

POLICE SCIENCES BETWEEN THEORY AND PRACTICE: AN EVALUATION OF SCIENTIFIC GROUNDS THROUGH THE PRISM OF THE CONSTITUENTS OF SCIENCE

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ABSTRACT

Purpose: This paper aims to conduct a theoretical analysis of the fundamental constituents of police sciences and assess their level of scientific grounds against the core elements that define any academic discipline.

Design/Methods/Approach: A systematic review of relevant literature was carried out and benchmarked against widely accepted standards of scientific rigor. Selected subfields of police sciences (police organization and tactics, police ethics, traffic safety from a policing perspective, police-criminalistics topography, and specialized physical education for law enforcement) were evaluated according to criteria such as research subject, methodology, terminology, theoretical framework, empirical basis, logical coherence, value system, institutional embedding, and societal context.

Findings: The analysis demonstrates that all considered disciplines within police sciences satisfy the essential requirements of a scientific field: they possess a clearly defined subject matter, employ valid research methods, develop specialized terminology and theoretical models, rely on empirical studies, exhibit coherent, logical structures, uphold professional values, enjoy institutional support, and address pertinent needs of the social environment.

Originality/Value: This study provides the first comprehensive theoretical evaluation of the scientific foundations of police sciences through a detailed examination of their constitutive elements. It establishes a robust basis for their equal recognition among academic disciplines and promotes enhancing police education, research, and practice.

Keywords: police science; scientific disciplines; scientific methodology; the constituents of science; scientific basis

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INTRODUCTION

The modern era is characterized by the rapid development of science and technology, which brings new, previously unimaginable security challenges to police forces around the world (Milojević & Janković, 2022). Crime utilizes scientific advances and sophisticated technologies, making police work increasingly complex and demanding (Banović & Amanović, 2022). At the same time, there is a growing need for the police themselves to be based on science, in order to organize the police more efficiently, apply effective tactics and respect high professional standards. This trend has led to the formation of a special field of police science, which deals with the study of the police as an institution and policing as a process, applying scientific methods and knowledge from multiple disciplines (Nagel & Vera, 2020; Milojević et al., 2025a; Milojević et al., 2025b).

Police sciences encompass a wide range of topics related to police activity – from the strategies and organisation of police services, through the tactics of police officers in the field, to forensic methods and technological tools, as well as the ethical and legal aspects of police conduct. Different scientific disciplines within police science are focused on specific segments of the field:

- Police ethics as a knowledge-theoretical discipline studying ethical principles in police work, value dilemmas and standards of professional behavior of police officers. As such, it contributes to increasing the abilities of police officers by completing their awareness of the close connection between professional service and morality, i.e. engagement that would maximally bring their service into line with the purpose of its humanistic and democratic-emancipatory mission. At the professional-official level, it contributes to strengthening the awareness of police officers about their moral duties and the need to improve their own moral habitus, thereby enhancing the quality and success of their work, which in turn manifests the ethical and humanistic immanence of the police service.
- Police Organization and Tactics which studies the organizational structure and function of the police in environmental conditions, to maximize the legality, effectiveness and efficiency of the police organization. It also deals with the planning and execution of police actions and operations in accordance with the concept of safe community, in partnership and on an equal footing, according to which the police in each country and other law enforcement agencies have a multi-agency approach to fighting crime, protecting public order, personal and property security of citizens and in response to current security challenges, risks and threats;
- Police and Criminal Topography as a theoretical and practical scientific discipline that studies the fundamental properties of graphic, photographic, digital and other geotopographic materials, as well as the methods of determining the values of horizontal and vertical sizes of elements of geospatial content, as the key determinants of tactical, fire, criminalistic-operational and technical measures, activities and actions in police proceedings, and their simultaneous graphic



representation in the form of a sketch, panoramas, schemes, plans and maps in the field or thematic-cartographic modelling of the peculiarities of manifestations of forms of crime within the bureau.

- Traffic safety (social aspect) which focuses on the role of the police in improving road safety, preventing traffic accidents, and controlling and regulating traffic. It is a theoretical and empirical scientific discipline that studies the interdependence between traffic and social processes, on the one hand, and the adverse effects and consequences of traffic, on the other. It researches and attempts to discover the laws governing the occurrence of adverse effects and consequences of traffic, to optimize the traffic process and mitigate these effects and consequences by addressing the social aspects of the problem.
- Special Physical Education for the Police (SFO) refers to the physical preparation of police officers and the specific skills (e.g. martial arts, dexterity, and fitness) needed to perform police tasks. Namely, SFO deals with the study of anthropomorphometric characteristics, physical abilities, and skills necessary for the professional competence of police officers, security guards, and rescue services. SFO has been developed in the field of physical education and sports, aiming to improve professional competence through the optimization of basic and specific physical abilities, cognitive characteristics, and emotional resilience, with effective adaptation to professional challenges. In addition to increasing work efficiency, the task of the SFO is to develop appropriate lifestyle habits that contribute to maintaining a healthy status during the working career.

It is crucial to note that each of these disciplines aims to produce science-based knowledge about relevant phenomena, processes, and techniques, with the ultimate goal of enhancing police practice and citizen safety.

However, although police science in the world has long been developed within academic and research institutions, it is not always treated on an equal footing with “traditional” scientific fields. In the Republic of Serbia, for example, police sciences are not yet formally recognized in the official classification of scientific fields, even though they have existed *de facto* for decades in educational and scientific institutions of the police (Banović & Amanović, 2017; Nagel&Vera, 2020; Banović & Amanović, 2022; Milojević et al., 2025a; Milojević et al., 2025b). This necessitates a clear articulation of the scientific basis of police science, enabling it to achieve its well-deserved status in the scientific community.

The main research question of this paper is whether the scientific disciplines of police science meet the criteria of science that are common for other scientific disciplines. In other words, the goal is to determine whether the disciplines of police science possess all those constituents that characterize a field as scientific. According to classical understandings in the methodology of science, such constituents include a clear object of study, a developed research methodology, special terminology, a built theoretical system based on an empirical basis, an appropriate logical structure of theoretical assumptions, an inherent value system, an institutionalized framework of action, rootedness in the social context and the fulfilment of an educational function (education of new personnel) (Milašinović & Milojević, 2016). The following sections discuss each of these elements in detail within the context of police science.

The theoretical and practical significance of this paper is reflected in its provision of a systematic overview of the scientific foundations of police disciplines. This contributes to the integration of knowledge developed in the police context into a broader body of science, as well as to advocating for the equal treatment of police science alongside other scientific fields. If their scientific validity is proven, it creates a basis for further strengthening of the police education and research, as well as for formal institutional recognition of police science (e.g. through the introduction of a specific scientific field into the official classification, as proposed in the literature (Banović & Amanović, 2022; Milojević et al.,



2025a; Milojević et al., 2025b). Additionally, emphasizing the scientific dimension of police skills and knowledge can enhance everyday police work by applying research results and theoretical knowledge.

APPROACH TO RESEARCH: METHODOLOGICAL FOUNDATIONS AND ANALYTICAL CRITERIA

The conducted research has the character of a theoretical and methodological analysis based on the study of the available literature. A qualitative approach has been applied, which includes: (1) analysis of the content of scientific and professional-methodological papers in the field of police sciences and general methodology of science, and (2) comparative analysis of the characteristics of police disciplines in relation to generally accepted criteria of science.

In particular, a list of ten constituents of science was used as an analytical framework: subject, methodology, terminology, theoretical system, empirical basis, logical structure, value system, institutional framework, social context and educational function. This list is derived based on methodological guidelines in science and is presented in the introduction of the paper. Each of these elements is operationalized through a set of questions: e.g. for the subject of study – what is the basic object of research of a given discipline; for methodology – what scientific methods are used and developed; for terminology – whether there is an established professional language and glossary; etc., (Milašinović & Milojević, 2016). Based on these questions, an evaluation of the situation in police science was carried out, supported by citations and findings from the literature.

