

**Володимир Андрійович Журавель**

*Національна академія правових наук України*

*Харків, Україна*

## **КРИМІНАЛІСТИЧНА ДІАГНОСТИКА: ПОНЯТТЯ, ЗНАЧЕННЯ ТА СФЕРА РЕАЛІЗАЦІЇ**

**Анотація.** *Сучасний етап розвитку криміналістики характеризується активним пошуком новітніх пізнавальних методів та засобів, до яких у повній мірі можна віднести й криміналістичну діагностику. Актуальність досліджуваної в статті проблематики обумовлена необхідністю формування сучасного понятійного апарату науки криміналістики, подальшої розробки наукової концепції криміналістичної діагностики, перспектив створення відповідного криміналістичного вчення. Метою дослідження є аналіз сучасних наукових підходів до розуміння поняття «криміналістична діагностика», його ознак, структури, інтегративних функцій, відмінностей від інших парних криміналістичних категорій. Задля досягнення зазначеної мети були використані такі загальнонаукові та спеціальні методи дослідження, як діалектичний, історичний, формально-логічний, системно-структурний, соціологічний, статистичний, метод правового прогнозування та моделювання, системного і семантичного аналізу. Доведено, що термін «криміналістична діагностика» доцільно розглядати в практичному і теоретичному значенні. В практичному значенні криміналістична діагностика – це метод, розпізнавання стану об'єктів, пізнання явищ, процесів, що мають відношення до обставин події злочину, детерміновані останньою. Це своєрідний інструментарій в розпорядженні експерта, слідчого, детектива, судді задля пізнання об'єкта (події, явища) за його відображенням. У теоретичному значенні криміналістична діагностика розглядається як окреме криміналістичне вчення, яке являє собою систему теоретичних положень про закономірності розпізнавання об'єктів (ситуацій) за їх ознаками та властивостями, на підставі аналізу змін, що відбулися в них під впливом обставин події злочину та її учасників, з метою здійснення доказування у кримінальному провадженні. Наголошено, що теоретичну основу криміналістичної діагностики становлять відомості про закономірності виникнення діагностованих об'єктів, дані про типові моделі відображення події (дії, поведінки). Звернуто увагу, що криміналістична діагностика як окреме криміналістичне вчення (теорія) перебуває в стадії свого формування, постійно нарощує науковий потенціал і розширює сферу практичної реалізації. Подальший розвиток теорії і практики діагностичних досліджень передбачає систематизацію і класифікацію діагностичних ознак і комплексів ознак об'єктів, подій, явищ відповідно до вирішення діагностичних завдань, класифікацію типових ситуацій, розробку методів і методик діагностичних досліджень*

**Ключові слова:** *розпізнавання, відмінність, визначення, ознаки, властивості, стани*

## FORENSIC DIAGNOSTICS: CONCEPT, MEANING, AND SCOPE OF IMPLEMENTATION

**Abstract.** *The current stage of development of forensics is described by an active search for the latest cognitive methods and tools, which fully include forensic diagnostics. The relevance of the subject matter is conditioned by the need to form a modern terminology of the forensic science, further development of the scientific concept of forensic diagnostics, and prospects for creating an appropriate forensic teaching. The purpose of the study is to analyse modern scientific approaches to understanding the concept of forensic diagnostics, its features, structure, integrative functions, and differences from other paired forensic categories. To achieve this goal, such general scientific and special research methods as dialectical, historical, Aristotelian, system-structural, sociological, statistical, the method of legal forecasting and modelling, system and semantic analysis were used. It is proved that the term «forensic diagnostics» should be considered in practical and theoretical terms. In practical terms, forensic diagnostics is a method of recognising the state of objects, cognition of phenomena and processes related to the circumstances of the crime event, determined by the latter. This is a kind of tool at the disposal of an expert, investigator, detective, judge to know the object (event, phenomenon) by its reflection. In the theoretical sense, forensic diagnostics is considered as a separate forensic teaching, which constitutes a system of theoretical provisions on the regularities of recognising objects (situations) by their features and properties, based on the analysis of changes that occurred in them under the influence of the circumstances of the crime event and its participants, in order to carry out evidence in criminal proceedings. It is noted that the theoretical basis of forensic diagnostics comprises information on the patterns of occurrence of diagnosed objects, data on typical models of event reflection (action, behaviour). It is noted that forensic diagnostics as a separate forensic teaching (theory) is at the stage of its development, constantly increasing its scientific potential and expanding the scope of practical implementation. Further development of the theory and practice of diagnostic research involves systematisation and classification of diagnostic features and sets of features of objects, events, phenomena in accordance with the solution of diagnostic problems, classification of typical situations, development of methods and techniques of diagnostic research*

