

THE DEVELOPMENT, PURPOSE, AND TASKS OF FORENSIC SCIENCE

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Abstract

The study deals with introductory notions about forensic science, approaches the concept of forensic science by making a brief history on the development of this science and the laws underlying the development of forensic science. It also examines the conceptual issues of the purpose of forensic science, analysing the views of different scientists on the issue under consideration. Thus, the aim of forensic science is the development of methods, tools, techniques and recommendations for the organisation of practical activities. The general task of forensic science is to provide scientific support for the activities of law enforcement agencies in the fight against crime.

Keywords: forensic science, purpose of forensic science, methods, tools, techniques, task of forensic science.

JEL Classification: K14

1. Introduction

A person's social being is diverse, as are the contradictions and conflicts that accompany it. It is this that determines the difficulties that arise in social relations per se and in the relationship between society and the individual, various social cells in society, classes, social groups etc., specific people as members of society and as individuals - especially in the relationship between them.

A special type of social activity with a minus sign is people's criminal activity, the commission of crime. An ever deeper insight into the problem of crime has shown the need to use the achievements of other sciences and independent methods of exposing criminals in the fight against crime, such as:

- forensic science, synthesizing legal and technical, natural, etc. methods of fighting crime;
- medicine (psychiatry);
- forensic psychology, etc.

However, none of the named sciences covered (and could not, because of its specificity) the problem of crime as a whole. However, their development has led to the emergence of a special science that studies crime as a phenomenon that exists in society, associated (and conditioned) with other social phenomena, that has its own laws of origin, existence and development, requiring specific and diverse forms of combating it. Criminalistics has become such a science.

All that is characteristic of the 19th century ("the century of steam") is the rapid growth of science and technology, the liberalisation of power regimes, the mass exodus of peasants to the cities, the weakening of patriarchal foundations and the enrichment of citizens, the concentration of capital, entrepreneurship as a guarantee of success and risk as the norm of life, the division of labour, its professionalisation, and another phenomenon: crime.

Criminality, through the use of increasingly sophisticated methods, including science-intensive methods of committing and concealing crime, has swept through Germany, France, England and the United States. Punitive bodies, which had previously worked on the basis of day-to-day experience, now proved powerless. A social order was therefore needed for a system capable of resisting crime of a new quality. To this order of state and society, science responded by creating a branch of knowledge, which the Austrian criminal scientist and later university professor Hans Gross at the end of the 19th century called criminalistics (from the Latin *crimen* - crime).

Between 1838 and 1841, a two-volume manual for the investigation of Ludwig von Jagemann was published in Frankfurt. The first volume is devoted to the theory of investigation. In the second volume, based on 344 examples from practice, the essence of the "pragmatics of investigation" is considered, i.e. advice and instructions are given for its production, a number of which are clearly of a forensic nature.

Similar works have been published in Russia: "Fundamentals of criminal trials with

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application to the Russian criminal process" by Ya. Barshev (1841)², "Rules and Forms of Investigations Compiled According to the Code of Laws" by E. Kolokolov (1850)³ and other recommendations for detecting additions, erasures, and alterations of wills, bills, and other transaction documents.

2. Development of forensic science

The development of forensic science - a scientific discipline that was first put at the service of justice - brought to life the procedural figure of a knowledgeable person: forensic scientists became indispensable participants in cases of investigation of assault on life and bodily harm, then competent people from other fields of science, technology and crafts began to be called in to help. The institution of forensic expertise was actively formed, which served as another stimulus for the development and use of forensic knowledge.

The trend to consolidate this knowledge was particularly strong at the end of the 19th and beginning of the 20th century. It found expression in the writings of a whole galaxy of police and judicial officials and scientists - the pioneers of the emerging science. This work went in three directions:

a) the development and improvement of the means of criminal recording (as forensic recording was then called) and the search for criminals, in which the police were particularly interested;

b) the development of scientific methods for the study of physical evidence;

c) the development and systematisation of techniques and methods for organising and planning an investigation, means, techniques and methods for detecting, securing and using evidence.

The first direction was mainly represented by research in the field of anthropometry, fingerprints, description of a person's appearance, photography.