The data sources included relevant scientific articles and monographs published in the last 25 years (approximately 2000–2025), ensuring that the considerations are up-to-date. Special attention is paid to the works of authors from the region (Serbia, Western Balkans region) who deal with the development and status of police science (e.g. Milašinović, Milojević and Milojković, Banović and Amanović, Kešetović et al.), but international sources in English who treat the concept of police science (e.g. Bruno, 1989; Buturac & Solomun, 2013; Wood, D., et al., 2017; Nagel & Vera, 2020). This enables us to examine both global trends and the local context.

It should be emphasized that the research method is predominantly descriptive-analytical and comparative. No original empirical research has been conducted for this paper. Instead, we have relied on already published empirical studies and meta-analyses as evidence of the existence of an empirical basis in police science. During the analysis, the historical method was also employed in the form of a brief review of the genesis of police science to gain a more complete understanding of its current status. However, the focus of the paper remains on contemporary theoretical and methodological characteristics. By combining these methodological approaches, the authors aimed to objectively and comprehensively evaluate the scientific foundation of police disciplines.

SYSTEMATIC FINDINGS ON THE SCIENTIFIC STRUCTURE OF POLICE DISCIPLINES

Object of study

The object of study of a scientific discipline is the set of phenomena, processes, or entities that it investigates. The establishment of a clear and defined object of study is the first step in the constitution of any science. For example, the subject of biology encompasses living organisms and life processes;



the subject of economics involves economic relations and activities; the subject of law pertains to legal norms and order. Therefore, for police science to be considered a scientific discipline, it must have a clearly defined object of research.

In the case of police science, the subject of study is relatively broad, yet determined: it encompasses all relevant phenomena related to the police and their work. Banović and Amanović (2022) explicitly state that the subject of police science encompasses police institutions (systems), crime, police affairs, police personnel, the effects of police work, and methodology for researching police phenomena. Such a definition of the subject indicates that police sciences focus on the organization and functioning of the police (institutions, personnel, jobs), as well as on the phenomena of crime to which the police respond, and on the results or efficiency of police activities. It is also significant that the methodology of researching police phenomena is introduced into the subject, which means that police sciences reflexively study their own methods of work.

Narrowly speaking, each discipline within police science has its own specific focus area, as follows:

- Police ethics has as its subject of research the ethical dimension of the police service in a modern democratic society. It represents a general and organized ethical thinking and knowledge of the moral dimension of professional practice in the police domain. Knowledge endeavor within its framework is manifested as: ethical observation, description, explanation, evaluation, and recommendation of specific professional morality of the police service (work ethic), as well as solving dilemmas in police work.
- The organization and tactics of the police for the subject of the research have the structure (strategic, coordinating and tactical level) and function (management and execution) of the police in interaction with its environment, and investigates the most optimal tactical procedures in maintaining public order and peace, preventing and combating crime, etc.
- The Police and Criminal Topography subject of the research is analog and digital geodetic plans, topographic and photo maps, as well as maps of crime and other police thematic maps that belong to the group of social or socio-economic thematic maps, as its specific theme, as well as ways of digital cartographic visualization, geospatial, temporal and purposeful variability of crime and purposeful use sources of necessary geospatial data in the decision support system in all conditions of police interventions;
- Traffic safety (social aspect) has as its subject of research the interdependence between traffic and social processes, on the one hand, and adverse effects and consequences of traffic, on the other, i.e., it investigates the laws of the occurrence of adverse effects and consequences of traffic, intending to optimize the traffic process and reduce negative impacts on traffic safety through the research of the impact of four basic factors: driver – vehicle – road – environment (e.g., human behaviour, abilities and skills of the driver, technical specifications of the vehicle, characteristics of the social environment, regulations, police coercion, etc.).
- Special Physical Education for the Police, as part of its subject of research, has the development, implementation and evaluation of educational programs, as well as techniques and tactics that contribute to the effective resolution of problem situations of escape, self-harm, resistance and attack. Additionally, SFO is involved in the selection and analysis of cause-and-effect relationships between various cognitive and conative factors, physical abilities, and the study of anthropometric characteristics and specific aspects of health status.

Regardless of this diversity, all these disciplines share a common link – they study aspects of police activity as a specific social mechanism for maintaining public order, enforcing laws and protecting the security of citizens. Thus, a unique broader field of police science is police activity and phenomena related to it.



It is essential to note that the subject of police science is multidimensional and closely intertwined with the fields of other social sciences and the Humanities. Crime, as a social phenomenon, is also studied in sociology, criminology, psychology, and jurisprudence, among other fields. However, the specificity of police science lies in its examination of these phenomena from the perspective of police practice and function. The focus is on the role of the police in preventing and suppressing crime, as well as maintaining security. According to Milašinović and Milojević (2016), in studying these phenomena, police scientists integrate knowledge from several other sciences, applying it to their subject. This means that police science “borrows” theories and methods from sociology, criminology, psychology, law, forensics, computer science, and even technical sciences, but adapts and directs them towards solving police problems. Such a multidisciplinary approach allows the subject of police science to be viewed more fully, from several angles, thus enriching the knowledge itself within other areas from which theories and methods are “borrowed”.

We can conclude that police science undoubtedly has a clearly defined object of research and that is the police and everything related to them. This thematic area is specific enough (focused on the police system and its activities) and yet broad enough to encompass various phenomena (from the organization of the service to the behavior of individuals, from local security to global trends in crime). This fulfils the first condition of science - the subject of police science is determined and socially relevant. This societal relevance is reflected in the fact that issues of public safety, the rule of law and the fight against crime are of fundamental importance to society, which makes the subject of police science not only clearly delineated, but also worthy of scientific study.

METHODOLOGY

Another key constituent of science is methodology – a set of scientific methods and procedures that the discipline employs to acquire new knowledge. Scientific methodology implies systematic and objective repeatability and verifiability in the collection and analysis of data. For the classical sciences, such as physics or biology, the methodology is strictly defined (experiments, observations, statistical analyses). The question arises: to what extent do police scientists apply scientific methods in their study of their subject?

The answer is yes – police science has developed its own research methodology over the last few decades, relying on the methodologies of the parent disciplines from which it draws knowledge. Modern technologies and special methods for collecting data and combating security threats are increasingly used in the operational work of the police (Milojković & Petrović, 2019). For example, geospatial analysis of the distribution of emerging forms of crime, aided by geographic information systems (GIS), is used to map crime hotspots, address location issues, and plan proactive police action. Statistical models are applied to predict criminal trends; forensic laboratory methods are used to collect evidence at the scene of a crime; psychological testing and sociological research are used to study the behavior of criminals and the community. All of these methods are actually scientific methods adapted to the specific needs of police research.

Academic institutions and research centres related to the police are increasingly functioning like classical scientific institutes. Alimpić (2018) notes that analytical and strategic services in the police, which are responsible for police development, are becoming increasingly similar to scientific institutes in terms of methodology and work approach. They employ scientific approaches – collecting data, formulating hypotheses (e.g., about the causes of a specific type of crime), testing different measures (e.g., pilot projects), and evaluating the outcomes. Such an approach clearly reflects the application of the scientific method in the police domain. In addition, there is a growing “evidence-based” policing



movement worldwide that emphasizes that police tactics and strategies should be based on empirical research and evidence of effectiveness, rather than intuition or tradition (Farrington et al., 2002; Lum & Koper, 2017; Pisa & Welsh, 2022). In the professional education and training of police officers globally, the scientific method is becoming the leading approach, meaning that police officers are trained to think critically and in an exploratory way, using data and analysis in decision-making (Bayley, 1994; Braga & Tucker, 2019).

