Contribution of Minovici brothers to ontogenesis of forensic science in Serbia

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Abstract: Introduction of scientific methods into crime investigations in the end the 19th century initiated phylogenetics of forensic science in the world. One of the main tasks of forensics is to determine a person's identity. The first method for identification and registration of criminals based on scientific principles was Bertillon's system (“Bertillonage”) established in France in 1880. The Romanian Police was among the first users of Bertillonage, through the efforts of brothers Mina and Nikolae Minovici. In an attempt to keep pace with the world, the Kingdom of Serbia directed the reform of its police towards the application of new scientific methods in crime investigation. The lack of professional staff was resolved as police officers of the Kingdom of Serbia were sent to further education abroad. In 1900, a police officer Dušan Alimpić (1873-1930) completed training in Bucharest (Romania) held by Minovici brothers for the application of Bertillonage. Professional knowledge that Alimpić gained during his training, comprehension of the work organization of the Bucharest Police and their experience in the application of Bertillonage in Romania, served as a foundation for the introduction of that method into the practice of the Serbian Police. This essay presents results of the research aimed at demonstrating the contribution of Minovici brothers to the introduction of forensic method for identification of individuals into the work of the Serbian Police, which may be regarded as a key step in ontogenesis of forensic science in Serbia.

Key Words: Nikolae Minovici, Mina Minovici, Bertillon’s system, forensics, Dušan Alimpić, anthropometry.

INTRODUCTION

For criminal offense to be regarded as resolved and proven it is necessary to determine facts through investigative and criminal proceeding by searching for positive answers on nine questions of criminalistics (what, where, when, how and why something happened; by what, with whom and against whom was the criminal offence committed and who is a perpetrator?). Answers to the last three questions require determining of identity or identification of an individual – primarily perpetrators of criminal offense, and sometimes of their accomplices and victims as well. A long history of police practice in determining the identity and registration of those categories of individuals was scientifically defined in the end of the 19th century by a French anthropologist Alphonse Bertillon (1853-1914), who is considered to be the father of forensics, scientific identification of individuals [1]. His scientific research resulted in a specific method of forensic identification and registration of individuals known as Bertillonage.

Practical application of Bertillonage initiated in Parisian Police in 1883 [2], while it was officially recognized at the First International Congress for Criminal Anthropology in Rome in 1885 [3]. By the end of the century Bertillonage was accepted and introduced in police and court practice in numerous countries, with Romania at the forefront. The application of Bertillonage in police prefecture in Bucharest commenced in 1892 [4], owing to prominent doctors of forensic medicine, criminologists and anthropologists Dr. Mina Minovici (1858-1933) and Dr. Nikolae Minovici (1868-1941). With professional assistance of the Romanian Police, and particularly of Minovici brothers, Bertillonage was introduced in the work on the Serbian Police in the beginning of the 20th century. Ever since, key innovations
in identification and registration of individuals ranged from fingerprinting method to contemporary methods of DNA (Deoxyribonucleic acid) analysis.

The subject of research, the results of which are presented in this essay, is determined with a question: what is the historical contribution of Minovici brothers to the introduction of Bertillonage in the police work of the Kingdom of Serbia and what were the effects of its implementation in the beginning of the 20th century? The scientific aim was to identify and describe contribution of Minovici brothers to the introduction of Bertillonage in the Serbian Police work, and analyse effects of its implementation in the Kingdom of Serbia.

CONCEPT, ORIGIN AND APPLICATION OF BERTILLONAGE IN THE WORLD

Bertillonage is the first forensic scientific method for identification and registration of individuals. It appeared in the period of creation of a new criminologist-anthropologist school that changed the world's perception of a crime, with particular emphasis on investigation of cause and consequence, preventive and repressive suppression and deterrence of crime, especially recidivism. Bertillonage stemmed from ten thousands of observations and measurements that Bertillon carried out in 1880 [5].