In 1882, Alphonse Bertillon, an employee of the Paris police prefecture, proposed a method of anthropometric recording and identification of criminals, based on the calculations of the Belgian statistician Quetelet, who proved that no two people in the world had the same size of all parts of their body. Bertillon proposed to take 11 measurements, which in his opinion are sufficient to establish a person's identity at a second arrest. The method, which has been called "bertillonage", has been introduced in all advanced countries.

But almost immediately, significant shortcomings of the anthropometric method were revealed. It was difficult to obtain the necessary accuracy of body measurements for police officers, especially those in the provinces, and errors were very likely. The variability of human body growth was also a stumbling block, and Bertillon thought it lasted up to 23 years, while other scientists named different ages - both 30 and 35. This method could not be applied to minors at all and it was difficult to measure women's heads because of the long hair.

Almost simultaneously with bertillonage, the method of recording fingerprints appeared, pioneers of which were William Herschel (1877), Henry Folds (1879, 1880), Francis Galton, Edward Henry, and in Russia - VI Lebedev, who in 1909 compiled the first instruction on "fingerprinting".

In 1901, bertillonage was abolished in England and the method of recording fingerprints was introduced. Over the next decade, it replaced anthropometry in Europe and America. In Russia, in 1906, fingerprinting was introduced in prisons, in 1907 the Ministry of Internal Affairs issued a circular on its use by the police, and in 1908 fingerprint offices were organised in all 89 provincial and city police detective departments. The first Russian examinations were carried out Odessa (1911) and St. Petersburg (1912).

Bertillon's services to science were not limited to anthropometry. He developed methods of (descriptive) signalling and metric photography at the scene and equipment for these. He also developed the idea of a "verbal portrait" (1885) - a systematic description of a person's appearance

² Ya. Barshev, *Fundamentals of Criminal Proceedings Applied to Russian Criminal Proceedings*, St. Petersburg, 1841.

³ E. Kolokolov, Evgraf Fedorovich, *Rules and Forms for Investigations, According to the Code of Laws*, Moscow, 1850.

using a unified terminology, later improved and simplified by the Swiss criminologist Rudolf Archibald Reiss.

The second direction - the development of methods for the study of physical evidence, which were figuratively called "dumb witnesses" - is associated with the names of scientists such as E.F. Burinsky (Russia), Reisse (Switzerland), Lombroso and Ottolenghi (Italy), Heindl (Germany), Locard (France) and are rightly called "fathers of forensic photography", but in fact its role in the formation and development of domestic forensic science is more significant: E.F. Burinsky can rightly be considered one of its founders. In 1903, his major work "Forensic Examination of Documents, their Production and Use" was published, in which he not only establishes photographic methods of investigation, but also formulates his ideas about forensic examination in general, the ways of its use in legal proceedings.

Special attention of scholars in those years was drawn to the expert research of handwritten documents - the most prevalent in civil and criminal proceedings. In 1895, a book was published by Cesare Lombroso, already known as the author of the "congenital criminal" theory - "Graphology"⁴. The main idea of the book was the statement that the writing process is a natural function of the human body; handwriting is a "mirror of the personality" reflecting its basic, "natural" properties. In essence, it was the same "congenital killer" theory transplanted into expert soil.

Bertillon and Locard contributed to the study of handwriting and handwriting. A combination of their proposed methods was proposed by Ottolenghi. However, later all of these, because they lacked sufficient scientific grounds, were rejected by forensic science and expert practice.

The third direction - the development and systematisation of means and methods of collecting evidence, organising and planning an investigation - is primarily associated with the name of Hans Gross (1847-1915).

An Austrian by birth, Gross was a forensic investigator for 20 years, then became a lecturer at the University of Chernowitsy, and from 1902 - in Graz, where he created the first forensic museum in history. In 1892, his fundamental "Guide for forensic investigators, gendarmerie and police officers" was published, in which he systematized all the means and methods of working with evidence known at that time, developed a series of original recommendations for detecting, seizing and studying traces and other physical evidence, described the life and jargon of professional criminals, the most common methods of committing and concealing crimes in practice, and formulated the basis of methodology for the disclosure and investigation of several dangerous crimes.