Police science does not rely on a single method, but on a plurality of methods. Since the subject is complex and multidisciplinary, the methodology includes: qualitative methods (e.g., interviews with police officers and citizens, observation of police work), quantitative methods (statistical analyses of crime, surveys on public attitudes), experimental approaches (e.g., controlled experiments in the community – testing different models of patrolling and comparing results), action research (where researchers and police jointly implement and evaluate a specific intervention) and more. For example, one of the methodologies that has emerged is the concept of “embedded criminologist” – hiring criminologists as researchers within police departments to continuously collect and analyze data on crime problems (Braga & Davis, 2014). Such an approach enables the literal incorporation of scientific knowledge into everyday police practice, allowing for the solution of problems based on the study of facts rather than relying solely on experience.

It is also important to note that police science develops its own methods tailored to its needs. For example, the method of crime analysis is specific to the police sector – it is the application of analytical techniques to identify crime patterns and propose proactive measures. Profiling offenders is also a method developed by experts in psychology, geoinformation sciences and police practice. Furthermore, police science is increasingly utilizing simulation techniques (computer simulations of scenarios), operational research (the application of mathematical models to optimize patrol routes or incident response, thereby shortening response times), and other methods. Special indicators and metrics are being developed to measure the success of police activities (e.g., community safety indices, indicators of public trust in the police) – all of which belong to the methodological instruments of discipline.

As a confirmation that the methodology of police science is scientific, we can point to a large number of research studies published in recent years that use rigorous methods. For example, randomized controlled trials (RCT experiments) have been conducted in the field of patrolling “crime hotspots”, where scientists and police collaborated to test the effect of increased police presence in selected micro-locations and to determine a significant reduction in crime in these zones (see e.g., Weisburd et al., 2016). Likewise, meta-analyses of multiple studies (Braga et al., 2019) have provided a synthesis of evidence used for the work in policing tactics (such as problem-oriented policing or community-based policing). All this testifies to the fact that police science actively applies modern scientific methodology and contributes to the scientific base.

In short, the methodology of police science is scientific, systematic and diverse. It not only uses the methods of other social sciences, but also develops its own specific methodological approaches in accordance with the nature of police phenomena (Milašinović & Milojević, 2016). Thus, it meets the second important criterion of science – reliable and verifiable methods for generating knowledge.

TERMINOLOGY

Gradually, each scientific discipline has developed its own professional language – a set of terms and definitions that precisely describe phenomena of interest. The development of terminology is a sign of a science maturity: concepts must be clearly defined, unambiguous within the context of the disci-



pline, and generally accepted among experts in order for effective communication to occur. In this regard, the question may arise whether police science has a specialized terminology or relies exclusively on the terminology of its parent disciplines (such as law and criminology).

Police science employs a significant amount of terminology from other fields – for example, terms from criminal law (such as crime, investigation, and evidence), terms from security studies (security situation, threat, risk), as well as general sociological terms (social control, deviance, and community). However, during the development of police practice and theory, many specific terms have emerged that hold a special meaning within the police context.

Some of the concepts that form the core of the terminology of police science are, for example: police powers (a set of legal powers entrusted to the police, defined explicitly in police laws), the use of proportionate force, the maintenance of public order and peace, criminal processing (the procedure for gathering information and evidence from the moment of discovery of the act until the indictment), operational tactics, police intelligence model, preventive visit, critical infrastructure (in a security context), forensic identification, professional deviation (in terms of police corruption or overstepping of authority), etc. These terms are part of the everyday vocabulary of police professionals. However, they are also defined and explained in textbooks and manuals, which means that they have the status of professional terms.

A good indicator of the development of terminology is the existence of textbooks, dictionaries, and encyclopaedias dedicated to the field of police science. In the 1990s, the *Encyclopaedia of Police Science* (edited by W. G. Bailey) was published in English, which systematized the terms and concepts relevant to policing in several volumes. Since then, the terminology has been further enriched, especially in the areas of new technologies (e.g., cybercrime and digital forensics are now standard terms, while it was not the case before). Additionally, professional journals and conferences in the region frequently present papers that introduce new terms or discuss definitions of existing ones.

In Serbian, the terminology of police science has primarily developed in parallel with the development of the police service and education. Terms such as criminal tactics, situational plan (in terms of operational action planning), record-keeping (in the context of police databases), forensic analytics, etc., are now part of the standard vocabulary. There is an effort to unify terminology through the development of curricula and publications. For example, the University of Criminal Investigation and Police Studies in Belgrade uses textbooks in which each of these terms is precisely defined for students, thus building a common understanding of the terms among future professionals.

Another aspect of terminology is the existence of acronyms and codes within police practice (e.g., “BOLO” – Be on the Lookout, an international signal; or domestic abbreviations such as “KD” for a criminal offence, “MUP” for the Ministry of the Interior, etc.). These abbreviations and jargon are also part of broader police studies because they reflect the specific culture of the profession. The scientific approach seeks to introduce standardization here as well – e.g., by defining standard 10-codes in police radio communications, which initially originated from practice but was later analyzed and rationalized by research for improved communication.

In conclusion, police science has developed a recognisable professional vocabulary over time. It overlaps in part with the terminology of other disciplines (especially law, security, and forensics), but it also has its own peculiarities. The terminology is supported through teaching literature and scientific papers, where authors strive to define each term they use precisely. This means that the third criterion of science is also met – police science speaks “its own language” that enables precise scientific communication. Of course, the development of terminology is an ongoing process, primarily as new phenomena (such as high-tech crime), necessitate the introduction of new terms; this is true of any



existing science. It is essential to have a solid terminological basis that distinguishes this area from general speech and makes it professional.

THEORETICAL SYSTEM

A theoretical system is a set of theories, conceptual frameworks, and models that explain phenomena within the object of study of a science. A developed theoretical system means that the discipline contains not only a bunch of data, but also general principles, laws, and hypotheses that connect and explain those data. In the classical sciences, examples include Newton's laws of motion in physics, the theory of evolution in biology, and theories of personality in psychology, among others. In the domain of police sciences, the question of the theoretical system is fascinating because it is an applied science close to practice. What kinds of theories exist in police science?

Contrary to a perhaps popular belief that policing is more of a practical skill than a theoretical science, a significant body of theoretical knowledge about police and police work has accumulated over the past few decades. Firstly, theories of police organization and action have been developed. One of the most well-known is the community policing theory, which conceptually explains that the police achieve the best results when they work with the community, build trust, and solve problems in the neighbourhood together. This theory, supported by empirical studies, has changed the paradigm of policing in many countries since the 1980s (Palmiotto, 2011). Furthermore, there is the theory of problem-oriented policing, developed by Hermann Goldstein, which posits that the police should proactively identify the root causes of a problem (e.g., why fights frequently occur in a particular location) and address those causes, rather than responding only to individual incidents.

Various criminal theories have also been developed, which fall partly under criminology and partly are used directly in police practice. For example, Wilson and Kelling's *Broken Windows Theory* suggests that visible signs of disorder and petty crime, if left unaddressed, encourage more serious crime. This theoretical framework has directly influenced policing strategies (e.g., the so-called zero-tolerance approach to disorder). Furthermore, the theory of routine activity (Cohen and Felson) explains the emergence of crime through three elements (motivated offender, convenient target, absence of a law enforcement officer), which gives the police a theoretical model for prevention – e.g., increasing the “guardian of order” (police presence) in a particular place reduces the probability of crime (Goldstein, 1979).

In addition to theories that explain crime and police response, there are also theoretical models within police organizations themselves. The bureaucratic and military model of the police (the traditional model of hierarchical organization) versus the decentralized, standard model is discussed in the theory of police organization (Reiner, 2010). Police subculture theory examines the shared values, norms, and patterns of behavior among police officers and how these affect their perception of work and the public (e.g., “us vs. them” mentality) (Kesić & Zekavica, 2019). The theory of legitimacy and procedural justice (Tyler, 1990) introduces the concept that the way police treat citizens affects the perception of the government's legitimacy and the willingness of citizens to cooperate, which has become an important theoretical basis for training police officers in communication and respect for citizens.