The task of Bertillonage is to determine the identity of unknown and known individuals – perpetrators, facilitators and victim in an investigative procedure. Bertillonage is based on a principle of unrepeatability of events in nature and society, i.e. non-existence of two or more exactly the same physical features. The Bertillon’s system includes: signaletic photography, anthropological description, anthropometric measuring and description with distinctive features (fingerprint was included later on). The most important part of Bertillonage are so-called “verbal portrait” (fr. portrait parles), created based on the said descriptions. Extraction of distinctive physical features of an individual, shown in a standardized manner presented with simple unified anthropometric vocabulary, could create quite an accurate “verbal portrait” of an individual, which was often more useful to investigative authorities than a regular photo. The aim of the verbal portrait is undoubtedly to ascertain the identity of an individual known to the police from earlier, and their practical application is particularly significant in cases of locating unknown individuals [6]. Data on perpetrators of criminal offences were systematically organized and written in specific anthropometric registers, according to precisely determined order of measurements. Bertillon composed a special dictionary of morphological terms describing some parts of human body and he made standardized nomenclature of abbreviations and conventional markings (anthropometric stenography) for data describing an individual, which were noted in registers. Classification of registers according to anthropometric measures facilitated data search, while standardization of content and form of registers enabled international data exchange.

Bertillon presented his method for identification of individuals on 1 October 1879, but officials from the Parisian Police discarded it. In 1883, when the leadership of the Parisian Police prefecture changed, practical application of Bertillonage in France commenced [2]. Subsequently, the new method was recognized at the First International Congress for Criminal Anthropology in Rome in 1885 [3].

Bertillonage was accepted rather early and it was introduced in many countries: Belgium, Switzerland, USA, most of South America countries, Tunisia, England, Roumania, Russia, Germany, Italy, Spain, Austria, Portugal [6].

APPLICATION OF BERTILLONAGE IN ROMANIA

Bertillonage was introduced in Romania in 1892, through the efforts of brothers Mina Minovici [7] and Nikolae Minovici and with support of then ruling authorities [4]. Mina Minovici, a doctor of forensic medicine, was named the first chief of Cathedra for Forensic Medicine at the Faculty of Medicine in Bucharest (1897) [8]. He studied Bertillonage during his stay at Alphonse Bertillon in Paris (1890). Upon his return to Bucharest (1892) he was supported by Romanian authorities to invest in the first European forensic institutional project [9]. According to Mina Minovic’s idea, the City Morgue was rearranged (1892) into the National Institute of Forensic Medicine, one of the first Institutes of Forensic Medicine in the world, [10] where, apart from forensic-medical expertise, researches from the field of criminal anthropology were carried out. The same year, Bertillonage was introduced in Romania. Assistant director of the Institute of Forensic Medicine and Anthropological School professor Nikolae Minovici was a chief of the Anthropometric Department in Bucharest [11]. Apart from the contribution he gave in the application of Bertillonage and training of numerous members from police and judicial authorities, Nikolae Minovici gave great scientific contribution to the study of hanging [11] as well. In that study he clarified differences in traces on human body caused by strangulation from those inflicted by suicidal hanging.

Minovici brothers received special acknowledgments for their work by Dr. Rudolph Archibald Reiss (1875-1929) [12], a founder of the Institute of Forensic Science (“Institut de police scientifique”) at the University of Lausanne (1909). Commendations for the work and organization of the Anthropometric Department in Bucharest Police were accentuated in professional literature in the end of the 19th century [7].

Minovici brothers were regular representatives
of Romania in international professional and scientific congresses. Nikolae Minovici shared his experience in practical application of Bertillonage in the Romanian Police work at the Congress of German police officers in Berlin on 2 July 1897 that was attended by the representative of the Kingdom of Serbia, Atanasije (Tasa) Milenković [4]. On that occasion, Minovici stated: that in three years from the introduction of Bertillonage, 8,000 anthropometric measurements was carried out; 11,000 francs [7] of budgetary means were regularly allocated for the Anthropometric Department; physician performed all the measuring as well as examination of an individual in order to determine the state of their body and soul; number of identified recidivists had increased and their number was fifty per year [4].