The third edition of Gross's book was published under the modified title "A Guide for Judicial Investigators as a System of Forensic Science" (1898), but the term "forensic science," which he introduced into scientific use and practice, was not immediately adopted, and not by all.

Gross's ideas gained many supporters: A. Weingart (Germany), Nicheforo (Italy), A. Reiss and others. The latter set up a kind of school for police and judicial officials in Lausanne.

The development of forensic science in Western countries consisted mainly in the development of means and methods for the study of physical evidence. Only in Germany has some attention been paid to questions of a theoretical nature and problems of forensic tactics and method.

E. Locard's seminal research, "Forensic guide", became widely known in these years, the last (seventh) volume of which was published on the eve of World War II (an abridged translation into a Russian volume was published in 1940). Locard, in fact, was the first to turn to the study of dust and other micro-objects, developed a method of pore identification (poroscopy), and for many years was head of the police laboratory in Lyon.

In Germany, Hans Schneikert, head of the Criminal Investigation Department in Berlin, developed questions about describing the appearance of criminals and techniques for working with traces. His books "Die Zeichenlehre zur Identifikation" and "Einführung in die Kriminaltechnik" were published in Russian translation in 1925 and 1926. Together with V. Stieber, he publishes "Ein praktischer Leitfaden für Kriminalbeamte". In 1924, Schneikert, in the Office for the Identification and Teaching of Forensic Science at the University of Berlin, published the book "Das Geheimnis

⁴ Cesare Lombroso, *Grafology*, Milan, 1895, Ulrico Hoepli, Publisher-Bookseller of Real Casa, 1st edition.

des Mörders und der Weg zu seiner Enthüllung".

In the same years, the work of another German criminologist, Robert Heindl, became widely known: "Kriminelle Technologie. Aus der Werkstatt der Kriminalpolizei" and especially "Fingerprinting und andere Methoden der Kriminaltechnik bei der Aufklärung von Straftaten".

Erich Annushat, in his book "Die Kunst des Umgangs mit Verbrechen und die Gesetze der Logik", was the first to address the issue of the use of logical inferences by investigators, the rules for constructing and testing hypotheses.

This period in the development of domestic forensic science is characterised by a pronounced practical bias, solving the most urgent tasks of fighting crime, setting up the work of investigative bodies, whose employees did not yet have sufficient knowledge nor sufficient experience.

Russian forensic literature at the beginning of this period was dominated by translations to somehow satisfy the demand and arm young investigators and experts. But even in these years, in the early works, marked by the influence of Western forensic science, there are a number of original theoretical propositions. These can be found in the works of G. Yu. Manns (1921) and P.S. Semenovskiy (1923). IN Iakimov, in his first guide to the investigation of crime (1924), lays down some theoretical foundations of examination and attempts to construct a general method of investigation based on circumstantial evidence. NP Makarenko examines the theoretical basis of fingerprints, some general aspects of inspection tactics (1926). Even in an essential reference manual such as the work of P.P. Mikheev and N.N. Semenov "Forensic examination. Codes of Criminal Procedure in Questions and Answers" (1926), one can find provisions containing topics of forensic science and objectives of this science.

3. Laws of development of forensic science

The correct interpretation of the content of the law of science is based on the well-known thesis that our consciousness is only an image of the external world and therefore the reflection (in this case, the law of science) cannot exist without the laws of the real world known to science.

In addition to the laws of science - idealized images of objective laws, the result of science's knowledge of its subject, there are laws of the development of science as a reflection of those factors, conditions, principles that determine the direction of change in science as a social phenomenon and a form of knowledge. There are laws for the development of science in general:

- the law of continuity of the accumulation of scientific knowledge;
- the law of integration and differentiation of scientific knowledge;
- the law of communication and mutual influence of science.
- the law of accelerating the development of science in the light of scientific and technological progress.

The three general laws of the development of science in forensic science correspond to specific laws of its development such as:

- connection and continuity between existing and emerging forensic concepts;
- active creative adaptation for the purpose of judicial proceedings of modern achievements of these sciences, whose provisions cannot be directly used in the practice of crime fighting;
- conditioning forensic recommendations to the needs of practice and improving this practice on the basis of the provisions of forensic science.