Within the framework of police science, theoretical concepts are sometimes formulated through the modelling of specific processes. For example, models that describe the escalation of violence in conflicts are emerging – when and how a police officer should apply a higher level of force; decision-making models in emergencies; profiling models (based on theoretical assumptions about the relationships between personality and behavior patterns of criminals, as well as the mean distance from the



place of living or work to the place where the crime was committed). Such models, although applied, are based on theoretical assumptions that can be tested.

Police sciences must not exist in a theoretical vacuum – they rely on theories of parent disciplines (criminological theories on the aetiology and phenomenology of manifestations of crime, sociological theories of deviance, psychological theories of aggression, etc.). However, they provide them with a special context of application and often develop sub-theories tailored to the police domain. For example, while criminology generally examines the causes of crime, police science focuses on theories of crime control – that is, not what causes crime (which is more a matter of criminology), but how to effectively suppress and control it (a specific issue of interest to the police). In this sense, it can be said that police science represents an applied theoretical synthesis of various fields, directed towards the practical goal of maintaining order and security.

Some authors refer to police sciences as “applied science”, implying that they do not deal with “pure theory” for its own sake, but rather that the theoretical system exists in service of practical problems (Milojević & Janković, 2022). However, even as applied science, they have theories – only these theories are often immediately associated with the possibility of implementation. Nagel and Vera (2020) define police science as the scientific study of the police as an institution and policing as a process, which, as an applied discipline, combines methods and subjects from related fields. This definition presupposes that these studies reveal general principles, i.e., theoretical outcomes.

It should be noted that specific segments of police science are at different degrees of theoretical development. Some fields, such as forensic sciences, have a significantly developed theoretical apparatus (chemical theories of reactions, genetic theories in DNA analysis, mathematical models of ballistics, etc.). Others, such as operational tactics, rely more on practices and experiential “strategems”; however, theoretical generalizations are also introduced here (e.g., situational awareness tactics – a theoretical framework for how a police officer perceives and reacts to threats in the environment). Over time, as empirical data are collected, these segments also acquire more and more theoretical features (Milojević & Janković, 2022).

We can conclude that police science has a theoretical system built upon a series of partial theories and models, either taken and adapted from other sciences or developed initially through research specific to the police sector. This theoretical system, although perhaps heterogeneous, provides a conceptual framework for understanding the phenomena with which the police deal. Therefore, the condition of the existence of a theoretical basis is fulfilled – police disciplines are not a mere collection of empirical recipes, but also possess abstract knowledge, principles and laws that can be taught, critically considered, and further developed by scientific work.

EMPIRICAL BASIS

The empirical basis of science refers to the fact that its claims and theories rely on factual, observed data and research results, rather than just speculation or dogma. Scientific knowledge must be tested through experience, which can be achieved through experiments, observations, case studies, statistical analyses, or other forms of research. For police science, this means that the effectiveness of methods and the veracity of theories about crime and policing should be confirmed by actual data from practice or research.

In the previous section on methodology, it has already been suggested that police science attaches increasing importance to empirical studies. Today, there is an abundance of data collected by the police (official crime statistics, records of interventions, survey data on the perception of security, video



recordings of cameras, etc.), which scientific methods can analyze. Researchers at universities and institutes are also conducting independent research on various aspects of policing.

For example, numerous studies worldwide have investigated the impact of various policing strategies on crime rates and public trust. An example of an empirical basis is the evaluation of the “Hot Spots Policing” program. The research has repeatedly shown (including systematic reviews in recent years) that focusing police patrols on small geographic areas with high crime rates leads to a measurable reduction in incidents in those areas, without significant spillovers of crime into neighbourhoods (Braga & Weisburd, 2010). These conclusions did not arise by accident – they were derived from carefully designed field experiments and quasi-experiments, which means that practical police tactics have received empirical confirmation.

Furthermore, crime prevention programs, such as DARE (Drug Abuse Resistance Education) or various forms of community policing, have also been evaluated through empirical studies. Some have shown less success, which is also a valuable finding – scientific knowledge of what does not work allows the police to abandon ineffective practices. An example of this is the introduction of mandatory counselling interviews with petty offenders: studies have shown that this has no significant effect on crime recovery rates, and some police have redirected resources to more effective measures (Banton, 1964).

Empirical research in police science is not limited to quantitative measurements. There are also qualitative studies – e.g., in-depth research of cases of corruption in the police through interviews and analysis of documents, which provide insight into the causes and ways of preventing and combating this phenomenon. Studies of community perception through focus groups have contributed to understanding how different communities perceive the police and what influences their willingness to cooperate or report crimes. All of these are empirically collected data (from participants’ experiences or through observation), which are then incorporated into the knowledge of police science (Bittner, 1970).

In Serbia and the region, there is also a particular tradition of empirical research in the police sector. For example, the Faculty of Security in Belgrade and the University of Criminal Investigation and Police Studies have conducted surveys among police officers over the years to assess their training needs, as well as among citizens to gauge their sense of security. The results of these studies were used to adapt training curricula and strategies for fieldwork (Kešetović, Banović, & Radović, 2017). The research conducted by Kešetović et al. (2017) in the context of police education in the face of new challenges involved collecting data on new security threats and analyzing how existing training programs address them, thereby providing an empirical basis for training improvement proposals.

Furthermore, an example of the evaluation of the use of body cameras in the police can be mentioned, which is relatively new: in some police departments, experiments have been conducted where some patrols are equipped with cameras, and some are not, to examine whether this affects the reduction of citizens’ complaints and the reduction of the use of police force. The results of such studies (some published in 2018–2020) are mixed, but they are valuable as an empirical contribution to understanding the effects of technology on policing (Milidragović & Milić, 2024).

All of the above shows that police science is deeply grounded in empiricism. There is an abundant and growing corpus of data and research findings that support (or disprove) theories and methods in policing. This corpus is integrated into teaching and theory – for example, when students are taught about a tactic, case studies and statistics on its effectiveness are often cited. This is the essence of the scientific approach: claims such as “this method is the best” must be supported by evidence, not just tradition. Globally, the trend of “evidence-based policing” promotes precisely the culture of evidence-based decision-making within police organizations (Lum, Koper & Telep, 2011; Braga & Tucker, 2019; Pisa & Welsh, 2022).



With all this in mind, it can be affirmed that there is an inherent empirical component to police science. They do not survive solely on theoretical assumptions; instead, they continually rely on practical indicators from real-world experiences and research to build and refine their knowledge. This also fulfils the criterion of science – the existence of a strong connection with empiricism, which allows verification to confirm or falsify claims, just as in other scientific disciplines.

LOGICAL STRUCTURE

The logical structure of science is understood as the internal organization of knowledge within that discipline – how the concepts are related, whether there is a hierarchy of principles, whether the conclusions drawn are logically consistent with the premises, how the subdisciplines are classified, and so on. The logical structure of a science is often reflected in its systematization: division into branches, fields and disciplines, which are logically related and non-contradictory. Thus, for example, medicine has a logical structure, divided into anatomy, physiology, pathology, clinical medicine, and so on, where each branch has its place and all together form a coherent whole.

When discussing police science, it is worth noting that it is also internally divided into specific areas and disciplines, thereby forming a structured body of knowledge. One of the earlier approaches (Milošević & Mudrić, 2001) proposed that police sciences be divided into systemic (basic), special, and applied disciplines according to their general subject and mode of study. Systemic or basic would refer to the general principles of the police system (e.g., police management, theory of police organization); special to certain areas of police activity (e.g., traffic, counter-narcotics, public order); applied to multidisciplinary fields that link police knowledge with other scientific fields (e.g., forensics, which links police and natural sciences, or security policy, which links police and political science). Such a division points to a logical framework: there is a clear distinction between general theoretical knowledge (basic), concrete practical fields (special) and integrative approaches (applied).

