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The thirty-first collection issue presents content on criminalistics, theory and methodology of forensic science, as well as information about the annual meeting of ENFSI participants, an international conference organized by the founding institution, and cooperation with the International Commission on Missing Persons. Our authors are representatives of forensic science institutions, higher education institutions, law enforcement agencies from Ukraine and foreign countries.

For students and employees of higher education institutions. The collection can be used in activities of law enforcement agencies, legal experts, and researchers.

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Interaction of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» with European Network of Forensic Science Institutes

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Forensic science and criminalistics are two scientific branches of the modern world that contribute to the disclosure of crimes and the administration of justice. Daily they are gaining more and more importance in our society, becoming an integral part of law and order and security.

Research Paper Collection "*Theory and Practice of Forensic Science and Criminalistics*" highlights the versatility of these disciplines in scientific, legal, and practical contexts. On its pages, scientists, researchers, and practitioners from different countries share the results of unique research, and outstanding experience, raise pressing issues and propose ways to solve them, and outline prospects for the future.

Forensic science is one of the leading tools for investigating crimes: its specialists analyze evidence and identify individuals, establish indisputable facts based on its results, and conclusions guarantee fairness in court cases. Criminalistics, in turn, plays an essential role in detecting and analyzing criminal acts, providing the necessary database for court decisions.

This issue contains research papers dedicated to various aspects of forensic science and criminalistics: updated methodological and methodical approaches and technologies, legal and applied aspects of these disciplines. We are confident that this collection will become a valuable source of information for scientists, law enforcement officers, judges, students and

This article is translation of the original Ukrainian content, which source is available at the link: <https://khrife-journal.org/index.php/journal> (translated by Tetiana Droshchenko). The author acknowledges translation as corresponding to the original.

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anyone interested in the work of forensic experts and criminalists.

Forensic science and criminalistics remain significant components of the modern legal order and crucial factors in ensuring justice and security in society. Our journal is aimed at the continuous development of these disciplines, promoting the exchange of knowledge and innovative research, with the goal of sustainable genesis of forensic science in general. We invite readers to the fascinating world of forensic science and criminalistics and hope that the materials in this collection will inspire you to make new achievements in these important fields.

The development of forensic science and criminalistics in Ukraine is largely due to the active cooperation of foreign and international forensic institutions with domestic ones, in particular National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» (hereinafter referred to as NSC «Hon. Prof. M. S. Bokarius FSI») with European Network of Forensic Science Institutes (ENFSI).

ENFSI unites forensic institutions from different countries to promote the exchange of knowledge and experience, training and professional development, and the creation of common standards and methodologies in forensic science.

ENFSI is proactively working to create standards and common approaches in criminalistics and forensic science which has a positive impact on the quality of forensic research and the efficiency of justice in Europe. ENFSI develops and implements standards and regulations in the field of criminalistics and forensic science to ensure uniformity of approaches and high quality of research in different countries and to form a reliable evidence base for court cases. As part of its activities, ENFSI also supports scientific papers and

the development of new methods and technologies in criminalistics and forensic science and facilitates the exchange of information and experience between forensic services from different countries.

It is worth paying special attention to the continuous development of new technologies as one of the priority areas of ENFSI's activities. Institutions that are members of this network are actively implementing modern technologies, including DNA analysis, biometrics, cyber forensics, and others, which are aimed at improving the means of detecting and investigating crimes. Overall, ENFSI's activities contribute to strengthening justice, security and the rule of law in Europe and beyond.

ENFSI annually organizes a meeting of its members to report on the results of the past year and make plans for the future. This year (24–26.05.2023) in The Hague (the Kingdom of the Netherlands), during a three-day event, seminars were held on the digitalization of forensic science and the use of artificial intelligence to optimize and improve the efficiency of forensic science. The participants discussed pressing issues, ways to solve them and areas of further cooperation between ENFSI members. At the business meetings, representatives of the ENFSI Council reported on the network's activities in 2022, discussed and agreed on the strategic development plan until 2026 and amendments to the organization's constitution, approved the financial report and budget for 2024, and considered other issues of the network's activities.

For several years now, NSCFSI and ENFSI have been cooperating in the field of forensic science and criminalistics, which contributes to improving the quality of forensic examinations, reducing the time of their execution, and the indisputability of expert opinions at the stage of justice.

ENFSI is an important tool for the exchange of knowledge and experience between forensic experts from different countries, so cooperation with such a network helps national expert institutions raise their standards and strengthen their ability to perform independent and objective examinations.