**Keywords:** *recognition, difference, definition, attributes, properties, states*

### INTRODUCTION

The current stage of development of forensic science is described by an active, purposeful search for effective ways to modernise investigative, judicial, and expert activities on a fundamental theoretical basis [1]. The most significant forensic concepts are developed based on the known patterns of scientific and technological progress, the needs of forensic investigative and expert practice, predictive vision of possible ways of development and structural changes in criminal manifestations, international experience in combating them [2]. A crucial incentive for the development of forensic science is also its integration with other branches of knowledge. It is at the junctions of social, natural, and technical sciences that new aspects are developed, the creative use of which opens up wide opportunities for further optimisation and improvement of the effectiveness of scientific research and law enforcement activities. But without innovative technologies and the latest means of solving organisational, legal, scientific and technical problems, developing and implementing modern forensic methods, tools, and recommendations in forensic investigative practice, ensuring the activities of law enforcement agencies will not meet the requirements of efficiency [3]. Taking this into account, considerable changes are currently taking place in the understanding of the term “forensic support”, where the introduction of

innovative approaches to the implementation of criminal proceedings comes to the fore. The priority areas of development of forensic science include the development of the latest methods, techniques, and means of countering and preventing criminal offences. Such modern cognitive methods and means of optimising investigative and expert activities can fully include forensic diagnostics, the development of which as a separate teaching (theory) occurs on a certain scientific hypothesis, the necessary empirical material and is aimed at updating the terminology of the science of forensic science, expanding its cognitive capabilities to optimise evidence in criminal proceedings and establish the truth in the case [4].

Diagnostics (from the Greek *diagnostikos* – capable of recognising) – the study of diagnostic methods [5; 6]. The etymology of the term “diagnosis” has three meanings: recognition, distinction, and definition [7-9]. Notably, forensic diagnostics accumulates all three values, each of which describes a certain stage of diagnosis and determines one of the aspects of this complex cognitive process. In particular, recognition is the establishment of a certain similarity to the already known one (establishing, based on the traces left, the similarity of the studied method to some standard model that has developed in science and practice). Distinction should be interpreted as the separation of one

object (situation) from other similar ones. The definition completes the diagnosis and it is considered as the result of identifying a specific, but not mandatory set of unique features and properties (conditions) for the object (situation) under study. This procedure is carried out by comparing and analysing the signs of similarity with the typical model, on the one hand, and the presence of differences between the established object (situation) and similar ones, on the other hand.

Thus, the core of diagnosis is comparison by analogy, since it is with the help of analogy that a conclusion is formulated, the degree of probability of which depends on the number of similar signs and on their significance. Therefore, forensic diagnostics can be considered as a purpose (task), a process, and method of cognising the properties and states of an object (situation) in order to establish the changes that have occurred, find out the causes of these changes and their connection with the event that occurred. In other words, forensic diagnostics recognises the state of objects, cognises events, phenomena, and processes. Therewith, diagnostics can be represented as a process of narrowing and specifying alternatives – up to choosing the most likely one at the stage of transition to a probable judgement on a certain fact.

Forensic interpretation of diagnostics, the specific features of the development of a separate doctrine of forensic diagnostics were investigated in different years by such forensic scientists as T.V. Averianova [10], O.Yu. Andronikov [11], R.S. Belkin [12], A. Wilks [13], A.I. Winberg [14], S.V. Dubrovin [15], Yu.G. Korukhov [16], O.V. Korshunova [6], N.P. Maylis [17], V.F. Orlova [17], M.O. Selivanov [18], V.O. Snetkov [19], V.O. Tymchenko [20], O.A. Yudyntsev [21], and others. The basic, starting materials for the preparation of this study include the scientific studies of S.V. Dubrovin [15; 22-25], Yu.H. Korukhov [16; 17], V. O. Snetkov [19; 26-29]. At the same time, in modern forensic literature, scientists have expressed far ambiguous judgements regarding the definition and content of the term “forensic diagnostics”, its connections with other forensic categories, in particular with forensic identification, conceptual approaches to the development of a separate forensic doctrine of forensic diagnostics. Forensic scientists have not yet reached an agreed position on many issues. In addition, the authors of this study are forced to state that the above-mentioned issues have not been studied in Ukrainian forensic science, and currently there are not enough special studies covering this subject matter. This once again confirms the need for further independent research of the problems that arise in this area of knowledge.