More contemporary considerations of the structure of police science (Milojević & Janković, 2022) also propose a systematization of the discipline. Milojević and Janković contributed to the definition of the structure of police science, outlining a set of disciplines and their interrelationships. The essence is to identify the main areas (broader units of knowledge) from which narrower subjects or subjects of study are then branched out. For example, “Police Traffic Safety” can be listed as the central area, within which there are narrower subjects, such as traffic control and regulation, traffic accident investigations, and traffic prevention. Similarly, the main field of “Criminology” may include criminal investigations, tactics, methods, operations, techniques, and analytics, as well as crime prevention, crime mapping, criminal profiling, criminal strategy, criminal psychology, and criminal victimology, among others.

Each discipline must have well-defined boundaries and clear connections with other disciplines in order to prevent overlap and confusion. In police science, this concept is still being refined, but its tendencies are clear. Banović and Amanović (2022) note that the constitution of police sciences as a distinct scientific field and their integration into the education system facilitate a clear demarcation of which science studies which police phenomena and which sciences form the basis of a particular profile. In other words, if we were to form a formal structure, we would know, for example, that *forensics* belongs to the natural-technical basis of police science. In contrast, *police psychology* has a foothold in the social sciences – but both are part of an integrated system of police science. This establishes a logical schedule that clarifies the discipline and makes it easier to understand.

The internal logic of police science is also reflected in the fact that there is a vertical connection between general principles and specific applications (Milošević & Milojević, 2000). For example, the



general principle “the police act in accordance with the law and ethics” logically underpins all sub-disciplines – from training (where ethics is taught) to practical procedures (where rules on the use of force reflect ethical and legal principles). If a subdiscipline were to argue for the opposite (e.g., that it is permissible to break the law for a higher purpose), there would be a logical inconsistency within the science itself. Fortunately, police science avoids such contradictions because it is based on a unique value framework.

Additionally, logical consistency is reflected in the fact that new theories and models proposed must be in accordance with already proven knowledge or clearly indicate how they enhance or modify it. For example, suppose a new model of patrol organization emerges. In that case, it must take into account pre-existing knowledge about the effects of patrols (empirical basis) and theoretical framework (e.g., routine activity theory) in order to be accepted. Otherwise, it would remain isolated and disconnected, which is rarely accepted by the scientific community. Currently, there are integration trends in police science – for example, linking community policing theories and counterterrorism strategies into a single model of how local policing can contribute to terrorism prevention, which presents a logical challenge (two seemingly different areas are merged). However, theoretical models are adapting and finding common denominators (e.g., building trust in the community as a means of preventing radicalization) (Perry et al., 2013).

A reflection of the logical structure is also presented in the curriculum of police education. Let us look into the curricula at higher education institutions for police education. We can see that the subjects are arranged in a logical sequence: first the basic concepts are taught (e.g., Introduction to Security, Basics of Criminology), then there are general theoretical subjects (Criminology, Penology, and Police Management), then specialist subjects (Methodology of Investigation of Certain Criminal Offences, Traffic Education, Public Order), and finally practical skills and applications (Practice, exercises, and scenarios). This arrangement is not accidental – it reflects how knowledge is structured from the general to the specific and from the theoretical to the applied. If the curriculum is well-designed, students make progress through the building blocks of the discipline and gain a holistic understanding. This is precisely one of the goals of formalizing police science – to systematize and logically organize its content, which is a prerequisite for the quality transfer of knowledge (Milošević & Subošić, 2010).

We can say, therefore, that the police sciences build their logical structure through the definition of narrow disciplines and their mutual relations, through the articulation of general principles that permeate the entire field, and through the organization of the educational process. While this structure may still be in the evolution phase (which is natural for a relatively young academic field), its outlines are clear and consistent. This also fulfils the criterion of logical order – knowledge within police science is not chaotic or contradictory. However, it can be presented as an ordered whole with substructures that together form a coherent system.

VALUE SYSTEM

Science does not exist in a vacuum of value neutrality – especially when it comes to the social sciences and practically applied disciplines. The value system of a discipline refers to the set of ethical principles and values that that discipline implies or promotes. For example, in medicine, the value of preserving life and “not harm” (the Hippocratic Oath) is embedded. In the legal sciences, values are justice and legality. In police science, due to the nature of police work, the value component is essential. Policing is empowered to use force and restrict the rights of individuals for the sake of the common good, which is inherently sensitive and must be guided by strong ethical principles.



Police ethics is the study of the moral aspects of policing. Namely, social goals, by recommending specific values and setting appropriate norms, are seen as influencing relevant behaviors that, through their adaptation, contribute to the integration of the police into society. Police ethics contribute to enhancing the capabilities of police officers by complementing their awareness of the close relationship between professional service and morality, that is, engagement that maximally aligns their service with the purpose of its humanistic and democratic-emancipatory mission. Therefore, police ethics must define codes of conduct for police officers, addressing the dilemmas they face (e.g., conflict of loyalty and legality, use of discretionary decision-making, treatment of vulnerable groups, and suppression of corruption within their own ranks). The existence and development of police ethics is a clear indication that police science has a built-in value system. This system is based primarily on the values of the rule of law, protection of human rights and freedoms, integrity, impartiality and service to the community. As stated by Loftus (2010), an integral part of police science also encompasses topics such as ethics, respect for human rights and freedoms, and the methodology for investigating these aspects. This means that ethical issues are not only a practical code, but also the subject of scientific research within the field (through sociological and psychological studies of professional ethics, case studies, etc.).

Historically, the development of modern police forces has also established ethical standards – from the Peel Principles of Policing of 1829 (which defined that the primary mission of the police is to prevent and combat crime and maintain order with public cooperation, that the police must have public trust, that the use of force comes as a last resort, etc.), to modern international documents such as the United Nations Code of Conduct for Law Enforcement Officers (1979), which globally prescribes basic ethical norms (legality, proportionality, humanity). All these values are integrated into the teaching at police academies, forming a pillar of police professionalization.

Police science, as an academic field, promotes these values through research and education. One of the goals defined in the literature is for the scientific education of police officers to lead to a higher level of professional awareness and ethics (Crank, 2007). For example, the study of human rights violations during police interventions (which would be among the adverse outcomes) leads to the development of training to prevent this, which is a direct combination of a value system and scientific knowledge. Likewise, studies of the police subculture that have revealed phenomena such as the “blue wall of silence” (the tendency of police officers to protect their colleagues even when they make mistakes) have a value implication: they have pointed to the need to suppress this phenomenon through ethical training and a system of accountability in favor of the values of responsibility and honesty (Westmarland, 2005).

The very fact that Police Ethics is taught as a subject, often compulsory, at police higher education institutions, confirms that the value system is not secondary, but central. In the literature in this field, principles such as legality (always acting in accordance with the law), neutrality (impartiality), proportionality, regularity, gradualness, responsibility, respect for the dignity of all persons, honor, and loyalty to the service and public interest, as well as courage and restraint, are emphasized. Police science also explores dilemmas when these values clash – for example, how much privacy can be sacrificed for the sake of security? How much force is morally justified to use against a violent offender? Such questions cannot be solved by empiricism or theory alone, but involve philosophical and ethical analysis, which is what police science does.

Thus, unlike the natural sciences, which strive for value neutrality, police science openly integrates a value system because its goal is for the police as a social institution to act morally upright. Such a normative aspect does not diminish the scientific nature of the discipline. However, it is a necessary part of its identity – much like medicine has the normative aspect of “saving lives”, despite being a scientific field. The value system must be clearly articulated, discussed and improved within the field itself, which is the case. There are international and national conferences dedicated to police ethics, featuring papers



that analyze cases of ethics violations and propose solutions, as well as comparative studies that assess police integrity in different countries. All this falls within the framework of police science, showing that values are not taken for granted but are subject to critical examination and standardization.