The fourth general law - acceleration of the rate of development of science in the light of scientific and technological progress - operates in forensic science in a direct, untransformed form and does not acquire specific features.

I. The law of communication and continuity between existing and emerging forensic concepts. Science is continuously developing, gradually accumulating knowledge, building on what has been achieved. As F. Engels pointed out, the development of science is "in proportion to the mass of knowledge inherited by it from the previous generation". It is due to the cumulative nature of the process of knowledge, due to the fact that scientific thinking cannot move haphazardly, chaotically, but moves forward in a strictly logical way, from the simple to the complex, each emerging scientific

concept building on the previous ones. Forensic concepts are no exception. This is proven by the well-known process of formulating the subject of forensic science, the idea of which was formed and refined as the science itself developed.

The dialectical principles of the approach to the study of objective reality dictate the need to clarify and improve existing concepts and definitions, including the subject of science. It is quite natural that this process cannot fail to relate to the rapidly developing science of forensics.

The role of the law of communication and continuity is that its action ensures the forward movement of forensic thinking from the phenomenon to the essence of the subsequent order, while preserving all the values accumulated by science.

II. The law of creative adaptation for the purposes of legal proceedings of the achievements of the various sciences. Forensic science emerged because science had to answer the questions of forensic practice. The task of meeting these needs as fully as possible became one of the trends driving the development of forensic science. This trend manifested such a general law as the integration and differentiation of scientific knowledge. Moreover, if for the period of accumulation of empirical material, the differentiation of sciences was more outwardly visible, corresponding to the level of knowledge at which phenomena were mainly described and classified, then the integration of scientific knowledge proved to be characteristic for the stage of construction of developed theories. Differentiation inevitably led to its opposite - integration.

At the present stage, both contradictory tendencies manifest themselves in dialectical unity. Thus, the emergence of new fields of knowledge at the junctions of the old classical sciences no longer merely means the further differentiation of science, but also testifies to the opposite - the emergence of new connections between previously isolated independent fields of scientific knowledge, about unification, the synthesis of the "particles" of these sciences into a new area of knowledge.

In the development of forensic science, these trends have manifested themselves in a very particular way. At the stage of its formation, the differentiation, on the one hand, expressed the attitude of forensic science to other legal sciences and, on the other hand, the attitude of the consolidated forensic knowledge to the data of other sciences serving the needs of criminal justice: forensic medicine, forensic psychiatry, forensic chemistry, etc., led to the determination of the place of forensic science in the system of legal sciences and its separation from related fields of natural sciences. The integration of knowledge at this stage was expressed mainly in the adaptation by forensic science to the needs of legal proceedings of data from the natural and technical sciences, which, in a transformed form, became part of the content of forensic science. These were used in fingerprinting, forensic photography, tracing, etc.

At the present stage, the processes of differentiation and integration of scientific knowledge have acquired a different qualitative character. Differentiation has turned out to be directed not so much outward, but within forensic science itself, leading to the emergence of new areas of knowledge at the junctions between it and related sciences: forensic psychology, investigative logic, etc., the subject of forensic science has moved into the subjects of these new sciences. The integration of knowledge has been given a double expression. It is still found in the creative active use of data from other sciences by forensic science and their introduction into criminal judicial proceedings, but this has been supplemented by processes that have eventually led to a change in the nature of forensic science, its transformation into an integral science.

The research methods and tools of different sciences are now used to study the same subject. Often, without such complexity, it is impossible to obtain fundamentally new knowledge. This leads to an increasing number of objects becoming common to two or more branches of knowledge, each studying them in combination with others or separately, in its own aspect and starting from its own objectives. The same methods are becoming more and more widespread in different sciences. The specificity of methods of knowledge and means of research as a sign of the independence of a particular science plays an increasingly minor role. Finally, the integration of the sciences is now explained not only by the commonality of objects, means and methods of knowledge, but also by the social function of science as a productive force in society.