In this regard, research on the problems of developing the modern terminology of forensic science, creating new forensic studies, and expanding the boundaries of scientific research in this area of legal science and practice is of particular importance. Solving such issues implies the need for an in-depth analysis of scientific approaches to understanding the main categories of the problem under study, such as recognition, distinction, definition, attributes, properties, states, material objects, phenomena, situations, and the mechanism of crime. It is also important to clarify

modern scientific opinions on the construction of a separate forensic teaching about diagnostics, its object, subject, tasks, individual research methods (analogy, modelling, experiment, extrapolation), the scope of implementation, real consumers of theoretical developments, and practical recommendations.

In view of the above, the purpose of this study is to investigate the genesis and current state of forensic diagnostics as an integral element of the structure of the general theory of cognition and important cognitive tools in expert and investigative practice, the general methodology of diagnostic procedures and the scope of their implementation, the ratio of diagnostic cognition and evidence in criminal proceedings and such paired forensic categories as diagnostics and identification.

## 1. MATERIALS AND METHODS

The methodological framework of the study is a complex combination of scientific concepts and reasonable judgements produced by the modern realities and qualitatively formulated by outstanding contemporary forensic specialists. To solve these issues, the study uses a set of general scientific and special cognitive methods used in legal science. In particular, this refers to dialectical and historical methods as universal methods of cognition of socio-legal phenomena, which allowed studying the evolution of the enrichment of the terminology of the forensic science, including such a term as “forensic diagnostics”, the methodological framework of which comprises the theory of reflection, the patterns of occurrence of objects studied by forensic science, their properties and features, as well as information about typical models of reflection of reality (events). The development of forensic diagnostics as a separate teaching is analysed in its historical retrospective using the historical legal method. The method of semantic analysis made it possible to find out the content of the term “forensic diagnostics”, its features, structure, integrative functions, differences from such forensic concepts as identification, identification and non-identification expert research. The comparative method allowed analysing the newest approaches proposed in the forensic literature to define the term “forensic diagnostics”, the possibilities of creating a separate forensic teaching about diagnostics, clarifying its content, structure, and scope of implementation, the knowledge of which enriches the scientific toolkit of forensic science and serves as the basis for optimising the investigation of criminal offences.

The use of the formal logical method allowed concluding that forensic diagnostics is the process and result of recognising objects (situations), that is, establishing their nature and condition, which have a certain connection with the crime event and are determined by the latter. In cognitive terms, forensic diagnostics is considered in two aspects: as a theoretical concept that finds its implementation in a separate forensic science (theory) and as a means of solving specific expert and investigative tasks related to clarifying the circumstances of the crime event, proving the guilt of a certain person. Therewith, in the diagnostic cognitive process, a special role is played by the construction and testing of hypotheses (versions) to establish an event based

on its results (traces), where causal relationships become decisive. Establishing causality can be both the purpose of diagnostics and part of this process, an intermediate stage on towards the cognition of an event (phenomenon, fact). The system-structural method was used to determine the elemental composition of the structure of the forensic diagnostic process, which in general can be presented as follows: definition of the purpose, preliminary study of objects, analysis of diagnostic features, comparison by analogy, evaluation and correction of the results obtained, formulation of conclusions. The method of legal modelling made it possible to formulate specific positions on the state and prospects of development of forensic diagnostics as a scientific concept and working tools of the investigator and expert. The use of sociological and statistical methods contributed to the generalisation of investigative and expert practice, analysis of empirical information related to the subject matter.

Using the method of system analysis, the study generalised the accumulated theoretical knowledge on the development of the term “forensic diagnostics”, its correlation with other paired categories of forensic science, in particular identification. The method of legal forecasting allowed identifying the possible areas for further development of scientific opinions on the concept of forensic diagnostics, its integration into the terminology of forensic science, and the prospects for creating a separate forensic teaching on diagnostics. Thus, the use of these scientific methods provided objective knowledge of: a) forensic diagnostics as a theoretical concept and effective working tools at the disposal of the expert and investigator to recognise objects (situations) related to the mechanism of crime; b) patterns of evolution of the establishment and development of this forensic category, the shaping of its content and structure; c) prospects for creating a separate theory of forensic diagnostics.

## 2. RESULTS AND DISCUSSION

The basis of forensic diagnostic research is the fundamental possibility of establishing the nature and condition of the object, taking into account the changes that have occurred in it, and which are caused by the conditions and factors of the criminal situation [22, p. 5]. Forensic diagnostics can be defined as a special method of cognition, which constitutes a system of cognitive techniques, the basis of which is the process of establishing the nature or state of an object that has a certain connection with the event of a crime, as a result of comparison with various classifications [15, p. 248; 23, p. 14]. The subject of the study of forensic diagnostics is the cognition of changes that occurred as a result of the commission of a crime, the causes and conditions of these changes based on selective study of the properties and states of interacting objects in order to determine the mechanism of a criminal event in general or its individual fragments (stages) [16, p. 2]. The essence of forensic diagnostics can be defined as the study of the regularities of recognition of forensic objects by their characteristics (height of a person by footprints; gender of a person by handwriting; type of firearms by traces on a shell; type of clothing by the composition and properties of individual fibres) [17].

