also increased. Patent activities on universities were tripled after the enactment of the Bay Dol Act in 1980 in the USA, that had the encouragement of academic inventions patents as a goal (*Singh, Hallihsour, Rangan, 2009:222*). On the other hand, cooperation between universities and the private sector increased by funding research and assignments of intellectual property rights with license contracts and creating spin-off companies. Because of that the period after the Bay Dol Act was put into force was called the period of "open and collaborative" research, which resulted in creating first of all genome databases, and stem cell databases right after. (*Winckoff, Saha, Graff,2005 :54*). Many of the research in this area is still "basic" and the patents are undertaken primarily, as we stated before, on the universities that are funded, at least in part, from public resources, and that is why cooperation with the private sector is necessary as well as forming public-private partnerships, in order to exploit private financial resources for the mentioned research. It should be pointed out that there is a concern about patenting research results effect in the earlier stage and how it affects further research, as well as the effects of the patents on the final price of products, especially considering what the data show: a small number of universities own protected inventions and large income, while the university patent quality in the USA overall, is in decline (Hescot, 2014: 29).

Bay Dol Act prescribes that institutions conclude contracts with inventors based on which inventors give the right to apply for a patent to those institutions. An institution, on the other hand, approves a free license to the USA government for using inventions for their own purposes. The usage of that kind of invention is especially granted to researchers whose research is funded by the USA government.

Next to the primary interest of the university, which scientific interest, there is more and more talk about the financial interest. One of the university goals, next to the progress in the scientific community, becomes monetization. Because of that, universities are looked upon as "services", and not organizations, trying to monetize their research (Nelson, 2001:17).

Looking up to the USA example, many European countries created their own versions of the mentioned law.

In Great Britain, since the moment of the first patent application regarding stem cells in 1989, the number of patent applications was constantly increasing. Universities are especially active, so almost half of all patents regarding stem cells belong to universities (42%), while corporations own 48%. Today, therefore, universities are not expected only to do research and teach. Exchange of knowledge is traditionally done through publishing scientific papers in magazines, conference presentation, etc., but today, universities are expected to earn money from manufactured knowledge, so they could primarily justify investments.

Lisbon Agreement states that the EU's goal is the empowerment of the scientific and technological foundations in order to achieve European research space in which researchers are free to allocate scientific knowledge and technologies, thus encouraging competition in the industry. We already mentioned the Horizon 2020 Project, the EU program for research and innovation. This program represents an instrument for accomplishing the main goals of the Europe 2020 strategy, and above all, its initiative, Innovative Union. The goal is to ensure the creation of world-class European science and to simplify cooperation between the public and private sector in the field of innovative work. With its goals, Horizon 2020 still aims at further developing European research space as a unified market of knowledge and innovation.

As a part of its global competition strategy, the EU strives to invest an additional 800 billion euros until the year 2025. In the current, 80 billion euros worth research project Horizon 2020, a goal has been set - investing 3% of the European GDP in research and development. Patents represent one of the key measurements of success for the EU. (*Plomer, 2014:16*).

RESEARCH AND STEM CELL PATENTS IN SERBIA

Serbia signed the Agreement with the EU regarding joining the Republic of Serbia to Horizon 2020 - framework program for research and development (2012 - 2014). By signing the mentioned Agreement, our country achieved the status of the country associated with the Horizon 2020 Program, which was gradually implemented starting January 1st of 2014., and it was put into force in accordance with the Law that confirmed that Agreement. Status of the associated country means that all legal entities originating from that country have equal rights and obligations as legal entities from the EU country members. Innovations are in focus because they are the most efficient mean of successfully solving social challenges like climate changes, energy shortages, and public health. By commercializing research, the return on the investment is enabled, which can be later invested in further development. Considering that all relevant provisions of domestic law do not give clear enough answer to the question of whether stem cells of the human embryo are patentable or not, our view is that lawmakers could explicitly normatively edit stem cell protection in the future Patent Law. That would enable the development of academic research result patents that refer to stem cells, that is, universities and other public research organizations would be enabled to increase their research and encourage the creation of innovative spin-off companies.

CONCLUSION

In the past, wrong approaches in research as well as poor public informing resulted in the emergence of doubt towards security and justification of the stem cell usage to cure diseases. Today, however, it is known that regenerative medicine uses stem cells in the treatments of incurable diseases like cancer and that the treatment in the future will be individual, based on the genetics of the patient, in which stem cells play a huge role (Kraljinović, Stojković, Babić, 2016:6).

Stem cell patents cannot be stopped ant that is why it would be better to control it, for the benefit of all mankind. Laws in this area must be permanently adjusted in accordance with continual changes in science, and to strive to keep up with the fast development of scientific research.

REFERENCES

1. Barrow T., „EU Research funding prpgramme may not support embryonic stem cell research", https://www.bionews.org.uk/page_93815?mode=SIMP.
2. Bregman-Eschet Y., Bar Ziv Sh., Ponchek T., Elkin Koren N., "The ripple effect of иntellectual property policy:empirical evidence from stem cell research and development", Journal of technology Law and policy, Vol 19, 2014.

3. Cassidy P., "EU Commision Reject petition to stop funding embrional stem cell research", https://www.bionews.org.uk/page_93815?mode=SIMP
4. Eschet B. Y., Ziv B. Sh., Talya Ponchek, Elmin-Koren N., „The Ripple Effect of Intellectual Property Policy: Empirical Evidence from Stem Cell Research and Development", Journal of Technology Law and Policy, Vol. 19, 2014, http://heinonline.org/HOL/License
5. Harris C. R., „Human embrionic stem cell patents in the USA", Human Stem Cells, Source of Hope and of controversy;
6. Hescot L. A., „Standing on the shoulders of giants? A study of scientists engagement with patent information", University of Shesfeld, School of Law, 2014;
7. Крајновић Д.,Стојковић Т., Бабић С., „Етички аспекти употребе матичних ћелија као здравствених технологија у персонализованој медицини", Енграми, Vol.38, 2016,6, http://scindeks-clanci.ceon.rs/data/pdf/0351-2665/2016/0351-26651601005K.pdf.
8. Nelson R., "Observations on the Post-Bayh Dole Rise of Patenting at American Universities", Journal of Technology Transfer, Kluver Academic Publisher, Netherland, 26, 2001;
9. O Connor M. S., „Intellectual Property Rights and Stem Cell Research: Who Owns the Medical Breakthroughs", New England Law Review, 2005, https://papers.ssrn.com/sol3/Data_IntegrityNotice.cfm?abid=687248
10. Plomer A., "Patents, profit and The Public", Patents human right and access to science, Elgar on line, 2014, https://www.researchgate.net/publication/283010094_Patents_Profit_and_the_Public;
11. Singh A., Hallihosur Sh., Rangan T., "Changing landscape in biotechnology patenting", World Patent Information 31, 2009, 222, https://www.sciencedirect.com/science/article/pii/S0172219009000313
12. Wang L., The Web of Science – Power Structure Research of the American Stem Cell Industry, Massachusetts, 2005, 40;
13. Winckoff E. D., Saha K., Graff D. G., "Opening Stem Cell Research of the Ameriican Stem Cell Industry", Massachusetts, 2005;
14. „Stem Cell Research and Patenting", European Parlament, Policy Detarpment Economic and Scientific Policy", 2012, 20, http://www.europarl.europa.eu/document/activities/cont/201205/20120524ATT45764/20120524ATT45764EN.pdf.
15. "Stem Cell Research and Patenting", European Parlament, Policy Department Economic and Scientific Policy, 2012,7, http://www.europarl.europa.eu/document/activities/cont/201205/20120524ATT45764/20120524ATT45764EN.pdf
16. Србија у програму Хоризонт 2020", http://horizon2020.mpn.gov.rs/.
17. Министарство просвете, науке и технолошког развоја, „ Програм Хоризонт 2020", http://www.zis.gov.rs/upload/documents/newsletter/bilten19-6.pdf

TOPIC VIII

EFFECTS OF PHYSICAL ACTIVITY ON ANTHROPOLOGICAL STATUS IN SECURITY AGENCY PERSONNEL

INITIAL STATE OF POLICE STUDENTS SWIMMING SKILLS AND EFFECT OF SWIMMING COURSE ON SWIMMING PERFORMANCE

Raša Dimitrijević, PhD[1]
Goran Žigić, MSc[2]
Goran Vučković, PhD[3]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: The aims of the research were to determine initial state of Police University students swimming skills and effect of swimming course on swimming performance. Research consisted of initial and final testing with 10 swimming classes between. The sample consisted of 255 subjects (160 males; 95 females). Initial testing showed for males: 25 (15.63%) belonged to non-swimmers, 78 (48.75%) to semi-swimmer (MSS) and 57 (35.62%) to good-swimmer group (MGS); for females: 14 (14.74%) belonged to non-swimmers, 72 (75.79%) to semi-swimmer (FSS) and 9 (9.47%) to good-swimmer group (FGS). ANOVA showed statistically significant differences between good-swimmer and semi-swimmer groups (F=27.505, p=0.000 for males; F=27.657, p=0.000 for females). The t-test results after swimming course showed that all groups achieved statistically significant better swimming times: MSS-F=3.444, p=0.001; MGS-F=3.594, p=0.001; FSS-F=12.373 and FGS-F=4.054, p=0.004, p=0.000, while ANOVA showed remaining of statistically significant differences between good-swimmer and semi-swimmer groups (F=51.508, p=0.000 for males; F=24.764, p=0.000 for females).

Key words: Police students, swimming course, learning

INTRODUCTION

Police officers must be physically capable of performing all occupational requirements successfully in a safe and secure manner for all those concerned (Marion, 1998; Anderson, Plecas & Segger, 2001). They should have a good health status, psychological and intellectual qualities, appropriate personality traits, professional knowledge and adequate physical abilities (Dopsaj, Blagojević & Vučković,

1 rasa.dimitrijevic@kpu.edu.rs
2 goran.zigic@kpu.edu.rs
3 goran.vuckovic@kpu.edu.rs

2007; Strating, Bakker, Dijkstra, Lemmink & Groothoff, 2010; Lagestad & Van den Tilar, 2014). In the cases of natural disasters, the police are one of the first services to respond. One of the most frequent natural disasters, both globally and in the Republic of Serbia, is floods. In the flood situations, police officers are involved in the rescue of human lives, the evacuation of vulnerable persons, repairing the damage, etc., which all together emphasizes the need for police officers to have good swimming skills (Milojković et al., 2015).