More detailed data on Bertillonage in Romania were presented by Dušan Alimpić, a student of the Anthropological School in Bucharest (1900) and future chief of the Anthropometric-police Department in Belgrade (1905-1908 and 1910-1913) and Belgrade city manager (1908-1910). In his report [13], submitted to the Minister of Interior Affairs, Alimpić highlighted that: Bertillonage was introduced in Romania in April 1892, mainly owing to a physician, a University professor and an anthropologist N. Minovici; in terms of successful application of Bertillonage, Romania is right behind France; only individuals sent with special act by investigative and police authorities to the Anthropological Department were measured, along with individuals banished from the country regardless of the nature of their guilt, generally known perpetrators and recidivists; of all measured individuals, only dangerous criminals and minors were photographed; data on measured individuals were noted in special registers classified in such a manner that search of all registers could be carried out in only a few minutes; from 1892 to 1900 the total of 9,871 individuals were measured, the third of which were foreigners; the Anthropological School was founded for training of police officers and agents in the application of Bertillonage; identification of individuals according to Bertillon’s system was executed by the Anthropometric Department within the competence of the Bucharest prefecture until 1895, when it transferred to the Ministry of Justice competence. Staff of the Anthropometric Department included a chief (Minovici), one commanding officer as a chief assistant, three officials and one photographer (Fig. 1) [13].

One half of material expenses of the Anthropometric Department was spent by Photography section. Apart from the main department, two outposts of the Anthropometric Department were formed (1899-1900): one in Braila (Romania) and the other in the Sanction Institution in Bucharest [13].

MinovicibrothersdrawAlimpić'specialattention to legal grounds for the introduction of Bertillonage, as almost all countries introduced Bertillonage following decisions of Ministers of Justice/Police, apart from Switzerland, which introduced Bertillonage with a special law. Upon decision of investigative judge, Service for identification of detainees was established according to anthropometric system. All detained individuals were taken to court buildings where they were measured. Every detainee was obliged to submit to measuring, and in case he declined, he was sentenced for disrespecting the law. Court and police departments were obliged to implement the said legal regulations [13].

Nikolae Minovici was one of advocates of forming the international alliance of anthropometric departments that would support and facilitate the work of international police. The Anthropometric Department in Romania exchanged data on suspicious individuals with similar departments from other European countries. The cooperation was based on mutual respect, good will and mutual benefit. Furthermore, an initiative was launched for this cooperation to become mandatory and international [13].

APPLICATION OF BERTILLONAGE IN SERBIA

In the end of the 19th century, the Serbian Police was planned to be reformed to resemble the police in developed European countries. Success of Bertillonage in the world instigated authorities in Serbia to base the planned reform of the Serbian Police on the introduction of a new scientific method. As a participant in the International Conference of Rome for the Social Defence against Anarchists held on November 24 and December 21, 1898, the Kingdom of Serbia accepted the Congress decision for Bertillonage to become mandatory [14]. To that end, it was necessary to create adequate conditions: professional staff, legal grounds, premises, equipment and financial means. The lack of professional staff was to be solved by sending Serbian Police officers abroad

![Figure 1. Staff of the Anthropometric Department in Bucharest. (Down on the right M. Minovici, next to him in a uniform D. Alimpić) [13].](image-url)
(Vienna and Paris) for training, where Bertillonage was already applied with great success. During a year-long training that took place in the period from 1897 to 1900, all of them were primarily tasked to study the work and organization of police there, while in terms of Bertillonage they gained only theoretical knowledge with no practical training, which was insufficient for a new method to be introduced in the Kingdom of Serbia.

Special interest in introducing Bertillonage in the Kingdom of Serbia was shown by mentioned Milenković, a chief of the Ministry of Internal Affairs of the Kingdom of Serbia (hereinafter the Ministry). He travelled to Germany, Austria and France on several occasions on his own expense to study the internal organization of police. After his encounter with N. Minovici in Berlin [4] he expressed criticism that: “the only countries that remained were Serbia and Turkey, which did not even hear of Bertillonage, let alone considered implementing it” [4].

In early 1900, a significant step forward was made for the introduction of Bertillonage. Upon proposal of Boža Marićanin, Belgrade city manager (1855-1921), Dorde Genčić Minister of Internal Affairs (1861-1938) delegated police officer Dušan Alimpić, to “commence studies in the institution aimed at researching anthropometric-police practice, called Bertillonage” [15] in Bucharest with N. Minovici. Obviously the encounter between Milenković and Nikolae Minovici in Berlin influenced the decision that training of Serbian policemen in the application of Bertillonage should take place in Romania.

Alimpić’s training in Bucharest lasted from February to October 1900 [15]. Respecting proposals and suggestions of N. Minovici, Dušan Alimpić resumed, upon his return to Belgrade in end October 1900, activities related to the introduction of Bertillonage but without support from the Serbian authorities [16]. Minister of Internal Affairs Dorde Genčić attributed more attention to reinforcing the Department for Confidential Police Affairs that was formed at 5 October 1899 [17] that to the introduction of Bertillonage.