The term “forensic diagnostics” was first proposed by V.O. Snetkov in 1972 [19, p. 103-106]. Notably, the term originally proposed by V.O. Snetkov did not arouse interest among scientists. On the contrary, a number of studies of forensic scientists have appeared, which proved the expediency of using the term “non-identification expertise”. Thus, Yu.P. Siedykh-Bondarenko came to the conclusion that the practice confirms the existence of non-identification examination along with the conventional identification examination, which is different in its purpose and content of research [30, p. 5-8]. During this period, there were both supporters and opponents of the use of the term ‘forensic diagnostics’. In particular, A.I. Winberg considered the possible existence of three areas of forensic expert research – identification, diagnostic, and situational [14, p. 73]. At the same time, M.O. Selivanov categorically denied the expediency of using the term “diagnostics” in theory and practice, as one that does not correspond to its general scientific interpretation [18, p. 58-60]. Next, due to the efforts of S.V. Dubrovin and Yu.H. Korukhov, forensic diagnostics began to take shape as a separate forensic doctrine, the provisions of which contribute to the enrichment of the general theory of forensics, the development of its scientific concepts, categories, terms, and methods. In practical terms, forensic diagnostics should ensure the solution of both expert and investigative tasks, in particular, the establishment of the mechanism of crime, the spatial and temporal circumstances of a criminal event, the construction and verification of investigative versions, situational research of the scene, etc.

The objects of forensic diagnostics are material bodies, phenomena, and situations that existed at the time of commissioning the crime [31]. They are classified into diagnosed and diagnosing. The former include objects, situations, phenomena, properties, qualities, states, relationships, interrelations in need of recognition, that is, the diagnosed objects are those whose nature and state must be established. Diagnosing objects are those that establish the nature and state, namely, material carriers of features that reflect the properties and influence of the conditions of the event that occurred on them. If the diagnosed objects or their reflection are related to the event of a crime, then the diagnosing objects are not related to this crime, but their nature has been studied, they are classified according to a set of characteristics. According to V.O. Snetkov, the diagnostic process lies in establishing the essence of a particular object by comparing its nature with the nature of objects of a particular class, genus, species, which are established by science and experience [26, p. 4]. Diagnosing objects include reflection traces (handwritten text, casts, photographs, etc.), parts of objects, substances (bulk, liquid, gaseous), and mental images. In the diagnostic process, samples are used, primarily reference materials (tables, atlases) that contain the characteristics of the studied objects, their images, as well as collections of natural objects.

Diagnostics, like identification, is based on studying the features of objects. A diagnostic feature is a feature that can be used to judge on the properties of an object that was reflected in the trace, their changes over time,

and the conditions in which the interaction of objects took place. However, unlike identification, diagnostics focus on the mechanism and conditions of trace formation and reflection. A characteristic difference between diagnostics and identification is that upon identifying the object under verification, it always exists financially, whereas when diagnosing it, it may not exist (for example, the person is absent, but according to the scheme of the trace track that the investigator has at his or her disposal, one can determine the approximate height of the person who left these traces). Forensic diagnostics solves a set of tasks that are aimed at investigating the internal properties and states of an object, its external features (time, place, functioning), the mechanism of occurrence and development of processes (the nature of interaction of objects with each other). These tasks include:

a) establishment of the spatial structure of the situation of a criminal event (where, in what situation the criminal event occurred; what is the exact place of collision of the vehicle; which of the traces that take place relate to the crime committed, etc);

b) establishment of the mechanism of individual stages of the event (the direction and nature of breakage of obstacles; the relative location of vehicles at the time of collision; the location of the person who fired the shot, based on the place of detection of the corpse and gunshot injuries located on it; the method of manufacturing counterfeit banknotes, etc);

c) determination of the material structure of the situation at the scene of the incident (compliance of traces found at the scene, material evidence with the mechanism of the crime; the possibility of leaving traces on the criminal and his or her clothes by the instrument of the crime, etc);

d) determination of the spatial and temporal features of the criminal event (when it occurred; how long it could have taken to commit it; in what sequence the actions were committed; in what direction and by what means the suspect moved when leaving the crime scene; what was the sequence of movement of the suspect during the commission of apartment theft; what traces appeared earlier, and what – later; what injuries were on the victim's body before the crime, and what caused at the time of its commission, etc);

e) establishing the properties of interacting objects (how many persons took part in the commission of a crime; the role of each of them in the implementation of criminal intent; whether the person has criminal skills, etc.);

f) establishing causal relationships (what is the cause of the fire; the possibility of spontaneous firing without pulling the trigger, etc.).