At the present stage of the development of forensic science, complex research is predominant, carried out by such teams, which, in addition to forensic scientists, include specialists in various fields of knowledge: physiology and bionics, cybernetics and mathematics, biology, chemistry, anthropology, etc., in this way this science develops.

III. Making forensic recommendations conditional on the needs of crime-fighting practice and improving this practice on the basis of forensic science. It is generally accepted that the service function of forensic science is to meet the needs of practice in the scientific methods of fighting crime. The development of forensic recommendations is driven by the requirements of practice, their feasibility and effectiveness are tested by practice. Such dependence is necessary, general and stable, determining the direction of scientific research, i.e. it is one of the laws of development of forensic science.

Practice for forensic science, of course, is primarily an object of research, and the study of practice, in turn, determines the conduct of forensic scientific research, because only in this way is it possible:

a) identify trends in the development of practice itself, means and methods of implementation of this type of human activity, determine the possibilities of influencing the practice of forensic theory.

b) determine the needs of practice and, consequently, the prospects for the development of forensic theory.

c) identify the forms and tendencies of objective patterns of occurrence, collection, research, evaluation and use of evidence, to ensure the necessity and repeatability of their manifestations.

d) to accumulate the empirical material necessary for the analysis, generalisation and construction of a system of the general theory of forensic science, because, as F. Engels said, it is impossible to construct connections and introduce them into facts, but it is necessary to extract them from facts and, having found them, to demonstrate them as far as possible empirically.

e) to obtain material for the choice of the best options for communication between researchers, i.e. for the development of the language of forensic science;

f) to get an idea of the errors of practice in order to determine their causes, to develop in theory ways of overcoming errors and new methods of improving the effectiveness of practice.

In terms of information, research, practice analysis is the extraction and accumulation of information that is systematised and processed. This is the stage of generalisation, the theoretical understanding of practice, the stage of clarifying and improving theory based on practical data.

Based on practice, theory is verified by practice. The degree to which practice is followed depends on the level of theory and the depth of penetration into the research subject. The desire for the fullest and most accurate reflection of reality has always been the ideal of scientific theory. However, the realisation of this ideal depends not only on science but also on other factors, including the level of development of technology and the development of scientific research methods.

IV. Accelerating the pace of development of forensic science in the context of scientific and technological progress. As early as 1844, F. Engels wrote: "Science advances in proportion to the mass of knowledge inherited from the preceding generation, and therefore, under the most ordinary conditions, it also increases exponentially".

The reasons for the accelerating pace of development of forensic science in the context of scientific and technological progress, in our opinion, are:

a) the increasing volume of fundamental and particular theoretical research in forensic science;

b) the accelerated development of those areas of knowledge whose data are used creatively in forensic science;

c) the increasing social significance of forensic science in relation to the urgency of the problem of fighting crime;

d) the growing potential of forensic science as a science under the influence of objective factors of scientific and technological progress.

4. The purpose of forensic science

Since forensic science is one of the special legal sciences, it is a holistic, structured set of ideas, concepts, theories, teachings, recommendations and other elements that make up the content of each science.

But this does not mean that it should be considered only as the sum of already accumulated, "frozen" and unchanging scientific knowledge. Like any other specific science, forensic science is constantly developing in the process of a special kind of spiritual, intellectual activity that generates new scientific knowledge about the laws of crime prevention, disclosure and investigation.

Various creative forensic research activities do not take place spontaneously, but under the influence of a certain motivation, i.e., it is always aimed at achieving its specific objectives.

Choosing a goal is one of the indispensable elements of any conscious human activity. Moreover, it should be stressed that any conscious human activity necessarily begins with goal formation or goal setting.

The determination of the goal of his activity by an individual person consists in mentally anticipating its outcome and choosing the ways and means of achieving the desire. Determination of the goal of science is a more complex process, because it is associated with mental anticipation of the development of knowledge and the choice of ways and means of achievement not by a single person, but by the collective mind of researchers in the process of development of science. The entire history of forensic science convincingly testifies to this.

The very birth of forensic science was due to the presence of such socially significant goals that could not be achieved otherwise than as a result of theoretical studies of the laws of prevention, disclosure and investigation of crimes, as well as the development of appropriate forensic tools, techniques and methods for identifying and exposing persons who have committed crimes.