In spite of insufficient support of authorities, activities related to the introduction of Bertillonage in the Serbian Police resumed. In his essay “Bertillonage and its practical application”, published in 12 parts in a Serbian journal “Policjanski glasnik” (“Police Gazette” hereinafter “Glasnik”) in 1901 [16], Alimpić presented potentials of Bertillonage to the professional public. In his essays, the author used not only the well-known professional work of Alphonse Bertillon, but work of Minovici brothers as well, such as: “Identificarea Antropometrică – Metoda Bertillon” by Dr. M. Minovici and “Scola Antropologica” by Dr. N. Minovici, Bucureşti (1900) [16].

Great contribution for the introduction of Bertillonage in Serbia was also given by a journalist Naum Dimitrijević (1858-1920). With his personal means, on 9 August 1897, he launched journal “Glasnik”. Dimitrijević was the owner and editor of the journal by 1901. By decision of the Minister of Internal Affairs, dated 28 July 1901 [18], editing of the journal was entrusted to redaction board of the Ministry. Apart from official statements of the Ministry, professional texts and discussions were published, which were significant for police officers and municipal authority.

Pictures of perpetrators of criminal offences were taken in photo atelier of the “Glasnik” and photos of wanted individuals were published in special columns labeled as: Persuits, From Police album, and Wanted. Published photos were not signaletic, as the Serbian Police did not have Bertillon’s camera in its possession and all photo shootings were made by photographer of the “Glasnik”. The first signaletic photo in the Kingdom of Serbia was published on 31 March 1901 in a column Persuits [19]. The photo was sent by the Romanian Police with a request to determine the identity of an individual arrested in Bucharest.

The “Glasnik” became a respectable professional magazine in other countries of the Balkans and it contributed to promotion of cooperation between Romanian and Serbian police. Special recognition to the journal came from the Romanian King Carol I, who awarded the “Glasnik” editor Naum Dimitrijević with IV row decoration of the Romanian Crown for merits related to the public security and neighbouring Kingdom of Romania [20].

Preparations that initiated in 1900 for the introduction of Bertillonage were completed four years later. After the shift of Obrenović dynasty on 28/29 May 1903, when royal dynasty Karadordević came to power, on 2 June 1903, a new constitution of the Kingdom of Serbia was enacted on 5 June 1903 [21], by which new state institutions were formed and preparations for the introduction of Bertillonage were once again intensified. The new King of Serbia Petar I Karadordević (1844-1921) visited the “Glasnik” premises on 3 June 1903. He was informed about preparations for founding of the Anthropometric-police Department according to Bertillonage (hereinafter Department) [22]. The Department was founded on 21 December 1904 by enactment of the “Law on measuring, description and identification of perpetrators” (hereinafter the Law) in the Ministry of Interior Affairs [23]. After Switzerland, Serbia became the second country in the world that regulated Bertillonage with primary legal act. The recommendation of Dr. Minovici communicated to Alimpić on regulation of the legal status of Bertillonage was thus adopted in the most rightful way. Professional staff of the Department, similar to Romanian Anthropometric Department included: two commanding officers, one of whom was named chief of the Section, two practitioners and a photographer. On 31 January 1905, Alimpić was named the first chief of the Department [24].

Duties of the Department stipulated by the Law were: to measure, describe, take photos according to
Bertillonage and keep records for all convicts, recidivists, gamblers and drifters; to take care of fugitives; to keep statistical records on crime trends and submit periodical reports to the Ministry. "Rules on Anthropometric-police Department" from 1 January 1905 [25] stipulated more precise provisions: on the work of the Department; on trainings within the Anthropometric-police Department; on editing and distribution of the gazette "Glasnik".

The Department officially started functioning on 1 February 1905, when the first anthropometric measurements of perpetrators [26] in the Kingdom of Serbia were made and first signaletic photos were published. Photos were taken in the "Glasnik" studio. The data on measured individuals were noted in records according to defined Bertillonage pattern and classified by measures and in alphabetical order in line with the determined practice. The Department was, inter alia, in charge of editing the "Glasnik" in which scientific discussions were published from the field of criminal law and criminal procedure and from criminalistics. By the Law, the "Glasnik" became (in 1904) a gazette of the Ministry and Dušan Alimpić became a chief editor. The financial means for material expenses of the Department and fees for the "Glasnik" collaborates were provided from proceeds of the magazine [25].