Taking into account theoretical developments, it is advisable to distinguish the following areas (types) of forensic diagnostic studies:

1. Diagnostic studies of the properties and states of an object during its direct study:

– research of the properties of an object, including its compliance with certain features (specified standards) (for example, whether the object is a firearm).

– investigation of the actual condition of the object, the presence or absence of any deviations from its normal

parameters (for example, whether the firearm is working properly and whether it is suitable for firing).

– establishment of the original state of the object (for example, what changes were made to the original text of the document under examination).

– determination of the causes and conditions for changing the properties (state) of an object (for example, what are the reasons for breaking the barrel bore of a hunting rifle).

2. Diagnostic study of the properties and states of the object based on its reflection.

– determination of the degree of information content of the trace (for example, whether there are hand prints on the bottle, and if so, whether they are suitable for identification).

– establishment of the properties and state of the object at the time of reflection (for example, what state the person was in at the time of writing the handwritten text).

– e) establishing the properties of movable objects based on traces of reflections (for example, how many persons took part in the commission of a crime; the role of each of them in the implementation of criminal intent; whether the person has criminal skills);

– determination of the reasons for changing the properties or state of an object (for example, this text has not been washed off, corrected, or etched).

3. Research of mechanisms, processes, and actions based on results (objects, reflections).

– *determination of the structure of the mechanism:*

– determination of the possibility of reproducing the mechanism and circumstances of the incident based on reflections (for example, what was the nature of the vehicle's movement (manoeuvre, braking) before hitting a pedestrian);

– determination of individual stages (fragments) of the event (for example, what, judging by the tracks on the road surface, was the direction of movement of the vehicle);

– establishment of the mechanism of the event in its dynamics (for example, what parts the vehicles were in contact with at the time of the collision);

– establishment of the possibility (impossibility) of performing certain actions under certain conditions (for example, whether it is possible to shoot a given hunting rifle when it falls to the floor from a meter height);

– establishment of compliance (non-compliance) of actions with special rules (for example, those that deviated from the special rules were allowed during the production of forms of this document);

– *determination of conditions (environment):*

– establishment of the time (period) or chronological sequence of actions (for example, in what sequence, judging by the traces at the scene of the incident, the criminal acted);

– establishment of the location of the action (its localisation, boundaries), the position of the participants (for example, what was the relative location of the shooter and the victim at the time of the shot);

– *determination of causality:*

– determination of the reasons for the result (for example, what is the cause of the fire, what is the cause of

the lock malfunction).

– establishment of a causality between the actions and the consequences that occurred (for example, to what extent the actions of the driver of the vehicle caused the occurrence of an emergency).

4. Establishment of criminogenic factors.

– establishment of the causes and conditions of a criminal event (for example, what circumstances contributed to the commission of a crime; what shortcomings in the production of documents contributed to their forgery) [12, p. 113-115].

Forensic diagnostics is implemented in expert [24, p. 128-135; 27, p. 22-30; 28, p. 42-53; 29, p. 3-12] and investigative [25, p. 108-114] practice. The essence of expert diagnostic research is to identify deviations from a certain norm in the examined object, establish the cause of these changes and determine the degree of connection of this cause with the event (mechanism) of the crime. For this purpose, the result obtained is compared with some analogue.

The method of expert diagnostic research includes the following stages:

1. Preparatory stage: identification of objectives. Familiarisation with the object (situation); determination of the possibility of conducting research.

2. Main study: analysis of diagnostic signs; comparative study using analogues; synthesis of the obtained data.

3. Final stage: evaluation of the research results; formulation of conclusions, execution of the conclusion.

In turn, the investigator performs diagnostics of the following:

1) a criminal situation based on the study of the mechanism of the crime (the method of preparation, commission, concealment; actions of participants in the event) based on its reflections;

2) the investigative situation based on the analysis of the obtained evidence, the characteristics of the personality of participants in criminal proceedings in order to predict the prospects for its development;

3) involvement of a person in the committed crime due to the presence of elements of victim behaviour;

4) the position of the interrogated person being searched according to the nature of his or her behaviour, arbitrary and involuntary reactions to stimuli.