Returning to the current issue of the Research Paper Collection *“Theory and Practice of Forensic Science and Criminalistics”*, we traditionally emphasize that our scientific journal is indexed in Google Scholar, the international abstract databases Academic Scientific Journals Indexing, Bielefeld Academic Search Engine (BASE), Directory of Open Access Journals (DOAJ), Directory of Open Access Scholarly Resources (ROAD), Directory of Research Journals Indexing (DRJI), ERIH PLUS, Europub, Index Copernicus International, MIAR, Polska Bibliografia Naukowa, RefSeek, ResearchBib, Ulrich’s, WorldCat, on the website of the DOI registrar of digital identifiers, and its full-text online versions are also available on the Internet on the platforms of V. Vernadsky National Library of Ukraine, higher education institutions of the Ministry of Internal Affairs of Ukraine, etc.

The collection traditionally contains sections with research papers and scientific notes. The first article in the section with scientific papers written by Doctor of Law, Prof. **Valeriy Sokurenko** is devoted to the technical and forensic support of investigating violations of the laws and customs of war. The author aims to identify the factors that influence the technical and forensic support for the investigation of violations of the laws and customs of war; characterize the technical and forensic means in accordance with the specific situations of the crimes under study; and provide practical recommendations on the use of types and

means of forensic technology in these situations. The article substantiates that inspection of the scene of an incident (as an important source of evidence) in the occupied and de-occupied territories has its own peculiarities (due to the danger of the territories where active hostilities are taking place; physical impossibility to carry out investigative (search) actions and/or detain the perpetrators, etc.): in particular, in this case, technical and forensic means of investigating digital traces are of great importance. The subject matter of the study raises an important topic of the Ukrainian present. The author draws attention to the fact that the forensic records used for such investigations (in particular, multimodal ones) need to be improved with the use of the latest foreign experience, which will help to identify the maximum number of sources of evidentiary information and increase the efficiency and quality of its receipt.

In the article “Forensic Thermal Engineering Examination: Subject, Object, Tasks, Main Research Areas”, **Ihor Bohdaniuk**, Ph.D. in Law, Senior Researcher, examines in detail the process of forming thermal engineering research as a separate type of forensic engineering and technical examination based on the principles of genesis in forensic science, analyzes the latest developments in the use of specialized knowledge in the production, distribution, transmission and consumption of energy resources. The empirical part of this article contains an analysis of the comprehensive expert studies conducted by the NSCFSI on metering violations and theft of natural gas by interfering with metering devices, on determining the scope of work performed on the installation, testing and operation of heat engineering equipment. The author offers his own vision of the subject matter of forensic thermal examination, the

general list of tasks of forensic thermal examination with structuring into four groups, and the main areas of research in forensic thermal examination.

The next article is devoted to the importance of forensic science for the administration of justice in Ukraine. **Vadym Khosha**, Ph.D. in Law, Senior Researcher, examined the organization, specifics, and features of the judiciary, whose main task is the administration of justice. The article summarizes the legislation of Ukraine on the administration of justice and identifies the subjects involved in this type of State activity, traces the legal status of an investigating judge and clarifies his/her competence, and outlines the existing substantive and formal characteristics of the legal category of the concept of “justice” with a view to forming the range of subjects to whom expert support is directed. The author’s analysis of the most common approaches to the definition of the concept of “forensic expert activity” is quite interesting, and the features and content of this type of state activity are revealed. The result of this study is the author’s own definition of the concept of “expert support of justice”, a presentation of the modern understanding of forensic expert activity and the current list of its areas.

In the article “Legal Status and Epistemological Characterization of the Objects of Forensic Veterinary Examination”, Doctor of Veterinary Sciences, Professor **Ivan Yatsenko** offers his own formulation of the definition of “objects of forensic veterinary research” as material and materialized sources of information about the event of an offense, which a forensic expert comprehensively, fully, objectively and directly examines during forensic veterinary examination on the basis of specific expertise, using an interrelated set of methods, techniques and means to solve diagnostic and situational

expert tasks set in the procedural document on the appointment of a forensic veterinary examination (engagement of a forensic expert). Attention is drawn to the fact that the material objects of forensic veterinary examination are living expert animals and expert animal corpses, feed and feed additives, biological material of animal origin and elements of the material environment of the crime scene, and the materialized objects are case (proceedings) and materials obtained during operational search and/or investigative activities (protocol of inspection of the crime scene, diagrams, photo and video documents, etc.), veterinary documents (protocols of pathological autopsy of animal corpses, acts of epizootic inspection of the farm, protocols of registration and treatment of sick animals and issuance of veterinary documents, anamnesis and excerpt from the animal’s outpatient record, results of laboratory tests of biological fluids (blood, urine, bile, feces, gastric juice, etc.)) and bacteriological, virological, mycological studies of biological material, clinical diagnostic studies, operating permits, etc.). The proposed scientific study is very large-scale and thorough: based on his own many years of experience as a forensic expert, the author has raised important topics for forensic veterinary medicine.