Intention of the Government was to implement Bertillonage throughout the country. The Law envisaged creating the Anthropometric sections in all police institutions with first instance courts. In August 1906, the Anthropometric-police Section in Požarevac was established as a part of the Department in Belgrade and "Rules on the Anthropometric-police Section in Požarevac town" were stipulated [27]. The Section in Požarevac carried out measuring and registration of all convicts in Požarevac prison.

Due to numerous insufficiencies, Bertillonage was discarded in many countries and fingerprinting was adopted as a simpler and more reliable method. In the Kingdom of Serbia, Bertillonage was not fully discarded after the introduction of fingerprinting (1911) [28]. In the war circumstances, i.e. the Balkan wars (1912-1913) and the First World War (1914-1918), in which Serbia suffered great casualties and destructions new scientific methods introduced in the work of police were abandoned and the Anthropometric-police Department stopped functioning.

RESULTS OF BERTILLONAGE APPLICATION IN THE KINGDOM OF SERBIA

To what extent has Bertillonage contributed to the reduction of criminality in the Kingdom of Serbia could be debated in a separate discussion. Great progress in detection and identification of perpetrators of criminal offences, particularly homicides, is evident. The said has been corroborated by statistical records on criminality trends in the Kingdom of Serbia [29].

Comparison of the number of executed (NE) and number of solved (NS) criminal offences, before and after the application of Bertillonage in the Kingdom of Serbia in the period 1889-1912, potentially shows that number of solved criminal offences increased significantly after the application of Bertillonage (1905). For instance, the efficiency of the Serbian Police in solving the most severe criminal offences – homicides, reached its peak. Table 1 shows that ratio between NE/NS by 1904 ranged from 33 to 81 %, with average efficiency of 60 % per year, while NE/NS ratio from 1905 ranged from 85 to 93 % with average efficiency of 90 % in solving homicides. As shown, the average police efficiency in solving homicides

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increased for 30%, which may be mainly attributed to the introduction of Bertillonage (Table 1).

CONCLUSION

Synthesis of research results brings about conclusions on the beginnings of the application of scientific methods in criminal investigation procedure in the Kingdom of Serbia in early 20th century. Police organizations in Europe were particularly focused on specific and scientifically based method of identification and registration of individuals Bertillonage. With insignificant lag behind developed European countries, Bertillonage became officially and formally a part of police reform in the Kingdom of Serbia. Substantial contribution to its introduction to the work of the Serbian Police was given by brothers Nikolae and Mina Minovici.

In the context of established international police cooperation between the Kingdom of Serbia and Romania, and with direct engagement of Minovici brothers, the first members of the Serbian Police completed professional trainings in the application of Bertillon's method in 1900. Owing to scientific-professional and advisory support of Minovici brothers for the decision of the Kingdom of Serbia to accept Bertillonage practice in its police work, reformed organization and work of the Serbian Police were significantly promoted in scientific-professional, formal-legal, information-operational, and preventive-repressive sense.

The work of the Serbian Police was advanced in scientific-professional sense as well with training of police officers in the application of Bertillonage and with introduction of that method in police practice. When a Law on measuring, description and identification of perpetrators was enacted (1904), Bertillonage became legally grounded, which upgraded police work in formal-legal sense as well. In information-operational sense, police work was advanced by founding, editing and publishing of the “Glasknik”, the first official journal of the Ministry of Interior. Positive results of advanced work of the Serbian Police were reflected in significant rise of percent of solved criminal offences and serious criminal offences with unknown perpetrator, and in decreased number of recidivists, all of which upgraded work of the Serbian Police in preventive-repressive sense.

In spite of the fact that Bertillonage was rather soon replaced with more simple fingerprinting method, its contribution to the conception and development of forensic science is undeniable. Minovici brothers and Serbian police officer Dušan Alimpić were the pioneers that introduced Bertillonage in the Kingdom of Serbia. Professional cooperation between them continued after the First World War and after re-opening of the Anthropometric-police Department in a newly formed country the Kingdom of Serbs, Croats and Slovenes.

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