Thus, diagnostics, i.e., recognition of an investigative situation that has developed at a certain stage of the investigation, as well as the construction of a predictive model for its probable development in the future, is based on the study and analysis of attributes (factors, conditions) that determine the establishment, functioning, and development of this situation. According to R. S. Belkin, these attributes (factors, conditions) can be divided into objective and subjective ones. Among the objective features (factors, conditions), the author refers to the following:

– the availability and nature of evidentiary and orienting information available to the investigator, which depends on the mechanism of the incident under investigation and the conditions of its traces in the environment;

– availability and constancy of the existence of yet unused sources of evidentiary information and reliable channels for receiving orientation information;

– the intensity of the processes of disappearance of evidence and the strength of the influence of certain factors on these processes;

– availability of the necessary forces, means, time, and the possibility of using them in an optimal way at the investigator's disposal at the given moment (availability of communications between the duty station and the operational investigation team, means of transmitting information from the accounting services of internal affairs bodies, etc.);

– the current criminal legal assessment of the event under investigation.

According to R.S. Belkin [12], the subjective attributes (factors, conditions) that influence the development of the investigative situation are as follows:

– psychological state of persons under investigation in the case;

– psychological state of the investigator, the level of his or her expertise and skills, practical experience, ability to perceive and implement decisions in extreme conditions;

– opposition to the establishment of the truth on the part of the criminal and his or her connections, and sometimes the victim and witnesses;

– favourable (conflict-free) course of investigation;

– the investigator's efforts aimed at changing the investigative situation in a way favourable for the investigation;

– consequences of erroneous actions of an investigator, operative employee, expert, witnesses;

– consequences of disclosure of pre-trial investigation data;

– unforeseen actions of the victim or persons not involved in the incident under investigation.

The combination and results of the influence of all these features (factors), according to R.S. Belkin, determine the individuality of the investigative situation at the time of investigation, its content, i.e., a specific set of conditions in which the investigator has to or will have to act [12, p. 135-137].

It follows from the above that in the process of diagnostic research (recognition), which is also considered as an element of pre-forecast procedures and the development of a prognostic conclusion [32, p. 200-212], it is necessary to strive to take into account as many attributes as possible that describe the diagnosed, and therefore the predicted object. This may be one of the main reasons for possible errors that occur when drawing up forensic forecasts, which can be minimised by identifying a system of relevant features, placing them in a hierarchical sequence according to the degree of significance and influence, mandatory consideration of the presence of these features for the most objective analysis of individual elements of the object of diagnosis or forecast (events, situations, actions, etc.).

Diagnostic procedures are also implemented in the mechanism of constructing forensic versions (investigative, forensic, expert, intelligence). Thus, Yu.H. Korukhov concludes that the organic connection of the hypothesis (version) with the attributes (facts) reflects the epistemological essence of the diagnostics. A hypothesis (version) is definitively created based on a certain number (complex)

of features (facts), it is justified and verified by them [16, p. 59]. V.O. Konovalova believes that the first stage of building a version is the analysis and generalisation of factual material necessary for the further development of knowledge about a single fact or set of facts [33, p. 16].

Recently, the forensic literature has been supplemented with proposals to expand the scope of diagnostic research and attract the achievements of forensic diagnostics for the development of forensic records (creation of file cabinets and collections containing diagnostic, indicative information), the construction of separate forensic methods of investigation based on the results of diagnostic analysis of certain criminal manifestations [11; 20]. In particular, O.A. Yudyntsev draws attention to the fact that, in economic information, diagnostics of signs and traces of non-return of funds in foreign currency from abroad can serve as a basis for building forensic versions and analysis of the investigative situation [21].

## CONCLUSIONS

Forensic diagnostics is a method of recognising the state of objects, cognition of phenomena and processes related to the mechanism of crime and determined by the latter. This is a kind of tool at the disposal of an expert, investigator, detective, judge to cognise the event, phenomenon, object by its reflection. The theoretical and methodological framework of forensic diagnostics comprises the theory of reflection, information about the patterns of occurrence of objects studied by forensic science, their properties and features, data on typical models of reflection of events (actions, behaviour).

Forensic diagnostics is considered as a complex cognitive process, during which a whole range of tasks is solved that are aimed at studying the internal properties and states of an object, its external features (time, place, functioning), the nature of interaction of objects with each other. The significance of the diagnostic process lies in establishing the essence of a particular object by comparing its nature (state, properties) with the nature of objectively existing objects of a certain class, genus, or species

established by science and experience. The objective of forensic diagnostics is to identify deviations from a certain norm in the examined object, establish the cause of these changes and determine the degree of connection of this cause with the event (mechanism) of the crime.