Therefore, police sciences also meet this criterion of science – they have their own value system that is embedded in their theory and practice. This system is aligned with broader social values (legality, human rights) and seeks to improve the police profession. In scientific papers in the field of policing, the importance of ethics and values is often explicitly stated (we can see this through the keywords of many articles – e.g., “police integrity”, “ethical policing” are frequent topics). In this way, police science contributes to ensuring that police work is not only practical but also legitimate and moral, thus serving the common good.

INSTITUTIONAL FRAMEWORK

For a field of knowledge to truly function as a science, it also requires an adequate institutional framework. This means that there must be institutions that support this science, such as universities, colleges, research institutes, professional associations, research funds, scientific journals, and conferences where the results are published. The institutional framework ensures the continuity of research, the training of new scientists and practitioners, the exchange of ideas and the general development of the discipline.

Police science has long been nurtured within institutions that may not have been formally recognized as “scientific institutions”, such as police academies or internal research departments of interior ministries. However, globally, there is a pervasive network of institutions dedicated to police science today. There are over 500 police colleges and universities in the world where police studies are carried out (typically a Bachelor of Science in Police Studies or equivalent). There are also several independent Universities of Applied Police Sciences – examples include the University of Criminal Investigation and Police Studies in Belgrade, the University of Applied Sciences for Police and Public Administration in the German state of North Rhine-Westphalia, and others. These data clearly illustrate that the police, once exclusively vocational training, have also become an academic discipline in the higher education system.

Across Europe and the world, police training centres have been transformed to or integrated into university frameworks. For example, the United Kingdom and Australia have university courses and research centres dedicated to police studies. In the United States, several criminology departments incorporate policing topics into their programs and research. The FBI also maintains its own National Academy Centre, and many law enforcement agencies and services collaborate closely with civilian universities. In the region, the former Police Academy in Belgrade has grown through reforms into the University of Criminal Investigation and Police Studies (KPU) – which represents the formal recognition of police studies as a higher educational, academic program (KPU has accredited bachelor’s, master’s and doctoral studies in the fields of criminal and police sciences, forensics and informatics and computer science). Thus, a domestic institutional framework for the development of police science in Serbia was created. Similarly, in Croatia, there is a Police College (incorporated within the Ministry of the Interior, but with a tendency towards a higher education status). In Bosnia and Herzegovina, faculties for security and criminology have been established (e.g., the Faculty of Criminology, Security Studies, and Law in Sarajevo). These are all institutions where police science is taught and developed.

In addition to educational institutions, an important part of the institutional framework embodies research institutes and projects. In Serbia, the Institute for Criminological and Sociological Research also includes projects related to police and security, collaborating with the KPU and the Ministry of



the Interior. At the EU level, there is CEPOL (EU Agency for Law Enforcement Training), which, in addition to coordinating training, encourages scientific research cooperation between the police institutions of the member states (conferences are held, standard teaching bases are developed, etc.). Furthermore, international organisations such as the UN, OSCE, and INTERPOL have departments that generate surveys and manuals relevant to police work (e.g., analyses of best practices in the police, statistical reports on crime trends). All this relies on a scientific approach and involves experts from the academic community.

Scientific journals and conferences specific to police science represent another pillar of the institutional framework. Several international journals are dedicated exclusively to police studies, including *Police Practice and Research*, *Policing*, an international journal, and *The International Journal of Police Science & Management*. These journals have a peer-review process and publish the results of contemporary research from all subdisciplines – from patrol strategies to police psychology. At the regional level, the journal *Science, Security, Police* (published by KPU) and, for example, the *Review of Criminology and Criminal Law* regularly publish papers on police topics. There are also frequent conferences and scientific conferences, such as the traditional international conference “Archibald Reiss Days”, which brings together scientists and police practitioners from Serbia and abroad to exchange knowledge. The presence of such activities indicates a vibrant scientific community that specializes in police science. This community has also been formalized through associations – e.g., the International Association of Chiefs of Police has a research wing that brings together researchers and practitioners. Additionally, there are academic associations, such as the European Society of Criminology Working Group on Policing.

Regardless of all said above, the specific situation in Serbia should be mentioned again: police sciences are not yet formally recognized as a separate scientific field in the classification sense (they are mostly de facto within the social sciences and humanities, but not de jure as a separate category) (Milojević et al., 2025a; Milojević et al., 2025b). However, this does not mean that there is a lack of an institutional framework – it exists and functions (KPU, etc.) - but rather as an imminent administrative step that would give it complete legitimacy. The authors Banović and Amanović (2022) and Milojević et al. (2025) argue that the establishment of police sciences as a separate scientific field is a necessary prerequisite for its equal treatment with other sciences. In other words, an official institutionalization at the level of scientific policy is proposed.² This is an inevitable next step and it is demonstrated by the increasing participation of police experts in scientific committees, accreditation bodies for study programs, and other relevant organizations.

Overall, the institutional framework of police science has mainly been established, with schools, universities, research programs, journals, and conferences dedicated to this field. This enables the continuous development of knowledge and its dissemination, which fulfils another criterion of science – that there is support and structure that enables systematic dealing with this science. Without institutions, science could not progress; police science has clearly found its place within institutions, even if, administratively, there is still a struggle for the status.

² Namely, in September 2024, the KPU submitted a reasoned proposal to the Main Committee for Philosophy, Psychology, Pedagogy and Sociology, to classify police sciences as a branch of Social Sciences, which it considered, and submitted a positive decision to the National Council for Science and Technological Development of the Republic of Serbia, which in the same year initiated an amendment to the legislation governing the division of sciences into fields, branches and disciplines.



SOCIAL CONTEXT

Science is always placed in a particular social context that influences its priorities, development and application. For applied sciences such as policing, the social context is of immediate importance, because security problems, criminality and society's expectations of the police depend on time and environment. The social context of police science encompasses both the reasons for its creation and the needs it addresses, as well as the impact of social change on the direction of research development.

Historically, the development of police science has been largely a response to societal changes evolving security challenges. We are living in a time of unprecedented expansion of science and the information age, which opens up new opportunities for security threats (Ferguson, 2017). The emergence of global terrorism, high-tech crime, transnational organized crime groups, migration waves, and changed public attitudes towards the police (demands for greater responsibility, protection of human rights) are social factors that impose the need for a scientific approach in the police. Police science has evolved precisely to answer the questions: how to proactively respond to terrorism, serious and organized crime, while preserving freedoms? How to use digital evidence from the seizure of computers? How can we reorganize the police to be more effective and efficient in a democratic society? Thus, the social context is also the driving force behind the development of police science.

For example, the rise of "community policing" theories in the US in the 1980s can be seen in the context of the broken relationship between the police and communities (predominantly minority communities) and society's need to fix it. Subsequently, sociologists and criminologists, along with practitioners, developed a new philosophy of work, which was afterwards scientifically tested and refined. Similarly, the decline in trust in the police following specific incidents (e.g., excessive use of force) in society has initiated research into procedural justice and conflict de-escalation training. Modern trends such as the Black Lives Matter movement around the world have led to an increased academic interest in the study of bias in policing (racial, ethnic profiling) and the development of science-based training programs to prevent and combat these biases. In other words, social problems become research problems of police science.

The social context also determines the role and place of police science in society. In democratic societies, police science is encouraged to develop because there is a demand for a more professional, effective, efficient and transparent police force – and this can only be achieved by relying on knowledge and training, rather than force and authority per se. On the other hand, in authoritarian contexts, there may not have been a strong incentive for science; instead, the police relied on their power. That is why we see that the boom in police studies often correlates with democratic transitions and security sector reforms. During the 2000s, police reforms and integration into international trends also contributed to the development of police-related faculties and studies in the Balkans. The impact of the Bologna Process on police education in Europe is noticeable – the standardization of higher education has also had an influence on police academies, introducing them into academic frameworks. Amanović et al. (2017) point to these reform processes.