The section with scientific notes opens with a review article by **Tetiana Kharina** and **Oksana Rusanova**, which discusses the invariant provisions of the definition of meaning that are repeated in different psychological concepts independently of each other. The authors note modern concepts of psychology that consider the ontological, phenomenological and activity aspects of meaning; using general theoretical methods of scientific knowledge, they highlight the main differences between cognitive and discursive psychology in terms of the theoretical basis

of psychological phenomena; highlight a number of methodological problems related to solving urgent expert tasks of forensic psychological examination (taking into account the peculiarities of conducting complex psychological and linguistic examinations). The researchers distinguish six types of the dynamic meaning system of a person (personal meaning, meaningful attitude, motive, meaningful disposition, meaningful construct and personal value), which an expert psychologist should take into account when analyzing the phenomena and patterns of meaningful regulation of human activity and consciousness in legally significant situations. The author emphasizes the multifaceted nature of semantic reality, which takes on different forms and manifests itself in various psychological effects.

The author of the following scientific notes, Ph.D. in Law, Associate Professor **Anatolii Starushkevych**, analyzes the role of the scientific method of crime investigation developed by A. Niceforo for the formation of the forensic doctrine of criminal investigation methods and forensic methodology as a component of modern criminalistics. The author of the manuscript notes that in constructing his method, A. Niceforo used general scientific methods and techniques (hypothesizing, graph method, analysis, synthesis, deduction, induction, analogy), an integrated approach, systematicity, phasing, and knowledge of psychology. Particular emphasis is placed on the role of the investigator's professional and psychological qualities required for the implementation of the analyzed method: ingenuity, observation, ability to apply logical techniques and operations (induction, deduction, analysis, hypothesis, etc.), intellectual development, and experience. A. Niceforo's method of

hypothesizing, successfully borrowed from the basic sciences, is the prototype of the modern method of verification (the method of proposing and testing versions). A. Niceforo rejected methods that could cause the subject any suffering: sleep deprivation, the use of psychotropic drugs and/or moral abuse, interrogation under hypnosis. Anatolii Starushkevych appropriately notes that the method of crime investigation according to A. Niceforo was an important step in the formation of the forensic doctrine of criminal investigation methods and the theoretical foundations of modern forensic methodology.

The section with scientific notes concludes with an article by **Viacheslav Hontarenko** on the problems of legislative regulation of forensic examinations appointed in the course of domestic violence investigations. The article analyzes in detail the criminal procedure legislation and regulations of Ukraine and foreign countries, as well as the positions of leading domestic scholars on this issue. In criminal proceedings related to domestic violence, the issue of timely appointment and conduct of examinations to establish the facts of physical, sexual, psychological or economic violence is quite relevant. These factors are mostly established by conducting forensic, forensic medical and forensic psychiatric examinations carried out exclusively by state-specialized expert institutions, which sometimes hinders a full and objective investigation and prevents participants in criminal proceedings from choosing the most qualified expert. The author makes recommendations to abolish the monopoly of state expert institutions on conducting such examinations, which will help victims realize their right to fair justice. Attention is paid to the issue of the legal capacity of the victim, whose testimony is one of

the most important sources of evidence. Since suspects are most often the objects of forensic psychiatric examination, the author proposes appropriate amendments to the Criminal Procedure Code and some regulatory legal acts. Procedure Code and some regulatory legal acts of Ukraine concerning the appointment of forensic psychiatric examination of victims.

Let us dwell on the traditional section "Scientific News". We would like to draw the attention of readers to the information about the International Scientific and Practical Conference "Current Issues of Forensic Examination and Criminalistics", which took place on May 19, 2023, at the NSCFSI.

The achievements of the scientific schools of L. Y. Arotsker and M. V. Salteviskyi, the legal regulation of forensic activities, forensic problems in the fight against organized crime, as well as current issues of the theory and practice of forensic investigation (investigation under martial law and documentation of the damage caused by the Russian aggressor to our country and its citizens) were discussed at the event.