In cognitive terms, forensic diagnostics is considered in two aspects: as a theoretical concept that finds its implementation in a separate forensic science (theory) and as a means of solving specific expert and investigative tasks related to clarifying the circumstances of the crime event, proving the guilt of a certain person. Forensic diagnostics as a separate forensic teaching constitutes a system of theoretical provisions on the regularities of recognising objects (situations) according to their characteristics and properties, based on the analysis of changes that occurred in them under the influence of the circumstances of the crime event and the actions of its participants, establishing the causes of these changes and their connection with the event under investigation, in order to accomplish the proving in criminal proceedings and establish the truth in the case. In practical terms, forensic diagnostics should ensure the solution of both expert and investigative tasks, in particular, the establishment of the mechanism of crime, the spatial and temporal circumstances of a criminal event, the construction and verification of investigative versions, situational research of the scene.

Forensic diagnostics as a separate forensic teaching (theory) is at the stage of its development, constantly increasing its scientific potential and expanding the scope of practical implementation. Further development of the theory and practice of diagnostic research involves the systematisation and classification of diagnostic features and sets of features of objects, events, phenomena in accordance with the solution of diagnostic problems, the classification of typical situations that act as analogues in the diagnosis of the crime mechanism in general and its individual elements, the development of methods and techniques of diagnostic research and their effective implementation in investigative and expert practice.

## REFERENCES

- [1] Shevchuk, V.M. (2020). Criminalistics innovation: Modern problems of formation and prospects for research. In *Perspectives of world science and education: materials of VIII International scientific and practical conference* (pp. 158-168). Osaka: CPN Publishing Group.
- [2] Kuchynska, O., Kashyntseva, O., & Tsyganyuk, Y. (2019). *International cooperation in criminal proceedings involving assisted reproductive technologies*. *Wiadomosci Lekarskie*, 72(12)/2, 2531-2535.
- [3] Cherniavskiy, S., Ortynskiy, V., Rohatiuk, I., Udalova, L., & Sirant, M. (2019). Investigation of crimes of an international character. *Journal of Legal, Ethical and Regulatory Issues*, 22(5). Retrieved from <https://www.abacademies.org/articles/investigation-of-crimes-of-an-international-character-8702.html>.
- [4] Vapniarchuk, V.V., Zhuravel, V.A., Trofymenko, V.M., & Karpenko, M.O. (2020). The essence of the philosophical category "truth": Criminal procedural aspect. *Astra Salvensis*, 1, 273-290.
- [5] Pervushina, N.A. (2019). A semiotic diagnostics of study kits in the era of neuropedagogy. *PRAXEMA*, 4(22), 194-205.
- [6] Korshunova, O.V., & Shkalikov, E.V. (2019). Semiotic competence of the future teacher: Problem statement, diagnosis, development prospects. *Perspectives of Science and Education*, 5(41), 452-467.
- [7] Kaplina, A.V. (2014). Strategic diagnostics of financing system for the cluster initiatives in the South Russian regions. *Sustainable Development of Mountain Territories*, 4(22). Retrieved from <http://naukagor.ru/en-gb/Articles/ArtMID/2518/ArticleID/1224/STRATEGIC-DIAGNOSTICS-OF-FINANCING-SYSTEM-FOR-THE-CLUSTER-INITIATIVES-IN-THE-SOUTH-RUSSIAN-REGIONS>.