The social context also includes the public perception of science and the police to the extent that the public and decision-makers recognize the value of a scientific approach in policing, thus leading to more investment and interest in research. In this sense, we can say that today, in the era of information, it is easier than ever to explain why it is important, for example, to statistically monitor crime and evaluate the work of the police, because society expects an "evidence-based" approach in other areas (such as medicine or education). Thus, it is increasingly accepted among police officers that "hunch" and traditional methods should be subjected to data verification, and this is becoming part of the culture. The role of scientists in law enforcement is becoming increasingly legitimate and in demand – a shift



that was not always the case. Milojević et al. (2025a, 2025b) emphasize the importance of integrating knowledge developed in practice and science for more efficient application in police education and everyday affairs. It is essentially a call to build a bridge between theory and practice more effectively, which occurs when society (including police, citizens, and the state) desires it.

Undeniably, the social context can also be challenging - rapid social change means that police science needs to evolve dynamically. What was topical yesterday (e.g., the fight against classic forms of crime) is now complemented by new topics (cybercrime, pandemics and maintaining public order, climate change and migration, etc.). One of the values that police science brings is anticipation and proactive action – through scenarios and analyses of crime hotspots, they help society prepare for future threats. Thus, the concept of applying the “scanning horizon” method, which security experts and analysts use to assess future security risks and develop effective strategies to respond to them, draws on and utilizes the scientific contributions of police science (Ferguson, 2017).

In summary, police science is deeply rooted in the social context and serves society’s needs for security and justice. They were created and evolved precisely in response to societal challenges and will continue to do so. With this, another criterion has been fulfilled – connection with society. There is no confinement in the “ivory tower”. On the contrary, every finding of police science has potentially immediate application and repercussions in the community. The social context is not just a background, but an integral part of the police sciences – they are, as a science of public safety, inherently a “social science” and their success is also measured by the positive changes in society that they can bring about, which makes them very relevant and necessary.

EDUCATIONAL FUNCTION

Last, but not least, the constituent of science that we are considering is the educational function. Scientific knowledge has value not only in discovering new facts, but also in passing this knowledge on to new generations – educating personnel who will utilize and further develop it. For police science, the educational function is crucial because it is an applied science that should directly improve police work through the training of its members, as well as educate experts who will continue research.

Today, hundreds of higher education institutions worldwide educate students in the field of police science. This means that police science has an established curriculum, which is a key aspect of its educational function. Undergraduate programs typically combine theoretical lectures (e.g., on sociology, criminology, police ethics, police organization, and criminal law) with more applied lectures from the corpus of criminal disciplines, as well as practical training (self-defence skills, shooting, and incident simulation exercises). Such a combination is possible precisely because there is a scientific basis for each topic – it is no longer enough to “train” a police officer only practically, but also to educate him to understand the bigger picture and principles. In Europe, for example, the Bologna Process has prompted police schools to incorporate more theoretical subjects and research components into their curricula (Amanović et al., 2017).

In Serbia, with the transformation of the Police Academy into the KPU, master’s and doctoral studies in police science were introduced. This means that not only are future police officers now being educated for basic duties, but also future scientists and lecturers in this field. Doctoral dissertations defended at the KPU and related institutions address topics such as forensic identification, the improvement of investigative methodology, and the analysis of crime in the community – all of which are original scientific papers that further contribute to the body of knowledge. The educational role thus



shifts from merely transferring existing knowledge to creating a new generation of researchers who will disseminate and advance knowledge.

On a more practical level, the educational function of police science is also reflected in the provision of continuous training, including professional development and advanced training programs, for active police officers. Scientific institutions often collaborate with police agencies in developing programs for what is known as continuing professional development. For instance, after the adoption of new laws or technological solutions, the teaching staff of police studies organizes seminars and courses for officers to transfer the necessary knowledge to them. Such was the case with the introduction of information systems in the police – experts from the Faculty of Organizational Sciences and KPU jointly trained police officers to work with new databases, combining IT knowledge with an understanding of police procedures.

The educational function is also a test of scientific maturity. If a piece of knowledge cannot be taught effectively, it suggests that it is not well-organized or systematized. Police science, through decades of teaching, has successfully codified its material, allowing it to be transmitted effectively. There are textbooks for almost all areas – from basic (e.g., “Police Law”, “Criminalistic Tactics”) to advanced and specialist (“Police Topography”, “Police Management”). These textbooks synthesize the results of scientific research into a form suitable for teaching, which shows the maturity of the field.

An indicator of the value of the educational function is that graduates of police studies possess competencies that enhance the overall ability of police organizations. Empirical research suggests that police officers with a college degree have fewer complaints about their work, are less likely to resort to force unnecessarily, and are more effective at handling complex situations, compared to those with a lower level of education. This is also a compelling argument in favor of police science as a central place in the education of personnel – the knowledge they impart directly influences the quality of police work to great extent and, consequently, the security and justice in society.

Another aspect is specialist training for specific functions (e.g., training police officers to work on cases of domestic violence). Moreover, this is where the scientific approach is reflected – the content of these trainings is based on studies and expert recommendations. For example, if research shows that a specific interrogation protocol is better for victims of violence, that finding becomes part of the training. Thus, scientifically generated knowledge enters educational programs, and then, through trained personnel, again have influence on practice.

Police science, through its educational role, also contributes to the popularization of the scientific view of police work among police officers themselves. As generations of police officers are educated within academies and universities, so is the culture – there is a growing willingness to embrace innovation, critically examine practice, and improve according to the research results. This closes the circle: science-based education produces practitioners who value science and often initiate new research questions, which in turn further advances the development of police science.

In short, police sciences fully fulfil their educational function: they have become an integral part of the formal education of police personnel at various levels, have developed teaching materials and methodologies, and, through education, influence the improvement of the police service itself. This completes the last of the defined constituents of the scientific basis – police science does not exist only “in books”, but lives through educational institutions and through people who are educated in that system and carry this knowledge into their professional lives.



SIGNIFICANCE OF THE FINDINGS: THEORETICAL, METHODOLOGICAL AND INSTITUTIONAL IMPLICATIONS

Through the previous analysis, we have determined that the scientific disciplines of police sciences meet all ten criteria considered essential for science: they have a defined subject, methodology, terminology, theoretical system, empirical basis, logical structure, value system, institutional framework, social context, and educational function. Taken together, these findings point to a clear conclusion – police science is a science-based discipline, not merely a collection of practical skills. In this section, we will discuss the implications of this conclusion, address some possible counterarguments or misconceptions, and examine the current status and future development of police science.