However, swimming can also be viewed in a wider context. Acording to Gošnik & Sedar (2010), swimming is a basic sport and ignorance of swimming knowledge and the lack of swimming facilities must not be just an excuse or a "sport" and local problem, but a global problem, the problem of health, hygiene, security, education and culture. Swimming also promotes excellent physiological fitness because it is a low-impact, aerobic activity, minimizing stress on the joints while exercising all of the major muscle groups of the body (Lee, Folsom & Blair, 2003). Individuals who can swim are more likely to be able to save themselves or others from drowning by performing basic swimming skills (Brenner, 2003; Irwin, Irwin, Ryan & Drayer, 2009). Also, one of the most important tasks for which physical education teachers, soldiers and police officers are prepared is their training for intervention in the water with the aim of saving someone's life (Kazazović, 2008).

Swimming in the police service implies the ability to overcome water area and obstacles (Dopsaj, Milošević & Blagojević, 2001), which could be of importance in reacting to floods. Apart from the selection of candidates for work in Firefighter and rescue unit, the swimming knowledge test is not an integral part of the entry criteria for employment in the Ministry of the Interior of the Republic of Serbia (Obradović, 2011). Currently, in accordance with the need for the work on activities in the field of security on and near the water surfaces, swimming skills tests are conducted for police officers who perform the above tasks and duties (Mitrović & Vučković, 2017).

During the floods in Republic of Serbia in 2014, a large number of police officers of the Ministry of Interior were engaged from the various organizational units: Sector for emergency situations, Special antiterrorist unit, Gendarmerie, Helicopter unit, Criminal police directorate, Police directorate, Traffic directorate, Border police directorate. Members of these units performed tasks related to the rescue and evacuation of injured and endangered citizens, raising the new security and protective infrastructure along the flooded areas, delivery of water, food, medical aid, hygiene items, clothing, etc. During their engagement, it was determined that some number of police officers did not know to swim, a significant number of police officers did not undergo water rescuing training and were not instructed in protection procedures in rescuing people (Milojković et al., 2015). Moreover, some police officers were not trained to steer the boats or to row, most police officers did not have knowledge of the proper use of construction embankments and the manner of using technical means for flood defence, while some officers did not have sufficient knowledge of providing first aid to the injured, especially the drowned. Together with the members of the Ministry of the Interior, over 500 students of the University of Criminal Investigation and Police Studies in Belgrade (UCIPS) were engaged in the mentioned activities during the 11 days of the flood. In the period immediately after the 2014 floods, an "Elaborate for the engagement of students and employees during emergency situations" at the UCIPS was prepared. The Elaborate determined that all UCIPS students were assigned to teams that, together with members of the regular staff of the Ministry of the Interior, were engaged in cases of natural disasters (Milojković et al., 2014).

The UCIPS in Belgrade educates students to work in the Republic of Serbia police through three departments: the Department of Criminology (DC), the Department of Forensic Engineering (DFI) and the Department of Information Technology (DIT). In the selection process for candidate's enrolment,

a test of swimming skills is not provided. During their studies, DC students attend the subject of the Special Physical Education (SPE), while DFI and DIT students do not have a single subject related to any form of physical activity. The curriculum of the SPE provides that students, in addition to the part related to the martial arts and the development of basic physical abilities, also have swimming course. Swimming course was realized in the period between 1993 and 2008, through one 60-minute class per week during all four years of studies. Students were required to pass the elements of swimming, diving and rescue techniques according to predefined norms and criteria at the beginning and the end of each school semester (Blagojević, Vučković, Koropanovski & Dopsaj, 2017). The result of such systematized and implemented swimming course during the studies, from the practical side, ensured that all graduate students had a high level of swimming skills as well as skills in the field of water rescue. From the scientific side, the testing results enabled a constant improving of training and educational work with students (Dopsaj et al., 2001; Dopsaj, 2005).

However, despite the fact that swimming course is still a part of the SPE curriculum, swimming has not been realized since 2008. To be more specific, none of the UCIPS students enrolled after 2006 were tested according to the swimming skills criterion. The same fact applies for the students engaged in the floods 2014. Finally, there are no any data about current UCIPS students swimming knowledge and swimming skills in the last 10 years. Therefore, the aims of this research were to determine initial state of swimming skills at the UCIPS student of both ganders and effect of 10 classes swimming course on their swimming performance.

METHODS

The sample

The total sample consisted of 255 subjects - 160 male (125 subjects from DC, 2 from DFI and 33 from DIT) and 95 female students (57 from DC, 23 from DFI and 15 from DIT). All subjects were from the first year of study in 2018/19 school year. Basic anthropometric measures were: body height (BH) = 182.29 ± 6.29cm, body weight (BW) = 79.08 ± 9.39kg and body mass index (BMI) = 23.75 ± 2.07kg/m^2 for males and BH = 169.02 ± 3.87cm, BW = 61.63 ± 5.50kg and BMI = 21.57 ± 1.85kg/m^2 for females. All respondents were healthy, with no acute and chronic diseases and without injuries of the locomotors apparatus to influence the test results. Before the beginning of the initial test, all respondents were introduced with the object and purpose of the research. The research was conducted in accordance with the terms of "Declaration of Helsinki for recommendations guiding physicians and biomedical research involving human subjects" - (http://www.cirp.org/library/ethics/helsinki/), as well as with the permission of the Ethics Committee of the Faculty of sport and physical education, University of Belgrade.

Testing procedure

The research consisted of initial testing held at the beginning of the first semester, 10 classes of swimming course and final testing held at the end of the same semester. Since there was no data on the students' previous training or knowledge in swimming, the first aim of the initial testing was to determine initial state of subjects swimming skills. For that purpose, testing was organised in 1.25 meter (m) deep pool. Subjects were instructed to swim over 25 m distance as fast as possible, with the correct use of any of the four swimming techniques (Rulebook on Criteria for Selection of Candidates for

Participants Course for Basic Training of Members of Firefighter and Rescue Unit, Official Gazette RS, 12/2019 & 14/2020). Students performed the start from a standing position in the pool, without jumping into the water or pushing off the pool wall. Based on the presented swimming skills on the initial testing, the subjects were divided into three groups: non-swimmers (the subjects could not swim over the given distance, MNS – male and FNS – female), semi-swimmers (respondents who swam the given distance with poor swimming technique, MSS – male and FSS – female) and good-swimmers (subjects who swam the given distance with good swimming technique including proper underwater breathing, MGS – male and FGS – female) (Rodić, Rupčić & Stojković, 2010). The level of subjects swimming skills was assessed by two experienced professors of physical education. The second aim of the initial testing was the assessment of students swimming performance, where time required to swim 25m distance was measured in seconds (s). After initial testing, subjects underwent 10 classes of swimming course with one 60-minute class per week for non-swimmers and one 30 minutes class per week for semi-swimmers and good-swimmers. The final testing was organized according to the same procedure as the initial testing – with the aim to assess students swimming performance after the course.

Swimming course methodology

The swimming course for non-swimmers was organized in the 1.25 m deep pool, where the water depth allowed standing and included: working on the ground, getting used to water exercises, breathing and keeping eyes open during water exercises, exercises to maintain a horizontal position and aquaplaning, water games, diving and learning basic swimming techniques (Stanković, Marković, Dopsaj, Ignjatović & Aleksić, 2016). Elements that were applied in non-swimmer training were selected in accordance with the relevant recommendations for non-swimmer training (Kazazović, 2008; Stanković, Milanović & Marković, 2015). The swimming course methodology for groups of semi-swimmers and good-swimmers was related to the partial improvement of arm and leg technique through freestyle, backstroke and breaststroke styles, where a swimming kickboard was used as an aid. After improvement of the partial movement with swimming kickboard, arm and leg movements were joined in the proper swimming technique. Together with improvement of the arm and leg techniques, the proper breathing technique was also practiced. More precisely, a combination of analytical and synthetic training methodology was used (Stanković, 2016).

Statistical analysis

All data were analyzed using the descriptive statistics to calculate the basic parameters of central tendency: arithmetic mean (MEAN), standard deviation (SD), minimum (Min) and maximum (Max) values. The existence of a general difference of variability between the groups was determined by one-way analysis of variance (ANOVA), while for the determination of partial difference between pairs of groups the t-test was used. Cohen's effect sizes (d) were calculated as the ratio of the difference in MEAN to SD, following the formula: d = (MEAN2 – MEAN1)/SD, where MEAN1 and MEAN2 were the means of the groups investigated and the SD was a pooled standard deviation of compared groups. Cohen classified effect sizes as *small* = 0.2, *medium* = 0.5 and *large* ≥ 0.8 (Sullivan & Feinn, 2012). Statistical significance was defined at 95% probability, i.e., at $p < 0.05$ level (Hair, Anderson, Tatham & Black, 1998). All statistical analyses were done by the application of software package SPSS Statistics 17.0.

RESULTS

The results of the initial testing, according to the subjects' level of swimming skills criteria, are shown in Table 1.

Table 1. *Results of initial testing in regard to swimming skills*

Males			
	Non-swimmers (MNS)	Semi-swimmers (MSS)	Good-swimmers (MGS)
DC	19	57	49
DFI	0	2	0
DIT	6	19	8
Σ (No)	25	78	57
Σ (%)	15.63%	48.75%	35.62%
Females			
	Non-swimmers (FNS)	Semi-swimmers (FSS)	Good-swimmers (FGS)
DC	9	39	9
DFI	1	22	0
DIT	4	11	0
Σ (No)	14	72	9
Σ (%)	14.74%	75.79%	9.47%

The results of descriptive indicators on the initial and final testing's for good and semi-swimmer groups of both genders, in regard to swimming time expressed in s, are shown in Table 2.

Table 2. *Results of descriptive statistics in regard to swimming time (s)*

Initial testing								
GROUP	N	MEAN	SD	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
MGS	57	18.04	2.57	0.34	17.36	18.72	12.05	24.42
MSS	78	21.98	5.23	0.59	20.80	23.16	16.13	48.26
FGS	9	20.69	2.41	0.80	18.84	22.55	17.00	24.44
FSS	72	33.13	7.01	0.83	31.49	34.78	21.62	51.33
Final testing								
GROUP	N	MEAN	SD	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
MGS	57	17.31	2.27	0.30	16.70	17.91	12.14	24.70
MSS	78	20.67	2.96	0.33	20.01	21.34	16.12	35.01
FGS	9	19.77	2.47	0.82	17.88	21.67	16.75	24.56
FSS	72	29.39	5.70	0.67	28.05	30.73	18.24	42.33

The results of ANOVA after initial testing showed statistically significant differences in swimming time between good-swimmer and semi-swimmer groups for both ganders (F = 27.505, p = 0.000 for males and F = 27.657, p = 0.000 for females). The results of t-test after the 10 classes swimming course showed that all groups achieved significantly better swimming times: MSS – F = 3.444, p = 0.001; MGS – F = 3.594, p = 0.001; FSS – F = 12.373 and FGS – F = 4.054, p = 0.004, p = 0.000. The results of ANOVA after the final testing showed remaining of statistically significant differences in swimming time between good-swimmer and semi-swimmer groups for both ganders (F = 51.508, p = 0.000 for males and F = 24.764, p = 0.000 for females).