- [8] Zavadenko, N.N. (2016). Speech disorders in children: Early diagnosis and treatment. *S.S. Korsakov Journal of Neurology and Psychiatry*, 116(12), 119-125.
- [9] Sobkin, V.S., Lykova, T.A., & Sobkina, A.V. (2018). Diagnostics of structural features of personality changes in theatre college students at different stages of training. *Counseling Psychology and Psychotherapy*, 26(4), 83-100.
- [10] Averyanova, T.V., Belkin, R.S., Korukhov, Yu.H., & Rossinskaya, E.R. (2001). *Criminalistics*. Moscow: NORMA.
- [11] Andronikova, E.Yu. (2006). *Criminalistics diagnostics of legalization (laundering) cash or other property on the basis of economic information* (Candidate thesis, Nizhny Novgorod Academy of Law, Nizhny Novgorod, Russia).
- [12] Belkin, R.S. (1997). *Course of criminalistics: Criminalistics tools, moves and recommendations* (Vol. 3). Moscow: Jurist.
- [13] Vilks, A., & Kipane, A. (2018). Cognitive aspects of criminal justice policy. *Journal of Advanced Research in Law and Economics*, 9(5), 1798-1805.
- [14] Winberg, A.I. (1978). Identification, diagnostic and situational criminalistics expertise. *Soviet State and Law*, 9, 71-75.
- [15] Dubrovin, S.V. (2005). *Fundamentals of the theory of criminalistics diagnostics* (Doctoral dissertation, International Law Institute Ministry of Justice of the Russian Federation, Moscow, Russian Federation).
- [16] Korukhov, Yu.G. (1998). *Criminalistics diagnostics in crimes' investigation*. Moscow: NORMA.
- [17] Korukhov, Yu.G., Maylis, N.P., & Orlova, V.F. (2003). *Criminalistics expert diagnostics*. Moscow: RFCFS.
- [18] Selivanov, N.A. (1988). Does criminalistics need such a "diagnostics". *Socialist Legality*, 6, 58-60.
- [19] Snetkov, V.A. (1972). Problems of criminalistics' diagnostics. *Works of the All-Russian Research Institute of the Ministry of Internal Affairs of the Russia*, 23, 103-106.
- [20] Timchenko, V.A. (2001). *The concept of criminalistics diagnosis of crimes based on accounting information* (Doctoral dissertation, Nizhny Novgorod Academy of Ministry of Internal Affairs of Russia, Nizhny Novgorod, Russian Federation).
- [21] Yudinsev, A.A. (2001). *Criminalistics diagnosis of crimes in the field of foreign economic activity on the basis of economic information* (Candidate dissertation, Nizhny Novgorod Academy of Ministry of Internal Affairs of Russian Federation, Nizhny Novgorod, Russian Federation).
- [22] Dubrovin, S.V. (1989). *Criminalistics' diagnostics*. Moscow: Moscow special middle militia school of the Ministry of Internal Affairs of the USSR.
- [23] Dubrovin, S.V. (2002). *Methodological aspects of criminalistics' diagnostics*. Moscow: Zakon i Pravo.
- [24] Dubrovin, S.V. (1988). Problems of criminalistics diagnostics in the expert research. In *Problems of optimization of the initial stage of crime investigation* (pp. 128-135). Yekaterinburg: USLU.
- [25] Dubrovin, S.V. (1990). The importance of criminalistics diagnostics for the construction of versions and the production of investigative actions in order to study the personality of the offender. In *Current issues of using the achievements of science and technique in the investigation of crimes by law enforcement bodies (criminalistics' issues)* (pp. 108-114). Moscow: Works of Academy of the Ministry of Internal Affairs of the USSR.
- [26] Snetkov, V.A. (1997). Criminalistics diagnostics: Controversial issues. In *Criminalistics' questions and expert-criminalistics problems* (pp. 3-21). Moscow: ECC of the Ministry of Internal Affairs of the Russian Federation.
- [27] Snetkov, V.A. (1981). Diagnostics in the production of criminalistics examinations. In *Modern issues of criminalistics expertise* (pp. 22-30). Volgograd: Volgograd Academy of the Ministry of Internal Affairs of the Russian Federation.
- [28] Snetkov, V.A. (1983). Diagnostics in the production of criminalistics expertise. In *Investigative actions (criminalistics and procedural aspects)* (pp. 42-53). Sverdlovsk.
- [29] Snetkov, V.A. (1984). Expert criminalistics diagnostics. In *Diagnosis during criminalistics examinations production* (pp. 3-12). Moscow: All-Russian Research Institute of the Ministry of Internal Affairs of Russia.
- [30] Sedykh-Bondarenko, Yu.P. (1973). *Criminalistics non-identification expertise: A training manual*. Moscow: Izdatelstvo VSH MVD SSSR.
- [31] Tatsiy, V.Y., Zhuravel, V.A., & Avdeeva, G.K. (2019). Independent forensic medical examination as a mean of proving the facts of a torture usage. *Wiadomosci Lekarskie*, 72(12)/2, 2596-2601.
- [32] Zhuravel, V.A. (1999). *Problems of theory and methodology of forensic forecasting*. Kharkiv: Pravo.
- [33] Konovalova, V.E. (2000). *Version: Concept and functions in justice*. Kharkiv: Consum.

**Volodymyr A. Zhuravel**

Doctor of Juridical Science, Professor  
Full Member (Academician) of NALS of Ukraine  
Chief Scientific Secretary  
National Academy of Legal Sciences of Ukraine  
61024, 70 Pushkinska Str., Kharkiv, Ukraine

**Suggested Citation:** Zhuravel, V.A. (2021). Criminalists' diagnostics: Concept, significance and scope of implementation. *Journal of the National Academy of Legal Sciences of Ukraine*, 28(1), 187-194.

**Submitted:** 14/11/2020

**Revised:** 26/01/2021

**Accepted:** 03/03/2021