1. Previous debates - “skill versus science”: Traditionally, there has been resistance to the idea that policing requires academic knowledge; it was thought to be a craft best learned through experience on the street and through hierarchical mentorship. Such a perception is similar to the old notion that, for example, medicine was more of an “art of healing” before it became based on science. A discussion of our results clearly shows that a similar shift has occurred in the case of the police – from relying on routine and intuition to an approach based on data, theory and proven methods. Policing will always involve an element of acting skills, as it requires leadership skills, interpersonal communication, and split second decision-making, among others. However, all of these skills can now be improved and refined through scientific knowledge. Therefore, it is not a question of whether the police are “just a skill or a science”, but that science provides the foundation on which skills are built more effectively. Through formal education, new generations of police officers learn not only what to do, but also why – understanding the basis of their actions through scientific principles, which ultimately professionalizes the service.
2. Equal treatment within the scientific system: If we accept (and the evidence supports) that police sciences have all the constituents of science, the question arises of their formal integration into the system of sciences. In Serbia, as Banović and Amanović (2022) note, the absence of police science in the official nomenclature of scientific fields is an anachronism. In practice, this can mean difficult funding for specific research, the absence of adequate committees for title selection, and so on, the discussion of the results suggests that the official recognition of police sciences (e.g., the formation of a separate scientific field, i.e., a branch within the social sciences and humanities) as proposed to the National Council by the Parent Committee (on the initiative of the KPU), would be justified. This would create an institutional framework for the area to gain more support and visibility. Such a step no longer requires further persuasion from the wider academic community, as the arguments are already compelling - if legal sciences or military sciences have their place, there is no reason why police science should not exist, especially given its interdisciplinary and socially beneficial character.
3. Attitude towards related disciplines: Police sciences are interdisciplinary in nature, so the question sometimes arises whether they are just “applied criminology” or “applied security study”. A discussion of our findings, the object of study, and the theoretical system reveals that police science has a specific focus – it is centred on the institution and the process of policing. They indeed share a lot with criminology (which studies the aetiology and phenomenology of crime and offenders), law (which provides rules of action), sociology (which examines the relationship between community and control), and other related fields. However, this multidisciplinary “background” does not negate the identity of police science, just as e.g., the engineering sciences share a background in mathematics and physics, but are nevertheless separate because of their specific focus on application. We can say that police science connects the theory and practice of various disciplines in a single context – the context of preserving public order and legality. This



argument is also important for positioning in the academic community - the goal is not to oppose police science to criminology or security studies, but to have complementary relationships. Moreover, cooperation is necessary – and in practice, we see that researchers often publish in criminological and police journals simultaneously, allowing students to gain a combined knowledge. Formal recognition of police science does not undermine these relations, but can deepen them, because it allows for a more precise identification of what is whose domain.

4. Advancing practice through science: One of the important elements of the discussion is how the validated science of police disciplines benefits the police themselves and citizens. From the results, we see numerous examples – ranging from improved methods to ethical standards. This implies that leaders of police organizations and policymakers should rely on the findings of police science to inform their decisions. For example, if empirical evidence says that a particular training model significantly reduces citizen complaints, this should be applied systematically. If theory and research suggest allocating patrols for more effective coverage, this should not be ignored. Unfortunately, there is still a gap in practice – sometimes innovations remain at the level of pilot projects or scientific papers, and do not come to life in the entire organization. The discussion leads to a recommendation: the “science–practice” link needs to be strengthened. That means more embedded models, more joint teams of scientists and police officers, regular monitoring and adaptation of procedures based on research. Fortunately, trends (especially in Anglo-Saxon countries) are moving in this direction – the so-called “evidence-based policing networks” (e.g., EPB in the UK, the Centre for Evidence-Based Crime Policy in the US) disseminate these connections. In the region, this has yet to reach full momentum, and it is here that the educational function plays a crucial role – new graduates of police science are often the ones who “bring the spirit of science” to their units.
5. Challenges and future directions: Although we have established a scientific basis, it does not mean that police science is fully built or that there is no room for improvement. The first challenge is the rapid pace of technological change – science must continually keep pace with phenomena such as artificial intelligence in policing, big data crime analysis, and cryptocurrencies in criminal transactions, among others. This will require even greater integration with the natural and technical sciences (e.g., cooperation with the IT sector). The second challenge is the globalization of security threats, which also requires the globalization of scientific solutions. Networking of police scientific institutions will become increasingly important (comparative studies between countries are already being done, which is welcome). The third challenge is ethics and legitimacy: in the era of surveillance and potential privacy invasions, police science must be at the forefront of finding a balance between security and freedom – a task that is both theoretical and practical. These are all fields for future research and theory development.

An interesting direction is the academic independence of police sciences – e.g., the development of one’s own theoretical models that do not originate solely from adaptation in criminology or sociology, but emerge from police data. As the database and research expand, it is more likely that indigenous theories will emerge (some of which we already have, such as the “police integrity” theory developed by Kutnjak Ivković et al., or the “police demand management” theory) (Kutnjak Ivković, 2003). This will further determine the status of police science.

6. Wider social significance of recognizing police science: At the end of the discussion, it should be emphasized that treating police disciplines as a science also has a symbolic significance: it raises the reputation of the police profession, attracts better quality personnel (because it becomes clear that it is not only a “physical job” but also an intellectual endeavor), increases public trust (which sees that the police are investing in knowledge and modernization). As an analogy, let



us think of the period when teachers or nurses received a university education – the profession gained in status and quality. Similarly, by adopting a scientific basis, the police enhance their professionalization and, consequently, their legitimacy.

Thus, the results of this work are not only of theoretical significance but also have practical and strategic implications. The main argument – that police sciences possess all the constitutive elements of science – is that there is no justification for marginalizing it in academia. On the contrary, they should be a central part of both security studies and broader interdisciplinary cooperation, because their specific focus fills an important niche between theoretical knowledge and practical security.

CONCLUSION

Starting from the defined criteria of science and their application to police science, this paper has shown that the scientific disciplines of police sciences have a solid scientific foundation. By analysing through ten aspects – subject, methodology, terminology, theoretical system, empirical basis, logical structure, value system, institutional framework, social context and educational function – we have established that police sciences meet each of these conditions on an equal footing with other established sciences.

The object of study of police sciences is clearly defined (police, crime and related phenomena), which ensures the focus and social relevance of their research. Diverse and rigorous scientific methods are used, and the discipline has developed its own specific methodological approaches, confirming that the methodology of police science is truly scientific. Over time, a recognizable professional glossary, i.e., terminology, has been established, which facilitates precise communication and the further development of knowledge. An extensive and diverse theoretical system has been developed, encompassing theories on policing, crime prevention models, community relations, and other related areas, making police science a theoretically grounded field rather than just a collection of empirical guidelines. All of these theories and claims are supported by empirical evidence from numerous studies, both experimental and observational, which provides a solid basis for the validity of knowledge. The internal logical structure of the discipline is reflected in its systematization into subdisciplines and the consistency of principles applied throughout the system. The value system of police science, through police ethics and related principles, provides a normative compass and promotes compliance with fundamental social values, while also being a subject of critical research within the discipline itself. Furthermore, police sciences have established a strong institutional framework – from universities and schools to journals and associations – that provides organizational support for further progress. Their development and direction largely reflect the social context and needs of society, which makes these sciences extremely relevant and adaptable to change. Finally, they perform a key educational function by educating new generations of police officers and researchers, imparting science-based knowledge to them, and thus closing the circle from theory to practice.

Based on all the above, we can unequivocally conclude that disciplines such as police ethics, police organization and tactics, police-criminal topography, traffic safety (social aspects), and special physical education for the police, among others, constitute scientific knowledge in the complete sense of the word. They possess all the characteristics expected of a science: systematicity, reviewing, objectivity, verifiability, and a developmental dimension. Consequently, they should be practically recognized in academia through further integration into scientific classifications and research funding, and in police practice through even more intensive reliance on the results that these sciences offer.



The presented conclusion has broader implications: strengthening the scientific basis of police work contributes to improving the security of citizens, i.e., more effective, efficient, and responsible work of police institutions. When the police utilize science as an ally, they are equipped with a powerful tool to adapt to modern challenges and expectations. Knowledge-based policing is an ideal to strive for, and police science is precisely the mechanism by which this ideal is realized.

Therefore, the recommendation derived from this paper is to continue and intensify the development of police science, both through theoretical research and through its application in training and practice. Institutional strengthening of this area in countries where it has not yet been done – including Serbia – is significant, as it will lead to a more fruitful connection between academic knowledge and practical action. As pointed out in the paper, in Europe and around the world, police science already occupies an equal place alongside other sciences, and it is time for this to be fully realized in our country.

Ultimately, the scientific basis of police science can no longer be questioned; instead, it should be taken as a starting point and built upon to yield new knowledge and even more professional police practices that benefit society as a whole.

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