Figure 2 shows the *effect sizes (d) and* relative *Δ (%)* differences between the groups for swimming performance on the initial and final test. Since the time of swimming in s was used to assess students swimming performance, where lower score is better, the values of the Cohen's effect sizes are in negative values.

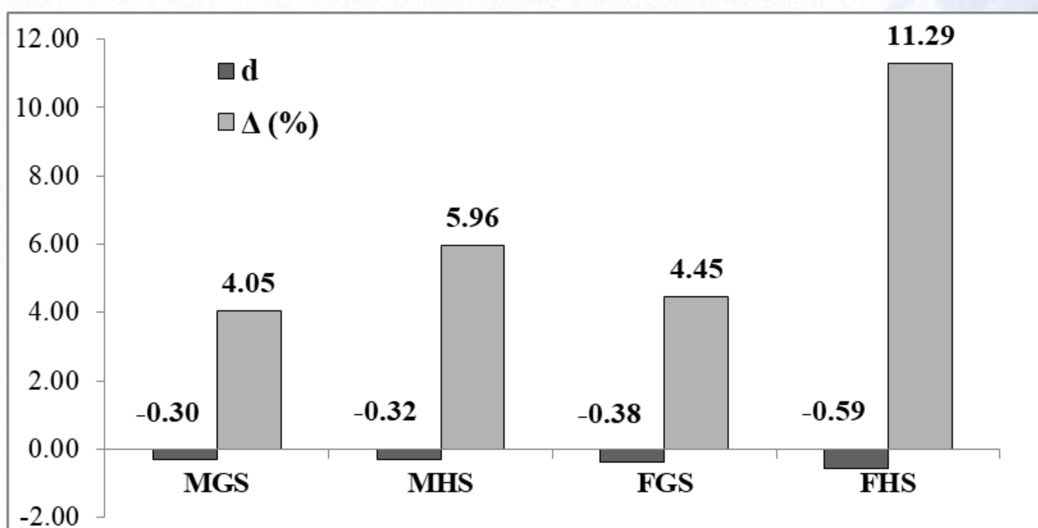


Figure 1. *Effect sizes (d) and relative differences Δ (%) between groups on initial and final testing*

The swimming performance test of non-swimmer subjects on final testing showed: for MNS - nine (9) students swam 25 m with an average time 33.15 ± 11.14 s, fourteen (14) students managed to swim an average 15.14 m in 21.34 ± 7.80 s and two (2) students have not learned to swim at all. For FNS – three (3) students swam 25 m with an average time 35.10 ± 1.72 s, nine (9) students managed to swim an average 16.56 m in 35.41 ± 7.74 s and two (2) students have not learned to swim at all.

DISCUSSION

The testing of initial level of students' swimming skills showed that 15.63% male and 14.74% female subjects did not know how to swim at all, 48.75% male and even 75.79% female students were semi-swimmers, while 35.62% male and only 9.47% of female subjects belonged to good-swimmer groups (Table 1). The percentage of non-swimmers is slightly below the percentage of non-swimmer students (20%) in the first years of the Faculty of Tourism and Sports Management in Croatia, but the great difference could be noticed for the semi-swimmer and good-swimmer groups since in the Croatian sample there were 70% of good-swimmers and only 10% of semi-swimmers (Budimir, Breslauer & Bokor, 2010). The reasons for the high percentage of UCIPS non-swimmers and semi-swimmers could be multiple: lack of swimming facilities in the areas where students come from, non-existence

of swimming courses at lower levels of school education, poor financial situation, etc. In addition, Komparić (2002) concluded that the most important reasons given by schools for not conducting organized training of non-swimmers are the lack of appropriate sports facilities (39.25%) and the lack of financial resources for the implementation of training programs (31.16%). It can also be assumed that the percentage of non-swimmers would be even higher if the testing was not performed in controlled conditions in a shallow pool, i.e. if the level of swimming skills was assessed in a real situation (river, lake, deep water, wearing a uniform, etc.),4 or if the longer swimming distance was chosen for initial testing. Since only the UCIPS first-year students were tested, it can also be assumed that a similar number of non-swimmers and semi-swimmers are in the senior years of study.

Such data could be worrying because, as mentioned earlier, UCIPS students may be occasionally (when needed) assigned to teams with other members of the regular staff of the Ministry of the Interior in cases of natural disasters and floods. Also, students in the non-swimmer group were not coherent in their previous swimming skills: some already had some swimming knowledge while some even did not dare to enter the water. This finding is in accordance with the study of Zenić & Petrić (2002), who concluded that in non-swimmer training programs, it would be desirable to form homogeneous groups according to swimming background, because working in a heterogeneous group is too demanding, increases the safety risk and often requires individual work. The results of the final testing in this researched showed that 10 classes swimming course can improve the level of non-swimmers swimming skills, but that such time frame is not enough for all students to learn to swim.

The statistically significant differences between good and semi-swimming groups were found both, on a general and partial level. More specifically, on the initial and final testing, MGS had statistically significant better average swimming time compared to MSS, while FGS had statistically significant better average swimming time compared to FSS. Also, the results of t-test showed that after the 10 classes swimming course all 4 groups achieved statistically significant better swimming times. Such t-test results confirmed that the training methodology used during the swimming course had a positive effect on the level of students swimming performance. Therefore, it can be assumed that achieving a better swimming time on the final test compared to the initial testing (Table 2) may be due to the improvement of swimming technique and not as a consequence of conditioning. This can be supported by the fact that MGS, MSS, FGS and FSS had classes lasting 30 minutes per week, while the improvement of swimming performance under the influence of the training program requires much more extensive physical work (Kazazović, 2008; Stanković et al., 2016). In addition, the obtained results of the Cohen's effect sizes showed that all four groups of swimmers can be classified into *medium* values (Figure 1).

In the selection process for working in the Ministry of the Interior of the Republic of Serbia, the assessment of candidates' swimming abilities is performed only within the Firefighter and rescue unit. The assessment is carried out for candidates of both genders by swimming 25 m distance regardless of the applied swimming technique, with measured swimming time. Based on the achieved swimming time, the candidates are evaluated with grades from 0 to 4 (Rulebook on Criteria for Selection of Candidates for Participants Course for Basic Training of Members of Firefighter and Rescue Unit, Official Gazette RS, 12/2019 & 14/2020). The Table 3. shows the criteria for scoring and distribution of UCIPS students based on the swimming time achieved in the final testing of this research - the classification also includes the times of students (9 males and 3 females students) who learned to swim during 10 classes swimming course.

Table 3. *Classification in relation to the Firefighter and rescue unit.*

Gender	Points	25 meters in s	No	%
Males	0	55 +	0	0
	1	54.99-37.01	2	1.38
	2	37.00-25.01	11	7.65
	3	25.00-19.01	63	43.75
	4	19.00 -	68	47.22
Females	0	60 +	0	0
	1	59.99-43.01	0	0
	2	43.00-31.01	31	36.91
	3	31.00-25.01	26	30.95
	4	25.00 -	27	32.14

Based on the results shown in Table 3, it can be concluded that 16 male and 11 female students would not pass the swimming test for Firefighter and rescue unit. Despite the fact that great number of students would pass the test, there is a still question whether they are able to participate in rescuing missions when tasks would include on-water operations. In regard, according to Wiesner & Rejman (2014), the consequences as injury and death from risky activity in water could be prevented if there is a high level of swimming, self-rescue and lifesaving skills. Therefore, since the UCIPS students undergo only short 10 classes swimming course, we assume that for the achieving the desirable level of swimming and lifesaving skills, longer period is necessary. Also, a longer period of time with a higher total number of classes for training is confirmed by the results of Cohen's effect sizes (Figure 1). More specifically, it can be assumed that with total fund of swimming classes increase, the values of the Cohen's effect sizes would be higher.

CONCLUSION

The aim of this research was to investigate the initial level police students' swimming skills and the possibility of their improvement through the 10 classes swimming course. The research was conducted on a sample of 255 students divided into non-swimmer, semi-swimmer and good-swimmer groups. Statistically significant differences, in the general and partial level, were found between groups in swimming performance. It can be concluded that the applied swimming course had the positive effect on all groups, but also that the level of swimming skills does not match the standards required by the needs for save and appropriate lifesavings. In regard, we could assume that, currently only small number of students could be safely included in the water-rescuing missions. Based on these results, there is a need for the new researches that will determine the initial status of swimming skills of all UCIPS students. The final goal of further researches should be related to the improvement of educational and training processes in the field of swimming, as well as the basis for the setting of a long-term strategy for the development and improvement of physical education teaching programs. Therefore, it is necessary to suggest an increase in swimming course total fund classes, which would be implemented during all eight semesters of study. This would provide continuous, planned and systematic educational and training impact throughout the whole period of schooling.