A general understanding of the purpose of forensic science was formulated by G. Gross in the title of his first scientific works: "A Guide to Forensic Investigators, General Police Officers and Constables" (1892) and "A Guide to Forensic Investigators as a System of Forensic Science" (1898). In other words, at the end of the 19th century, forensic science was seen as a science with the purpose of developing recommendations for the work of investigators.

Later, while retaining its original essence, this aim was repeatedly refined and supplemented.

In 1915, SN Tregubov, using the term "criminal technique" instead of "forensic science", wrote that its purpose was to provide active assistance to justice "in revealing the truth and ensuring that always possible, fatal mistakes are not committed, contributing equally both to the exposure of the truly guilty and to the clarification of the innocence of the person wrongly suspected"⁵.

In 1929, IN Yakimov pointed out that the general purpose of forensic science is to help the justice system reveal the material truth in a criminal case⁶.

In the first domestic manual of forensic science, published in 1935, it was stated that forensic science should "on the one hand, equip investigators with all the technical information necessary for this purpose and, on the other hand, develop such methods of investigation as would ensure maximum speed and accuracy of investigation"⁷.

As the theoretical foundations of forensic science have developed, the purpose of forensic science has been clarified.

In 1959, Professor S. P. Mitrichev wrote that "forensic science is the science of investigating crimes in order to reveal and prevent them"⁸.

In 1971, Professor AN Vasiliev pointed out that "forensic science serves to fulfil the requirements of the law that every crime be solved quickly and completely, that all those who have

⁵ Tregubov S.N., *Fundamentals of criminal technology: Scientific and practical methods of investigating crime: A practical guide for judicial figures*, Petrograd: Edition of the legal book deposit "Pravo", 1915.

⁶ Yakimov I.N., *Forensic science. Criminal tactics*, Moscow, 1929.

⁷ A. Ya. Vyshinsky (ed.), *Forensics. Book. 1: Crime investigation technique and tactics: A textbook for law students*, Moscow, 1935, p. 6.

⁸ S. A. Golunsky (ed.), *Forensic science: a manual for higher law, education, institutions*, Moscow, 1959, p. 5.

committed a crime have been subjected to the right punishment and no innocent person has been convicted" and also "directs its efforts to preventing crimes and eradicating the causes that give rise to them"⁹.

Professor I.F. Krylov, defining in 1976 the concept of forensic science as a science of technical means, tactics and methods, noted that they serve to detect, collect, preserve, fix and study evidence in order to effectively reveal, investigate and prevent crime¹⁰.

The same, generally shared understanding of the purpose of forensic science was shared by many authors in later years. Among them was Professor R.S. Belkin, who believed that the purpose of forensic science, or the general task of a given branch of scientific knowledge, is "to promote the fight against crime by its own specific forces and means". Here he added: "This is the purpose of the existence and development of forensic science"¹¹.

Thus, we can conclude that the purpose of forensic science is to provide assistance with their scientific achievements to the law enforcement agencies of the state in the prevention, disclosure and investigation of crimes.

However, this conclusion does not solve all the problems of clarifying the purpose of forensic science.

First, attention is drawn to the difference in terminology used by the authors for their definitions of the purpose of forensic science.

Formulating the mental anticipation of the results of the development of forensic science as a reflection of the objective needs of society, they use expressions such as "forensic science is intended ...", "forensic science should ...", "forensic science serves ...", "the purpose of forensic science ...", "the tasks of forensic science ...", etc.

Usually, the difference in terminology is not the subject of scientific debate, but only if it does not underlie errors in determining the content of the objects studied. As regards the case under consideration, in the initial period of the formation of forensic scientific knowledge, such a difference did not give rise to objections and negative assessments. But as the theory of forensic science strengthens, the need to clarify and detail the feasibility of its development becomes more and more acute, which is impossible without unification of the terminology used for it.

In particular, a more informed use of the terms 'internal objective' and 'external objective' is needed. Goal is to determine the general and main direction of the development of science; task - for detailing and achieving the goal.