Once again, the event organized by the NSCFSI brought together like-minded people concerned with solving the problems of forensic science and criminalistics not only in Ukraine, but also in the whole civilized world.

An equally important event was the *Annual Meeting of ENFSI members*, which is described in more detail above. The meeting in The Hague demonstrated the outstanding importance of cooperation and information exchange between

forensic scientists from different countries to improve the quality of forensic science.

An important part of the scientific life of the NSCFSI is also cooperation with the International Commission on Missing Persons, which has become especially important in light of the challenges that the war has brought to the entire Ukrainian society, including experts. Today, the issue of searching for missing persons is one of the cornerstone issues, and DNA research plays a key role in identifying such persons.

At the same time, we urge authors of scientific papers to adhere to ethical and formal standards when submitting scientific papers for publication to the Editorial Board of the Research Paper Collection "*Theory and Practice of Forensic Science and Criminalistics*". These norms are stipulated by the standards of quality of scientific papers and their presentation established in the global scientific community (in particular, Publishing Ethics Resource Kit (PERK), the recommendations of Elsevier, Committee on Publication Ethics (COPE), the Ethical Code of a Scientist of Ukraine, as well as the experience of foreign and Ukrainian professional communities, scientific organizations, editorial boards, and editorial offices).

We invite well-known and young scientists from Ukraine and abroad, graduate students of higher educational and research institutions, as well as experienced forensic experts and debutants, who have an interest and aptitude for both scientific and practical research in the field of expert assistance to justice, to publish their works in our journal.

Together we will win! Glory to Ukraine!

Technical and Forensic Support for the Investigation of Violations of Laws and Customs of the War

Valerii Sokurenko *

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The paper describes up-to-date issues of investigating the violation of laws and customs of the war that requires the use of forensic techniques. The author aimed (through the formal logical and system-structural methods) to identify the factors that influence the technical and forensic support of the investigation of violations of laws and customs of the war; characterize forensic techniques in accordance with the specific situations of the crimes under study; to provide practical recommendations on the use of types and means of forensic techniques in these situations. It is noted that the technical and forensic support for the investigation of violations of the laws and customs of the war is conditioned by criminal law and forensic aspects. It is substantiated that the inspection of the scene (as an important source of evidence) in the occupied and deoccupied territories has its own peculiarities (due to the danger of the territories where active hostilities are taking place; physical impossibility to carry out investigative (search) actions and/or detain the perpetrators, etc.); in particular, the technical and forensic means investigating digital traces are of great importance in this case. The author proves the need to provide law enforcement officers with protective equipment and send specialists in the field of explosives engineering, genomic analysis, forensic 3D reconstruction, environmental profiling, etc. to help them during the investigation of violations of the laws and customs of war. The forensic records used for such investigations (in particular, multimodal ones) need to be improved with the latest foreign experience, which will help identify the maximum number of sources of evidence and improve the efficiency and quality of its receipt.

This article is translation of the original Ukrainian content, which source is available at the link: <https://khrife-journal.org/index.php/journal> (translated by Tetiana Droshchenko). The author acknowledges translation as corresponding to the original.

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Keywords: war crimes; investigation of criminal offenses; technical and forensic support; forensic methodology; violation of laws and customs of the war; forensic science.

Research Problem Formulation

With the onset of full-scale russian aggression the pre-trial investigation authorities have faced new challenges related to the need for rapid, comprehensive, and high-quality documentation and collection of evidentiary information on war crimes, of which more than 90% are violations of laws and customs of the war (Art. 438 of the Criminal Code of Ukraine ¹). For instance, according to the Office of the Prosecutor General, in 2022 (since the Russian invasion of Ukraine), 49, 483 criminal proceedings were opened under this article ².

Undoubtedly, a thorough investigation of such criminal offenses is impossible without the use of forensic techniques. The use of scientific and technical means of obtaining evidentiary information

is determined by many factors and has to be carried out in a certain sequence. Therefore, the issue of the choice of the technical and forensic means and methods of detection, fixation and research of material traces and other sources of evidentiary information during the investigation of such crimes requires detailed consideration.