REFERENCES

1. Anderson, G., Plecas, D. & Segger, T. (2001). Police officer physical ability testing. *Policing: An International Journal of Police Strategies & Management,* 24(1), 8-31.
2. Blagojević, M., Vučković, G., Koropanovski, N. & Dopsaj, M. (2017). *Specijalno fizičko obrazovanje I*. Beograd: Kriminalističko-policijska akademija.
3. Brenner, R. (2003). Prevention of drowning in infants, children, and adolescents. *Pediatrics*, 112(2), 440–445.
4. Budimir, V., Breslauer, N. & Bokor, I. (2010). Plivanje kod redovnih i izvanrednih studenata prve godine studija menadžmenta turizma i sporta. *Zbornik Međimurskog veleučilišta u Čakovcu*, 1(1), 7-11.
5. Dopsaj, M., Milošević, M. & Blagojević, M. (2001). Metrološke vrednosti indikatora za procenu osnovnih plivačkih sposobnosti policajaca – matematički model. *Bezbednost*, 43(**6),** 737-747.
6. Dopsaj, M. (2005). Procena sposobnosti održavanja u vertikalnoj plivačkoj poziciji kod policajaca, *Bezbednost*, 47(5), 864–865.
7. Dopsaj, M., Blagojević, M. & Vučković, G. (2007). Normativno-selekcioni kriterijum za procenu bazično motoričkog statusa kandidata za prijem na studije Kriminalističko-policijske akademije u Beogradu. *Bezbednost*, 49(4), 166-183.
8. Findak, V. & Prskalo, I. (2004.) *Kineziološki leksikon za učitelje.* Petrinja: Visoka učiteljska škola.
9. Gošnik, J. & Sedar, M. (2010). Procjena plivačke sigurnosti studenata/ica od 2002/2009. godine uzastopno i provjera znanja plivanja na Filozofskom fakutetu u Zagrebu u 2010. godini. *Sport za sve*, 63, 37–39.
10. Hair, J., Anderson, R., Tatham, R. & Black, W. (1998). Multivariate Data Analysis (Fifth Ed.). Prentice – Hall, Inc., USA.
11. Irwin, C.C., Irwin, R.L., Ryan, T.D. & Drayer, J. (2009). The mythology of swimming: Are myths impacting minority youth participation?. *International Journal of Aquatic Research and Education*, 3, 10–23.
12. Kazazović, B. (2008). *Plivanje (Biomehanika, Metodika, Trenažni proces, Primjenjeno plivanje) 3.* Sarajevo: Grafičar promet.
13. Komparić, A. (2002). Obuka neplivača u osnovnim školama u republici hrvatskoj u školskoj godini 2000/2001. *Sport za sve*, 31, 41–42.
14. Lagestad, P. & Van den Tilar, R. (2014). A comparison of training and physical performance of police students at the start and the end of three-year police education. *Journal of Strength and Conditioning Research*, 28(5), 1394-1400.
15. Lee, C.D., Folsom, A.R. & Blair, S.N. (2003). Physical activity and stroke risk: a metaanalysis. *Stroke*, 34, 2475–2481.
16. Marion, N. (1998). Police academy training: are we teaching recruits what they need to know?. *Policing: An International Journal of Police Strategies & Management,* 21(1), 54-79.
17. Milojković, B., Stevanović, O., Milojević, S., Mlađan, D., Vučković, G. & Janković, B. (2014). Neka iskustva iz angažovanja studenata i zaposlenih na Kriminalističko-policijskoj akademiji u akcijama zaštite i spasavanja od poplava 2014. godine. *Elementarne nepogode i vanredne situacije*, Institut za uporedno pravo i Kriminalističko-policijska akademija, Beograd, 255–271.

18. Milojković, B., Milojević, S., Vučković, G., Gligorijević, M., Janković, B. & Jokić, N. (2015). Certain Aspects of Providing Use of Police Units in Actions of Protection and Rescuing in Case of Natural Disasters. International Scientific Conference "Archibald Reiss Days", Academy of criminalistic and police studies, Belgrade, 1, 407-422.
19. Mitrović, B. & Vučković, G. (2017). Basic swimming competence of police officers of the Ministry of interior of Serbia as a basic motor skill required in flood protection and rescue operations. *NBP -*
20. *Journal for Criminalistics and Law*, 21(3), 61-78.
21. Obradović, S. (2011). Planiranje, regrutovanje i selekcija kadra za prijem u Ministarstvo unutrašnjih poslova RS. *Nauka – Bezbednost – Policija*, 16(1), 135–156.
22. Rodić, S., Rupčić, T. & Stojković, R. (2010). Evaluacija programa Škola plivanja „Ljetne igraonice". *Sport za sve*, 63, 57–59.
23. Rulebook on Criteria for Selection of Candidates for Participants Course for Basic Training of Members of Firefighter and Rescue Unit (https://www.copo.edu.rs/userfiles/files/Konkurs%20VSJ%20mart%202020/PRAVILNIK%20o%20kriterijumima%20za%20izbor%20kandidata%20za%20polaznike%20kursa%20za%20osnovnu%20obuku%20pripadnika%20VSJ.pdf), Official Gazette RS, no. 12/2019 & 14/2020.
24. Stanković, S., Milanović, S. & Marković, Ž. (2015).Use of basic synchronized swimming techniques in non-swimmers trainings. *Activities in Physical Education and Sport*, 5(1), 82-85.
25. Stanković, S. (2016). *Efekti eksperimentalnog programa plivanja na motoričke, antropometrijske i funkcionalne karakteristike učenika osnovne škole*. Doktorska disertacija. Univerzitet u Kragujevcu: Fakultet pedagoških nauka.
26. Stanković, S., Marković, Ž., Dopsaj, M., Ignjatović, A. & Aleksić, D. (2016). The Effects of a Swimming Program of the Functional Abilities of Female Students. *Facta Universitas, Series: Physical Education and Sport*, 14(3), 427 – 434.
27. Strating, M., Bakker, R., Dijkstra, G., Lemmink, K. & Groothoff, J.W. (2010). A job-related fitness test for the Dutch police. *Occupational Medicine*, 60, 255–260.
28. Sullivan, G.M. & Feinn, R. (2012). Using effect size—or why the P value is not enough. *Journal of Graduate Medical Education*, 4(3), 279-282.
29. Wiesner, W. & Rejman, M. (2014). Risk Management in Swimming Education. *International Journal of Aquatic Research and Education*, 8(2), 157-167.
30. Zenić, N. & Petrić, S. (2002). O nekim problemima obuke djece neplivača. *Sport za sve*, 31, 24–25.

GENDER DIFFERENCES IN SHORT SPRINT PERFORMANCEWITH AND WITHOUT OCCUPATIONAL LOAD

Radivoje Janković, PhD[1]
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Nenad Koropanovski, PhD
University of Criminal Investigation and Police Studies, Belgrade, Serbia

Abstract: Maximum acceleration and running speed are significant for police officers in situations where they need to apprehend a running suspect. Most frequently, they have to handle these situations wearing work equipment that weighs equally for both genders. This research aims to determine the differences in maximum acceleration and running speed with equipment of different weight. 35 male and 24 female students from the University of Criminal Investigation and Police Studies took part in the research. The test measured the time needed for a 10m and 20m sprint, as well as a 10m flying start. All tests were performed without additional load, with a duty belt that contained police equipment weighing 5 kg total, as well as a vest weighing 10 kg. The Independent Samples t test found a statistically significant difference within groups in the time of running without occupational load compared to running with the load of 5 kg and 10 kg. Furthermore, the tests with 5 kg and 10 kg loads differed in the first 10m and 20m. All observed variables contained statistically significant differences between female and male students.

Keywords: police, students, occupational loads, physical abilities

INTRODUCTION

The nature of police officers' work entails that they should be adequately physically prepared in order to react efficiently in critical situations. In the moments when it is necessary to assist those in danger, or apprehend a suspect, it is of utmost importance to react quickly. Such incidents may occur suddenly, when officers who are, for instance, on foot patrol, might need to invest their maximum physical

1 radivoje.jankovic@kpu.edu.rs

effort so as to change their pace from a slow walk into a sprint, and arrest an offender (Anderson, Plecas & Segger, 2001; Koedijk et al., 2020). Understandably, the occupational effectiveness of police officers largely depends on their ability to perform these tasks (Strating, Bakker, Dijkstra, Lemmink & Groothoff, 2010; Crawley, Sherman, Crawley & Cosio-Lima, 2015). Therefore, physical abilities are recognized as a vital component when resolving critical incidents, such as attempting to detain a fleeing suspect, overpowering those resisting arrest, handcuffing, crowd control, etc.

Resolving a critical incident can be divided into three main parts: getting to the problem, controlling the problem and removing the problem (Anderson et al., 2001). The tasks of the first part (getting to the problem) can vary from safety checks, arriving to the place of incident (e.g. a traffic accident), or, in quite a few cases, to catching up to the suspect. During the chase, police officers mostly run at the maximum or almost maximum speed, with possible sudden changes in direction, within the range of 5 to 350 meters. Apart from these situations, acceleration and running speed are also significant in the moments when it is necessary to reach a cover as soon as possible (Anderson et al., 2001, Dawes et al., 2015). For abovementioned reasons, not only do the physical ability tests closely imitate potential scenarios that might occur on duty, with the aim of monitoring the level of police officers' physical abilities, but they also represent a strategy for improving the job-related physical fitness (Strating et al., 2010; Jackson & Wilson, 2013; Orr et al., 2019).

The equipment police officers carry during worktime is there to aid the resolving of critical incidents. Besides applying physical force, officers have at their disposal a police baton, handcuffs, or even firearms (Arlov, Ivanović & Janković, 2015). Sudden changes in the intensity of police work (e.g. when one needs to quickly run out of a car and apprehend a suspect) are very physically demanding, and consequently lead to higher injury rates than in the public sector, thus police officers carry protective gear that can weigh even up to 40 kg (Dawes et al., 2015). On the one hand, this equipment can make detaining a suspect easier, or increase safety; however, on the other, it can decelerate the movement and decrease the mobility of police officers (Dawes et al., 2015; Orr et al., 2019).

Regardless of the differences in morphological characteristics and motor abilities, when doing police work, duties performed by male and female police officers do not differ (Kukic et al., 2020). Men are taller and heavier than women, with a higher level of motor abilities, especially force and strength, and hence female officers may be required to carry relatively heavier loads than male officers (Dopsaj et al., 2010; Kukic et al., 2020). Aside from detaining a possibly much heavier suspect, female officers, as well as lighter male officers, are also expected to overcome a larger relative resistance (Baran, Dulla, Orr, Dawes & Pope, 2018, Lockie et al., 2018).

Determining the level of physical readiness of police officers is very important, inasmuch as adequate tests and testing procedures can ascertain what physical performances are related to the work efficiency of police officers (Strating et al., 2010; Jackson & Wilson, 2013). The equipment police officers carry decreases the speed of their movement, as well as their mobility; however, the higher their physical readiness, the lower the negative impact of occupational load (Orr et al., 2019). That being the case, appropriate ways of testing may serve to provide information regarding the level of physical abilities, and later even ways to further develop and establish the abilities relevant to the efficiency of police officers' work. The aim of this study was to determine the differences in the maximum acceleration and running speed in a short sprint distances, in both female and male students carrying loads of different weight.

METHODS

Participants

59 third year undergraduate students of the University of Criminal Investigation and Police Studies in Belgrade took part in the research, 24 of whom were female students (FS), while 35 were male students (MS). The basic descriptive data of their morphological characteristics are shown in Table 1.