Secondly, the question of the possibility of classifying the purpose of forensic science needs further study, as different views on this issue are also expressed.

A. Ya. Ginzburg and RS Belkin have presented their views on this issue most clearly.

A. Ya. Ginzburg divides the aims of forensic science into general aims, which are a reflection of the laws of development of the whole science and are formed both for it as a whole and for particular ones - for its individual theories and systems¹².

RS Belkin distinguished between 'external' and 'internal' goals. He wrote that 'external' objectives are objectives for the achievement of which science exists; 'internal' objectives are those whose achievement ensures the achievement of 'external' objectives that stimulate the development of science itself¹³.

However, one can agree with such classifications only if we consider that the authors, using the term "aim", mean the tasks of forensic science. Because the purpose of any particular science, being the final cause of its development, is always one and the same. Therefore, the purpose of forensic science is a general, holistic, and undifferentiated category.

And finally, thirdly, it is necessary to consider in more detail the problem of classifying the

⁹ A. N. Vasiliev (ed.), *Forensic science: a textbook for law students*, Moscow, 1971, p.3.

¹⁰ I.F. Krylova (ed.), *Forensic Science: A Handbook for Higher Education Students. Study. Institutions studying in the specialty "Jurisprudence"*, 1976, p. 11.

¹¹ Belkin R.S., *Forensics course: in 3 volumes*. Moscow, 1997. V. 1: *The General Theory of Forensics*, p. 224.

¹² Ginzburg A. Ya, *The principles of Soviet forensics*, Karaganda, 1974, p. 38.

¹³ Belkin R.S., *op. cit.*, p. 224.

tasks of forensic science.

The tasks of forensic science are also mental anticipations of the outcome of the development of this scientific knowledge, but more specific than the purpose or content. In the tasks of forensic science, the purpose of its development is revealed and realised.

The tasks of forensic science are numerous and can be classified according to various reasons - external and internal significance; legal and other content; links with forensic science theory, etc.

The most common in forensic literature is the differentiation of tasks according to their role in the development of science.

From this point of view, forensic science tasks are divided into the following groups:

- general tasks that achieve the purpose of forensic science and determine the most important directions of its development.

- special tasks which implement the general tasks of forensic science and determine the directions of development of the main sections of forensic science.

- specific tasks that determine the direction of development of individual forensic theories, teachings, concepts.

General tasks include the following tasks of forensic science:

a) a comprehensive study of the object of science.

b) identification and definition of models of prevention, disclosure and investigation of crimes;

c) improving the existence and development of new forensic technical means, tactical and methodological recommendations.

The tasks of forensic science are:

a) development of the general theory of forensic science:

b) development of forensic technology in the forensic system.

c) the development of forensic tactics as a section of forensic science.

d) development of the final section of forensic science - forensic methods of crime investigation.

The specific tasks of forensic science are diverse, and their content is directly related to the problems of development of individual theories, teachings, concepts and other structural elements of this science.

5. Conclusion

An erroneous conclusion of a forensic expert may lead to a miscarriage of justice. And if in the future a person is still proven innocent, no rehabilitation will bring back a few years of imprisonment, let alone a person's life. Forensic science is a science that solves problems that arise in the course of forensic and investigative authorities' activities and also helps authorities in improving the quality of their work.

The introduction of innovative technologies that meet the requirements of modern times into the practice of forensic examination institutions has led to the progressive development of this science and creates the opportunity to further attract new and advanced technologies.

The German publicist J. Torvald writes in the pages of his famous book "One Hundred Years of Forensic Science": There is no doubt that for 1010 years forensic medicine has become a science. A whole epoch has struggled to prove to its 'mother' - medicine, that it had a different content and a different purpose: to become a 'bridge' between medicine, on the one hand, and justice, forensics - on the other. In the following era, it successfully combined all the knowledge of medicine, natural science and, finally, the techniques it needed to solve the problems posed by forensics. The 21st century confirms the practical importance of forensic science as an applied science in the new modern conditions of fighting the criminal community.

At the same time, it should be noted that in the actual process of development of forensic science, the listed tasks are actually in a constant dialectical combination and unity, which ensures the possibility of successful implementation of the objective of this science.

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