Table 1. Basic data of participants morphological characteristics

Gender	Variables	Mean	SD	Min	Max
FS (N = 24)	BH (cm)	170.25	3.10	166.00	177.00
	BM (kg)	61.93	5.35	52.00	74.00
	BMI (kg/m^2)	21.37	1.90	18.90	25.90
MS (N = 35)	BH (cm)	183.63	5.26	171.00	194.00
	BM (kg)	84.91	6.77	70.00	103.00
	BMI (kg/m^2)	25.17	1.46	21.60	28.50

Procedure

After a detailed explanation of the manner of testing, as well as an appropriately conducted standard warm-up, the participants were instructed to run 20 meters from a standing start as fast as possible. In the test, the time of running the first 10 meters, then the second 10 meters, and finally the total time needed to run 20 meters were measured. Given that the 20-meter running test is similar to the 30-meter one, its reliability is undeniable (Mirkov, Nedeljkovic, Kukolj, Ugarkovic & Jaric, 2008). The test was conducted three times. The participants first ran in their sportswear, then carrying a standard police duty belt with a gun and a spare unloaded magazine, a baton, and handcuffs. The total weight of this belt with equipment was 5 kg. The third test was conducted with a vest weighing 10 kg. This type of load (the 10 kg vest) had been defined in some earlier works as the occupational load for police officers (Orr et al., 2019; Kukuc et al., 2020). Each test was conducted after an appropriate active rest, when the participants were able to display their maximum score.

The time was measured with the help of a computer system designed for physical ability testing (*Physical ability test 02)*, consisting of a measure acquisition device, application software, and running sensor (UNO-LEX, NS, Serbia). Photocells were set in such a manner that cutting the ray of the first one started the chronometer, whereas the moment of cutting the ray of the second one stopped it, in order to gain the information for the first 10 meters. Simultaneously, the measurement of the second 10 meters commenced, whereas going through the third sensor led to obtaining the final result. The test observed the results of running in all sections (first 10 m, second 10 m, and total 20 m) without load (10m1, 10m2 and 20m), with a police belt (PB10m1, PB10m2 and PB20m), and with a vest (V10m1, V10m2 and V20m).

Statistics

All data were analyzed by using descriptive indicators in order to calculate the basic parameters of a central tendency: arithmetic mean (Mean) and standard deviation (SD). The existence of differences was determined by the independent samples t-test (Hair, Anderson, Tatham & Black, 1998). Statistic procedure was conducted using Statistical Package for Social Sciences (IBM, SPSS Statistics 20). The significance level was set at $p < 0.05$.

RESULTS

The descriptive parameters for the time needed to run 10 m, 20 m, and 10 m flying start, together with the differences between FS and MS are shown in Table 2.

Table 2. Results of descriptive statistics and differences between the results achieved by FS and MS

Variables	FS		MS		t-test		
	Mean	SD	Mean	SD	Mean difference	Lower bound	Upper bound
10m1 (s)	2.159	0.087	1.930	0.117	0.229*	0.173	0.285
10m2 (s)	1.654	0.096	1.422	0.093	0.231*	0.182	0.281
20m (s)	3.813	0.158	3.353	0.185	0.46*	0.368	0.553
PB10m1 (s)	2.312	0.127	2.046	0.147	0.266*	0.192	0.339
PB10m2 (s)	1.719	0.120	1.451	0.112	0.269*	0.208	0.330
PB20m (s)	4.031	0.216	3.497	0.240	0.534*	0.412	0.657
V10m1 (s)	2.379	0.150	2.044	0.123	0.335*	0.264	0.407
V10m2 (s)	1.883	0.157	1.537	0.118	0.346*	0.274	0.418
V20m (s)	4.261	0.277	3.580	0.229	0.681*	0.549	0.814

*Significant at $p < 0.05$

The existence of statistically significant difference within the groups in the time of running without load, compared to the running with 5 kg and 10 kg load (police belts and vests), as well as the differences in the time of running with load for the first 10 m, second 10 m, and total 20 m are shown in Table 3, Table 4, and Table 5, respectively.

Table 3. The differences in first 10 m for FS and MS without and defined load

Gender	Test		Mean Difference (s)	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
FS	10m1	PB10m1	-0.153*	-0.214	-0.092
		V10m1	-0.220*	-0.028	-0.152
	PB10m1	V10m1	-0.067	-0.165	0.032
MS	10m1	PB10m1	-0.116*	-0.167	-0.065
		V10m1	-0.113*	-0.159	-0.067
	PB10m1	V10m1	-0.003	-0.050	0.056

*Significant at $p < 0.05$

Table 4. *The differences in second 10 m for FS and MS with and without defined load*

Gender	Test		Mean Difference (s)	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
FS	10m2	PB10m2	-0.066*	-0.109	-0.022
		V10m2	-0.229*	-0.287	-0.170
	PB10m2	V10m2	-0.163*	-0.235	-0.092
MS	10m2	PB10m2	-0.034*	-0.071	0.015
		V10m2	-0.117*	-0.154	-0.074
	PB10m2	V10m2	-0.083*	-0.127	-0.045

*Significant at p < 0.05

Table 5. *The differences in 20 m for FS and MS with and without defined load*

Gender	Test		Mean Difference (s)	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
FS	20m	PB20m	-0.218*	-0.293	-0.143
		V20m	-0.448*	-0.529	-0.367
	PB20m	V20m	-0.230*	-0.347	-0.112
MS	20m	PB20m	-0.158*	-0.218	-0.098
		V20m	-0.236*	-0.290	-0.182
	PB20m	V20m	-0.077*	-0.137	-0.018

*Significant at p < 0.05

DISSCUSION

The test results determined that variables 10m1,PB10m1 and V10m1 for FS had statistically significantly better results with all types of load, the differences becoming more prominent as the load increased (Table 2). Upon observing the total 20 m sprint time, it could be seen that the difference between FS and MS in sportswear was 13.72%, with a duty belt 15.27%, and with a vest 19.29%. The study found that, compared to the sports equipment, both FS and MStook statistically significantly longer running time in the first 10 m with a belt by 6.62% and 5.67%, whereas with a vest it was by 9.25% and 5.58%, respectively. In both gender groups between PB10m1 and V10m1, no statistically significant differences were found (Table 3). The difference between 10m2 compared to PB10m2 and V10m2 in FS was 3.78% and 12.16%, whereas in MS it was 2.37% and 7.49%. In 10 m flying start, a statistically significant difference was observed between PB10m2 and V10m2, which was 8.71% for FS, and 5.60% for MS (Table 4). The subsequent total 20 m running time statistically differed between 20m and PB20m, between 20 and V20m, as well as between PB20m and V20m, amounting to 5.42%, 10.53% and 5.40% for FS, and 4.53%, 6.62% and 2.18% for MS, respectively.

The results of this research are similar to the study of Orr (2019), which found that physical abilities, especially lower-body power, upper-body and trunk endurance, as well as aerobic fitness, are related to running speed, especially in officers wearing occupational load. What is more, the results of the study found that carrying a 10 kg vest statistically significantly increased the time of performing Illinois

agility test by almost 5%. Also, a strong connection found between vertical jump and sprint performance tests at the distances of 5 m, 10 m, and 15 m, shows that it is preferable to additionally apply the training methods that may improve lower-body power, potentially leading to enhancing sprint speeds over short distances (Dawes et al., 2015). In regrade, the results of our study showed that load increase affects FS more than MS. The results of these findings could be explained by the fact that men, on average, have a higher level of general physical abilities compared to women, viewed from the aspects of speed, strength, and endurance (Dopsaj et al., 2010), enabling them to perform better in sprint with load tests. Apart from physical abilities, the efficiency of movement with load can also be affected by morphological characteristics. Body composition is strongly related to the efficiency in the running speed both with and without 10 kg load, hence leading to a presumption that better results could be achieved by increasing skeletal muscle mass and reducing fat mass (Kukic et al., 2020). The occupational load carried by police officers may also have an impact on the results of physical ability tests. The study that corroborates this was conducted by Koedijk (2020), and its goal was to investigate the influence of wearing a police uniform on performance, using the Physical Competence Test (PCT). The difference in weight between the sportswear condition and the police uniform condition was about 9.5 kg. In this study, it took about 14 seconds more to perform the PCT in a uniform; i.e. the efficiency decreased by approximately 7.5%. Furthermore, the participants indicated a higher perceived exertion (RPE) after completing the PCT in a police uniform by approximately 17%. It was concluded that the decreased efficiency in the PCT, followed by the increased values of RPE, was in all likelihood caused by the diminished mobility, additional load, and heat.

The findings of this study showed that different weight of the equipment did not affect the time needed to run the first 10 m. As it was presumed carrying a police duty belt with the equipment weighing 5 kg diminishes the mobility of a participant similarly to a 10 kg vest. At the start, the participants attempted to fasten the equipment (they frequently held the baton or gun), as opposed to the vest, which they did not hold, since it clung to the body. Once they achieved certain speed, the participants did not need to fasten the equipment, thus the manner of running the second 10 m was identical, which, given the larger weight of the equipment, negatively affected the time needed to run 10 m flying start, and consequently the total 20 m.

CONCLUSION

The aim of this research was to investigate the differences in maximum acceleration and running speed between the FS and MS who performed the test first in sportswear, then with a police duty belt and 5 kg equipment, and finally with a 10 kg vest. The results of the study showed that MS had statistically significantly better results, compared to FS. It can be concluded that the load increase had a higher negative impact on the sprint performance of the FS. Based on these results, we can assume that there is a need for new studies that would ascertain the impact of occupational load on the results of standard physical ability assessment tests. That studies should potentially lead to new protocols, testing standards, as well as to determining adequate norms for police officers' physical abilities.

REFERENCES

1. Anderson, G., Plecas, D., Segger, T. (2001). Police officer physical ability testing re-validating a selection criterion. *Policing: An International Journal of Police Strategies & Management*, 24(1), 8-31.
2. Arlov, D., Ivanović, A., Janković, R. (2015). Quality of the use of meance of coercion and determinating their justifability and regularity in order to build the trust of citizens in state institutions. *Proceeding book of: International scientific conference Archibald Reiss Days*, (pp. 423–429), Belgrade, Academy of Criminalistic and Police Studies.
3. Baran, K., Dulla, J., Orr, R.M., Dawes, J., Pope, R.R. (2018). Duty loads carried by LA Sheriff's Department deputies. *Journal of Australian Strength and Conditioning*, 26(5), 34-38.
4. Crawley, A., Sherman, R., Crawley, W., Cosio-Lima, L. (2015). Physical fitness of Police academy cadets: Baseline characteristics and changes during a 16-week Academy. *Journal of Australian Strength and Conditioning*, *30*(5), 1416-1424.
5. Dawes, J., Orr, R.M., Elder, C., Krall, K., Stierli, M., Schilling, B. (2015). Relationship between selected measures of power and strength and linear running speed amongst special weapons and tactics police officers. *Journal of Australian Strength and Conditioning*, *23*(3), 23-28.
6. Dopsaj, M., Blagojević, M., Marinković, B., Miljuš, D., Vučković, G., Koropanovski, N., Ivanović, J., Atanasov, D., Janković, R. (2010). *Modelne karakteristike antropometrijskih pokazatelja i bazično-motoričkih sposobnosti (BMS) zdravih i utreniranih mladih osoba oba pola – populacioni pokazatelji Republike Srbije.* Bajina Bašta: Forma.
7. Hair J., Anderson R., Tatham R., Black W. (1998). *Multivariate Data Analysis* (Fifth Ed.). USA: Prentice – Hall, Inc.
8. Jackson, C.A., Wilson, D. (2013). The gender-neutral timed obstacle course: A valid test of police fitness? *Occupational Medicine,* 63, 479-484.
9. Koedijk, M., Stuurman, H., Renden, P., Hutter R.I., Strating, M., Oudejans, R. (2020). The physical competence test of the Dutch National Police: The effects of wearing a police uniform on test performance. *Police Practice and Research*, 21(3), 264-278.
10. Kukic, F., Koropanovski, N., Jankovic, R., Cvorovic, A., Dawes J.J., Lockie G.R., Robin M. O., Dopsaj M. (2020). Association of sex-related differences in body composition to change of direction speed in police officers while carrying load. *International Journal of Morphology,* 38(3), 731-736.
11. Lockie, R.G., Dawes, J.J., Balfany, K., Gonzales, C.E., Beitzel, M.M., Dulla, J.M., Orr, R.M. (2018). Physical fitness characteristics that relate to work sample test battery performance in law enforcement recruits. *International Journal of Environmental Research and Public Health,* 15(11), 2477.
12. Mirkov, D., Nedeljkovic, A., Kukolj, M., Ugarkovic, D., Jaric, S. (2008). Evaluation of the reliability of soccer-specific field tests. *Journal of Strength and Conditioning Research,* 22(4), 1046-1050.
13. Orr, R., Kukic, F., Cvorovic, A., Koropanovski, N., Jankovic, R., Dawes, J., Lockie, R. (2019). Associations between fitness measures and change of direction speeds with and without occupational loads in female police officers. *International Journal of Environmental Research and Public Health*, 16(11), 1947.
14. Strating, M., Bakker, R., Dijkstra, G., Lemmink, K., Groothoff, J. (2010). A job-related fitness test for the Dutch police. *Occupational Medicine,* 60(4), 255-260.

THE IMPACT OF LOAD CARRIAGE ON LOWER-BODY POWER IN SWAT POLICE

Robin Orr, PhD
Tactical Research Unit, Bond University, Queensland, Australia
Filip Kukić, PhD[1]
Testing Section, Police Sports Education Center, Abu Dhabi Police, UAE
Eduardo Marins
Federal University of Pelotas, Rio Grande do Sul, Brazil
Cheryl Lim
Centre of Excellence for Soldier Performance, Singapore
Jay Dawes, PhD
Department of Health and Human Performance,
Oklahoma State University, Stillwater, Oklahoma, USA
Robert Lockie
Center for Sport Performance, Department of Kinesiology,
California State University, Fullerton, California, USA

Abstract: Tactical personnel such as Special Weapons and Tactics (SWAT) police are required to carry occupational loads of approximately 20 kg and, on occasion, more than 40 kg. These occupational loads have been found to negatively impact officer mobility. The aim of this study was to investigate the impact of load carriage on lower-body power in SWAT Police.

Six active male officers of a state police SWAT unit (mean age = 34.0 ± 7.4 years, mean height = 184.2 ± 3.3 cm, mean body mass = 96.3 ± 6.4 kg, mean years of SWAT experience = 6.0 ± 6.8 years) volunteered to participate. Ethics approval for the study was obtained by Bond University Human Research Ethics Committee (RO1585). Lower-body power was measured using a repeated vertical jump (VJ) test of three jumps with data collected using an uni-axial portable force plate sampled at 600 Hz and filtered using a 4th order Butterworth filter with a cut-off frequency of 50 Hz. Force-time data were subsequently analysed. The VJ variables,

1 filip.kukic@gmail.com

peak velocity, peak force, peak power, and jump height and landing force were measured. Officers randomly completed the VJ in both an unloaded condition (5.5 kg – fatigues and M4 weapon slung) and a tactically loaded condition (23.5 ± 2.8 kg: 24.5 ± 3.4% body mass) with all operational equipment. The VJ heights of all three jumps were averaged to provide a final VJ height for analysis.

Paired sample t-tests were used to evaluate differences between the tests in loaded and unloaded conditions. Magnitude of differences was calculated according to Cohen's effect size. Pearson's correlations were conducted to investigate relationships between the unloaded and loaded condition for each variable. The significance level for all data was set at $p < .05$.

The results of the paired samples t-test revealed no statistical difference between the initial and third VJ height performed in the repeated VJ test, for either the unloaded ($p = .864$) or loaded ($p = .898$) conditions. There were significant differences ($p < .001$) between the unloaded and loaded conditions in VJ height (0.34 ± 0.02 m; 0.26 ± 0.02 m, respectively) and peak velocity (2.57 ± 0.07 $m.s^{-1}$; 2.26 ± 0.08 $m.s^{-1}$, respectively) with large effect sizes (d=-1.73 and -1.71 respectively). All measures, with the exception of landing force (r=.46, p=.35) were significantly and strongly correlated

Lower body power in SWAT Officers is reduced during load carriage. This can potentially lead to decreased tactical performance in critical tasks, such as seeking, or moving between, cover. Officers should train in both unloaded and loaded conditions to increase lower body power and mitigate landing impacts.

Keywords: law enforcement, fitness, training, specialists

INTRODUCTION

Specialist tactical police officers, such as those serving in Special Weapons And Tactics (SWAT) teams, are required to carry occupational loads while performing tasks that include warrant execution, engaging armed offenders, and hostage rescues (Irving, Orr, & Pope, 2019). The loads comprise specialist equipment and clothing required of SWAT police and increase the loads carried and worn from the 10 kg typical of general duties officers (Baran, Dulla, Orr, Dawes, & Pope, 2018), to around 20 kg (Carbone, Carlton, Stierli, & Orr, 2014), and even in excess of 40 kg (Pryor, Colburn, Crill, Hostler, & Suyama, 2012) when ballistic shields and breaching devices are included. While these loads are important for protecting, sustaining and enhancing the operational capabilities of tactical personnel (Orr, 2010; Son, Lee, & Tochihara, 2013), they have been found to negatively impact the performance of tactical personnel (Carlton & Orr, 2014; Dempsey, Handcock, & Rehrer, 2013) and lead to a variety of injuries (Orr, Pope, Johnston, & Coyle, 2014).

Leg power is an important attribute in police officers and is required to perform high-intensity, short-duration actions such as pursuing fleeing suspects, arresting uncooperative offenders, executing dynamic entries during search warrants, and lifting objects of substantial weight (Dawes et al., 2017; Shephard & Bonneau, 2002). Successful execution of these tasks requires officers to have adequate leg power (Orr, Dawes, Lockie, & Godeassi, 2019). Where the legs have been shown to express peak power at around one's body mass, when the body is loaded with more than 8% of body mass, peak power output has been shown to be reduced (Pazin, Berjan, Nedeljkovic, Markovic, & Jaric, 2013; Suzovic, Markovic, Pasic, & Jaric, 2013). Considering this, load carriage can decrease leg power and decrease occupational performance in tactical populations (Dempsey, Handcock, & Rehrer, 2014). Previous research on police load carriage has found that even light loads (8-10 kg) can reduce leg power as

measured through a vertical jump (Dempsey et al., 2014; Taylor et al., 2016), short distance sprints (Lewinski, Dysterheft, Dicks, & Pettitt, 2015; Taylor et al., 2016) and agility / change of direction speed runs (De Maio et al., 2009; Martin & Nelson, 1985). In regard to occupational task performance, the weight of tactical equipment is believed to negatively impact an officer's ability to pursue and apprehend a suspect (Stubbs, David, Woods, & Beards, 2008). Since SWAT officers must perform occupational tasks with loads heavier than general duties law enforcement officers, they may be at greater risk of experiencing performance decrements. These reductions in performance can potentially put SWAT officers at an increased risk of injury within the dangerous workplace environments in which they are exposed (Carlton & Orr, 2014; Dempsey et al., 2014). Consequently, improving both the health and skill related aspects of fitness is a primary a focus of police officer training (Cocke & Orr, 2015; Mala, Szivak, & Kraemer, 2015).

It is known that load carriage can negatively impact tactical personnel's ability to perform occupational duties, including mobility (Orr, Kukić, et al., 2019) and quick explosive movements (such as jumping) (Dempsey et al., 2014). What has not yet been further investigated is the impact of a full tactical load on the leg power of specialist police officers (e.g. SWAT officers). Therefore, the purpose of this study was to investigate the effects of the standard tactical load worn by SWAT police on their leg power performance.

METHODS

Participants

The participants were six active male officers of a state SWAT police unit (mean age = 34.0 ± 7.4 years, mean height = 184.2 ± 3.3 cm, mean body mass = 96.3 ± 6.4 kg, mean years of specialist experience = 6.0 ± 6.8 years) who volunteered to participate. Inclusion criteria for participation were a) members of the specialist unit, and b) over 18 years of age. The exclusion criterion for participation was any officer who had an injury at the time of data collection. Ethics approval for the study was obtained by Bond University Human Research Ethics Committee (RO1585).

Load conditions

The participants underwent testing in both unloaded and loaded conditions. The unloaded condition consisted of the officer dressed in police issued fatigues, boots, a primary weapon (M4 carbine assault rifle) and a secondary weapon (9 mm Glock pistol) (Carbone et al., 2014). The loaded condition consisted of the attire in the unloaded condition plus full standard tactical assault clothing and equipment (Carbone et al., 2014). This included body armour and a helmet but excluded other specialist equipment, such as respirators and breathing equipment, that would be task-dependent (Carbone et al., 2014). The mean mass of the unloaded condition was approximately 5.5 kg with slight variations due to weapon modifications and clothing sizing differences. The mean mass of the tactically loaded condition was 23.5 kg (± 2.8 kg) and ranged from 19.7 to 27.3 kg with variations due to weapon modifications, sizes of body armour and additional personal preference stores. As a percent of body mass, mean tactical load was 24.5% (± 3.4%) and ranged from 18.9-27.3%.

Outcome measures

Leg power was measured using a repeated vertical jump test. Vertical jump data were collected using a uni-axial portable force plate (400 Series Performance Force Plate; Fitness Technology, Adelaide, Australia) which has been shown to have high reliability and validity in a variety of jumping and landing tasks measures (Walsh, Ford, Bangen, Myer, & Hewett, 2006). Data were sampled at 600 Hz and filtered using a 4th order Butterworth filter with a cut-off frequency of 50 Hz. Force-time data was subsequently analysed (Ballistic Measurement System; Fitness Technology, Adelaide, Australia). Vertical jump variables assessed included peak velocity, peak force, peak power, jump height and landing impact force.

The order in which the subjects performed this test (i.e. unloaded or loaded) was randomised by ballot lot draw. Officers were instructed to step on the force plate and when ready, perform three continuous vertical jumps as high as possible with hands maintained on their hips consecutively without pause. A repeated vertical jump test was used because the authors believed that it would be more applicable to the duties performed by the SWAT Police and has been shown to have good reliability for force outputs in a previous study (Cormack, Newton, McGuigan, & Doyle, 2008). In the current study, the repeated vertical jump was modified to only three repeated jumps due to the difficulty of remaining on the force plate while under a full tactical load. Vertical jump height was calculated using the software by measuring the amount of time the feet are not in contact with the plate. This was calculated for the initial jump and two rebound jumps performed by each officer. Officers were allowed two attempts with the best result recorded as their score. A rest of three minutes between the attempts and 10 minutes between the load conditions allowed for full recovery between attempts.

Statistical Analyses

Data were imported and statistically analysed using SPSS Statistics for Windows, Version 23.0 (IBM Corp. Armonk, New York, USA) and plotted in GraphPad Prism version 6.0 for Windows (GraphPad Software, San Diego, California, USA, www.graphpad.com). Paired sample t-tests were used to evaluate differences between the tests in loaded and unloaded conditions. The significance level for all data was set at $p < .05$. Trends of $p < .10$ were also noted due to the small sample size. The magnitude of differences was calculated according to Cohen's effect size (d) calculation, whereby the magnitudes were defined as small = 0.2, moderate = 0.5, large = 0.8 and very large = 1.3 (Sullivan & Feinn, 2012). Pearson's correlations were conducted to investigate relationships between load conditions (i.e. unloaded and loaded) for all variables and between first and third jumps.

RESULTS

All six participants completed each of the tests as previously described. Descriptive data and comparisons of the repeated vertical jump (averaged across the three repeated jumps) parameters in unloaded and loaded conditions are shown in Table 1. The average vertical jump peak velocity was significantly lower (-0.31 ± 0.04 m/s, -8.48(5) = 2.57, p <.001) in the loaded condition. Average vertical jump height was also significantly reduced (-0.08 ± 0.01 m, -9.20(5) = 2.57 p < .001) in the loaded condition. These negative effects of the load occurred for each participant (Figure 1*a*), with larger relative differences in jump height than jump peak velocity (Figure 1*b*).

Table 1. *The influence of loading on average of repeated vertical jump performance.*

Variables	**Unloaded** Mean ± SEM	**Loaded** Mean ± SEM	**Difference** Mean ± SEM
Vertical jump peak velocity (m/s)	2.57 ± 0.07	2.26 ± 0.08	**-0.31 ± 0.04****
Vertical jump peak force (N)	2369.42 ± 114.20	2491.21 ± 74.07	121.79 ± 67.20
Vertical jump peak power (N/s)	4641.15 ± 239.97	4488.26 ± 276.86	-152.89 ± 93.00
Vertical jump height (m)	0.34 ± 0.02	0.26 ± 0.02	**-0.08 ± 0.01****
Vertical jump landing force (N)	3169.53 ± 143.38	3180.38 ± 108.23	10.85 ± 133.71

**Significant at $p < .001$

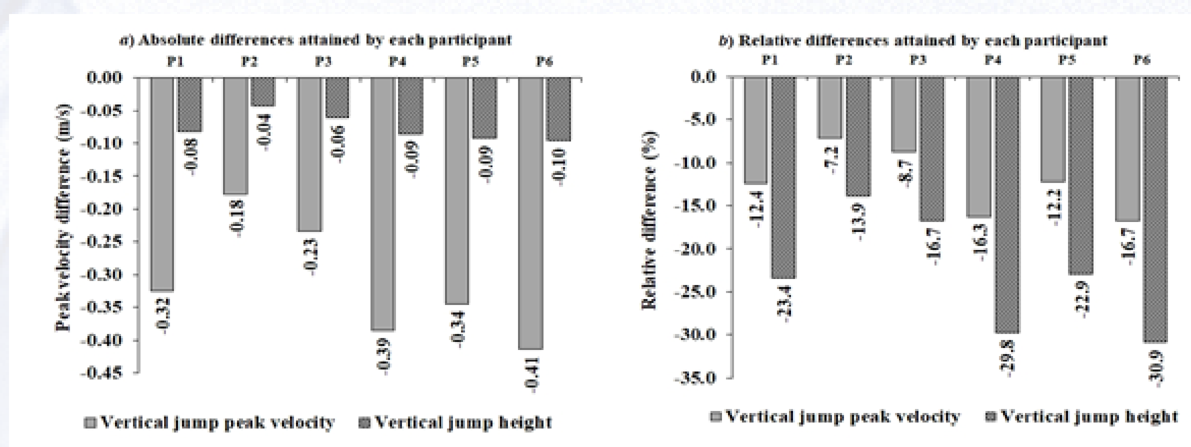


Figure 1. *Absolute (a) and relative (b) differences in vertical peak velocity and vertical jump height for each participant.*

Cohen's *d* and relative differences (%) between the unloaded and loaded condition in vertical jump peak velocity and vertical jump height are showed in Figure 2. The impact of the load was relatively greater on the vertical jump height than on the vertical jump peak velocity.

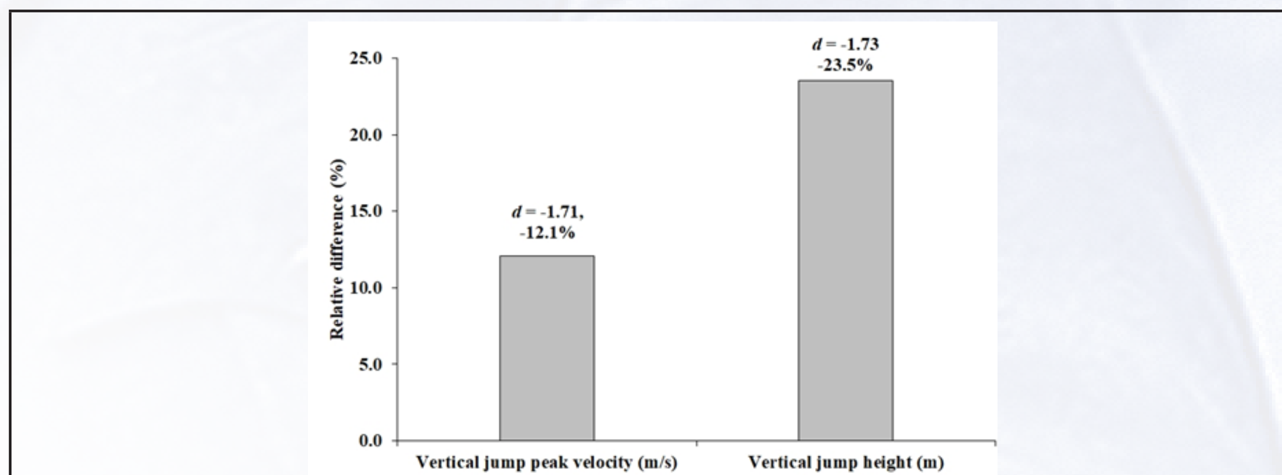


Figure 2. *Cohen's effect size (d) and relative (%) difference between the unloaded and loaded conditions.*

Significant strong correlations between unloaded and loaded performance of the repeated vertical jump were found as detailed in Table 2. However, no significant correlation was found between the unloaded and loaded impact forces for the vertical jump.

Table 2. *Correlations between the unloaded and loaded performance of the repeated vertical jump.*

Variables	***r*** **value**	***p*** **value**
Vertical jump peak velocity (m/s)	.90	.02
Vertical jump peak force (N)	.83	.04
Vertical jump peak power (N/s)	.95	.004
Vertical jump height (m)	.90	.02
Vertical jump landing force (N)	.46	.35

A two-tailed paired student's t-test revealed no statistical difference between the initial vertical jump height and the final third jump performed in the repeated vertical jump test, in both the unloaded (+0.00 ± 0.01, -0.18(5) = 2.57, p =.86) and loaded (-0.00 ± 0.00, 0.13(5) = 2.57, p = .90) conditions. The jump height of the initial vertical jump under loaded conditions correlated significantly with the performance of the final third vertical jump (r = 0.99, p < .001). However no significant correlation was found in the unloaded condition between the first and third vertical jump heights (r = 0.63, p = .18).

DISCUSSION

The aim of this study was to investigate the effects of the standard tactical load worn by SWAT officers on their leg power using a repeated vertical jump. Significant differences were found between the unloaded and loaded conditions with these differences highlighted above in Table 1.

The average peak vertical jump velocity in the loaded condition was 12.2% lower than the unloaded condition. Additionally, the average jump height with load carriage decreased by 22.7% compared to the unloaded condition. These reductions in performance follow the previous finding by Dempsey et al. (2014) in which additional load carried (7.65 kg armour vest) decreased the jump height of police by 11.95%. Compared to the findings of Dempsey et al. (2014), a larger reduction in vertical jump performance was found in this study. This larger reduction can be attributed to the heavier loads used in this study (23.5 kg) for the loaded condition when compared to that of Dempsey et al. (2014). The change between the unloaded and loaded vertical jump peak force (2369.42 vs. 2491.21 N respectively, p = 0.13) and power (4641.15 vs. 4488.26 N/s respectively, p = 0.16) generated by the participants remained similar, suggesting that the muscle force produced was largely unchanged. However, since the total mass in the loaded condition was increased it follows that vertical jump height and velocity was reduced as the force exerted on the mass remained the same. Together, these findings further support previous research in which load carriage decreased tactical performance and put members of a SWAT unit at increased risk of injury (Carlton & Orr, 2014; Dawes et al., 2015; Dempsey et al., 2014). Load carriage is known to decrease carrier mobility and impact their ability to rapidly seek cover or accelerate in tactical situations (Carlton & Orr, 2014; Dempsey et al., 2013). Risk of injury increases with load carriage as additional loads can alter movement techniques, increase loads across the body and decrease mobility which increases occupational risk (Carlton & Orr, 2014; Dempsey et al., 2013; Orr et al., 2014).

The average landing impact force was not significantly different between loaded and unloaded conditions, suggesting that participants were able to effectively mitigate the impact of additional mass upon landing. However, this may be due in part to the reduced jump height achieved with the additional load carried. Previous research has found that additional loading increases landing forces (13–19%, $p < .001$) when dropping from a fixed height (P. Dempsey et al., 2014). The results presented in this study suggest that when unfatigued, members of a SWAT unit were able to effectively manage the additional mass when landing from a jump with tactical load, an activity which may be performed in a tactical situation to clear an object or as an evasive manoeuvre (Dawes et al., 2015). However, if they were required to vault from an object or drop from a fixed height, Dempsey et al. (2014) has shown that landing forces would increase with additional load carriage.

Additionally, there were strong (Mukaka, 2012) significant correlations between the unloaded and loaded vertical jump performance for average peak velocity, peak force, peak power and peak height but not for the landing impact force. This suggests that the unloaded vertical jump performance relates to the loaded performance but not necessarily so for the landing ability of the police officer. Therefore, improving unloaded vertical jump performance is likely to translate into increased loaded vertical jump performance but not in landing capabilities in SWAT police. This is an important consideration for the selection of appropriate training loads and volumes across different training cycles, with a need to monitor the total exposure and adaptation (positive and negative) to load carriage. Repetitive overloading due to load carriage is known to be linked to an increased risk of injuries in tactical populations, particularly in soldiers (Orr et al., 2014). However, vertical jump impact force (i.e., landing capabilities) did not correlate between the two loading conditions, suggesting that strength and conditioning as well as tactical training should be carefully crafted to include training in both loading conditions.

No statistical difference was found between the initial vertical jump height and final third vertical jump height achieved during either the unloaded and loaded condition. The results suggest that while not fatigued, the performance of a short series of repeated jumps remains unaffected by load. Also, a correlation was found between the initial vertical jump height and third final vertical jump height in the loaded condition, but not in the unloaded condition. This is likely due to the increased variation in the raw data for jumps in an unloaded state, which has been previously noted in research by Cormack et al. (2008).

LIMITATIONS

Limitations of this study were mostly due to the low sample size and consequential natural variations in the data which made it more difficult to observe statistically relevant phenomenon. Additionally, since anthropometric data on the individual participants was not available, we were not able to factor in any potential confounding effects of body mass, body composition, age and height on leg power and strength performances.

CONCLUSION

Specialist police personnel, such as those serving on a SWAT team, are often required to carry substantial loads during their occupational duties. These loads can impact their leg power performance which is an important physical requirement for tactical task performance. This study suggests that the

performance of leg power in SWAT police is reduced during load carriage. This can potentially lead to decreased tactical performance and increased risk of injury. Additionally, unloaded performance of leg power relates to loaded performance. Therefore, training which increases unloaded leg power is likely to carry over directly into tactically loaded performance. However, vertical jump landing force (i.e., landing capabilities) did not correlate between the two loading conditions, suggesting that strength and conditioning as well as tactical training should be carefully crafted to include training in both loading conditions. This is of importance as good capability in landing, deceleration and stopping while carrying loads may reduce the risk of injury. Taken together, these findings have implications in the understanding of tactical performance with load carriage. To further elucidate the impact of load carriage on leg power, it would be beneficial to conduct future studies with simulated tactical situations to see the effect of fatigue with load carriage.

REFERENCES

1. Baran, K., Dulla, J., Orr, R., Dawes, J., & Pope, R. (2018). Duty loads carried by the LA sheriff's department deputies. *Journal of Australian Strength and Conditioning, 26*(5), 34-38.
2. Carbone, P. D., Carlton, S. D., Stierli, M., & Orr, R. M. (2014). The impact of load carriage on the marksmanship of the tactical police officer: A pilot study. *Journal of Australian Strength and Conditioning, 22(2), 50-57*.
3. Carlton, S. D., & Orr, R. M. (2014). The impact of occupational load carriage on carrier mobility: a critical review of the literature. *Int J Occup Saf Ergon, 20*(1), 33-41.
4. Cocke, C., & Orr, R. (2015). The impact of physical training programs on the fitness of tactical populations: a critical review. *Journal of Australian Strength and Conditioning,23(1)39-52*.
5. Cormack, S. J., Newton, R. U., McGuigan, M. R., & Doyle, T. L. (2008). Reliability of measures obtained during single and repeated countermovement jumps. *Int J Sports Physiol Perform, 3*(2), 131.
6. Dawes, J., Orr, R., Flores, R. R., Lockie, R. G., Kornhauser, C., & Holmes, R. (2017). A physical fitness profile of state highway patrol officers by gender and age. *Ann Occup Environ Med, 29*(1), 16. doi:https://doi.org/10.1186/s40557-017-0173-0
7. Dawes, J., Orr, R. M., Elder, C. L., Krall, K., Stierli, M., & Schilling, B. (2015). Relationship between selected measures of power and strength and linear running speed amongst Special Weapons And Tactics Police Officers. *Journal of Australian Strength and Conditioning, 23*(3), 22-26.
8. De Maio, M., Onate, J., Swain, D., Morrison, S., Ringleb, S., & Naiak, D. (2009). Physical Performance Decrements in Military Personnel Wearing Personal Protective Equipment (PPE). Naval Medical Center Portsmouth, VA:USA.
9. Dempsey, P., Handcock, P. J., & Rehrer, N. J. (2013). Impact of police body armour and equipment on mobility. *Appl Ergon, 44*(6), 957-961.
10. Dempsey, P. C., Handcock, P. J., & Rehrer, N. J. (2014). Body armour: the effect of load, exercise and distraction on landing forces. *J Sports Sci, 32*(4), 301-306. doi:10.1080/02640414.2013.823226
11. Irving, S., Orr, R., & Pope, R. (2019). Profiling the Occupational Tasks and Physical Conditioning of Specialist Police. *Int J Exerc Sci,* 12(3) 173-186.

12. Lewinski, W. J., Dysterheft, J. L., Dicks, N. D., & Pettitt, R. W. (2015). The influence of officer equipment and protection on short sprinting performance. *Appl Ergon, 47*, 65-71. doi:10.1016/j.apergo.2014.08.017
13. Mala, J., Szivak, T. K., & Kraemer, W. J. (2015). Improving Performance of Heavy Load Carriage During High-Intensity Combat-Related Tasks. *Strength Cond J, 37*(4), 43-52.
14. Martin, P. E., & Nelson, R. C. (1985). The effect of carried loads on the combative movement performance of men and women. *Medicine, 150*(7), 357-362.
15. Mukaka, M. M. (2012). A guide to appropriate use of Correlation coefficient in medical research. *Malawi Med J, 24*(3), 69-71.
16. Orr, R. (2010). The history of the soldier's load. *Australian Army Journal, 7*(2), 67-88.
17. Orr, R., Dawes, J., Lockie, R. G., & Godeassi, D. (2019). The Relationship Between Lower-Body Strength and Power, and Load Carriage Tasks: A Critical Review. *Int J Exerc Sci, 12*(6), 1001.
18. Orr, R., Kukić, F., Cvorovic, A., Koropanovski, N., Janković, R., Dawes, J., & Lockie, R. (2019). Associations between Fitness Measures and Change of Direction Speeds with and without Occupational Loads in Female Police Officers. *Int J Environ Res Public Health, 16*(1947). doi:10.3390/ijerph16111947
19. Orr, R., Pope, R., Johnston, V., & Coyle, J. (2014). Soldier occupational load carriage: a narrative review of associated injuries. *Int J Inj Contr Saf Promot, 21*(4), 388-396. doi:10.1080/17457300.2013.833944
20. Pazin, N., Berjan, B., Nedeljkovic, A., Markovic, G., & Jaric, S. (2013). Power output in vertical jumps: does optimum loading depend on activity profiles? *Eur J Appl Physiol, 113*(3), 577-589.
21. Pryor, R. R., Colburn, D., Crill, M. T., Hostler, D. P., & Suyama, J. (2012). Fitness characteristics of a suburban special weapons and tactics team. *Journal of Strength and Conditioning Research, 26*(3), 752-757.
22. Shephard, R., & Bonneau, J. (2002). Assuring gender equity in recruitment standards for police officers. *Can J Appl Physiol, 27*, 263-295. doi:10.1139/h02-016
23. Son, S.-Y., Lee, J.-Y., & Tochihara, Y. (2013). Occupational stress and strain in relation to personal protective equipment of Japanese firefighters assessed by a questionnaire. *Ind Health, 51*(2), 214-222.
24. Stubbs, D., David, G., Woods, V., & Beards, S. (2008). Problems associated with police equipment carriage with Body Armour, including driving. In *Contemporary Ergonomics 2008: Proceedings of the International Conference on Contemporary Ergonomics* (CE2008), 1-3 April 2008, Nottingham, UK, 23-28.
25. Sullivan, G. M., & Feinn, R. (2012). Using effect size—or why the P value is not enough. *J Grad Med Educ, 4*(3), 279-282.
26. Suzovic, D., Markovic, G., Pasic, M., & Jaric, S. (2013). Optimum load in various vertical jumps support the maximum dynamic output hypothesis. *Int J Sports Med, 34*(11), 1007-1014.
27. Taylor, N. A., Burdon, C. A., van den Heuvel, A. M., Fogarty, A. L., Notley, S. R., Hunt, A. P., . . . Peoples, G. E. (2016). Balancing ballistic protection against physiological strain: evidence from laboratory and field trials. *Appl Physiol Nutr Metab, 41*(2), 117-124. doi:10.1139/apnm-2015-0386
28. Walsh, M. S., Ford, K. R., Bangen, K. J., Myer, G. D., & Hewett, T. E. (2006). The validation of a portable force plate for measuring force-time data during jumping and landing tasks. *J Strength Cond Res, 20*(4), 730.