Analysis of Essential Researches and Publications

The issues of strategy and tactics of the pre-trial investigation of war crimes were thoroughly studied by the following scholars: D. O. Koval and R. A. Avramenko ³; O. V. Batiuk and S. O. Dmytriv ⁴; O. M. Dufeniuk ⁵; O. V. Chervyakova ⁶; A. V. Shulzhenko ⁷. Separate issues of technical and

- 1 Кримінальний кодекс України від 05.04.2001 р. № 2341-III (зі змін та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 17.03.2023).
- 2 Єдиний звіт про кримінальні правопорушення за січень — грудень 2022 року / Офіс Генпрокурора : офіц. сайт. URL: <https://www.gp.gov.ua/ua/posts/pro-zareyestrovani-kriminalni-pravoporushennya-ta-rezultati-yih-dosudovogo-rozsliduvannya-2> (date accessed: 17.03.2023).
- 3 Коваль Д. О., Авраменко Р. А. Военні злочини. Особливості розслідування міжнародних злочинів, скоєних в контексті збройного конфлікту на Донбасі. Київ ; Одеса, 2019. 36 с. URL: <https://truth-hounds.org/wp-content/uploads/2019/12/%D0%92%D0%BE%D1%94%D0%BD%D0%BD%D1%96-%D0%B7%D0%BB%D0%BE%D1%87%D0%B8%D0%BD%D0%B8-Truth-Hounds.pdf> (date accessed: 15.03.2023).
- 4 Батюк О. В., Дмитрів С. О. До питання організації розслідування військових злочинів. *Соціально-правові студії*. 2021. Вип. 3 (13). С. 77—87. URL: <http://dspace.lvduvs.edu.ua/handle/1234567890/3976> (date accessed: 15.03.2023).
- 5 Дуфенюк О. М. Розслідування воєнних злочинів: логістичні, криміналістичні та судово-медичні питання. *Юридичний науковий електронний журнал*. 2022. № 4. С. 369—374. DOI: [10.32782/2524-0374/2022-4/88](https://doi.org/10.32782/2524-0374/2022-4/88) (date accessed: 15.03.2023).
- 6 Червякова О. В. Відповідальність за воєнні злочини: механізми та процеси відновлення суверенітету та безпеки України. *Форум права*. 2020. № 61 (2). С. 150—162. DOI: [10.5281/zenodo.3883835](https://doi.org/10.5281/zenodo.3883835) (date accessed: 15.03.2023).
- 7 Шульженко А. В. Проблеми доказування об'єктивної сторони у злочинах про порушення законів і звичаїв війни. *Вісник Луганського державного університету внутрішніх справ ім. Е. О. Дідоренка*. 2022. Вип. 2 (98). С. 261—270. DOI: [10.33766/2524-0323.98.261-270](https://doi.org/10.33766/2524-0323.98.261-270) (date accessed: 15.03.2023).

forensic support for war crimes were considered in detail by R. L. Stepanuik ⁸.

Simultaneously, there are no comprehensive researches regarding technical and forensic support for the investigation of violations of laws and customs of the war, taking into account the foreign experience and situations that determine the choice of technical forensic means.

Article Purpose

To determine the features of technical and forensic support for the investigation of violations of laws and customs of the war, taking into account factors that affect their technical and forensic support. To characterize the technical and forensic means in accordance with the specific situations of technical and forensic support of the crimes under investigation, taking into account foreign experience.

Research Methods

Using the formal and logical method the features of technical and forensic support of the pre-trial investigation of violations of laws and customs of the war are determined. The system-structural method made it possible to clarify the means of technical and forensic support for the pre-trial investigation of such crimes, taking into account foreign experience.

Main Content Presentation

In forensic literature, technical and forensic support is defined as a system of scientific and technical means intended for conducting investigative (detective), covert investigative (detective), judicial actions, expert research, as well as information support for the pre-trial investigation, court cases and specially developed technical techniques, methods, methods of their use, necessary for the dynamic optimization of the activities of criminal justice bodies for the prevention of criminal offenses, their investigation and trial ⁹.

During the investigation of war crimes, the sources of significant information are divided into:

- personal — testimony of witnesses, victims, suspects (most often they are captives);
- material — material situation; places of destruction; abandoned equipment, things, weapons, ammunition and their fragments, explosive objects that did not detonate; corpses with signs of violent death; traces of biological origin. These traces also include materials and substances testifying to the use of prohibited weapons or contamination of the ecosystem (soil, water, etc.) with dangerous substances;
- digital — materials for photo and video recording of events; data of electronic, computer and

8 Степанюк Р. Л. Деякі питання техніко-криміналістичного забезпечення розслідування воєнних злочинів. *Сучасні тенденції розвитку криміналістики та кримінального процесу в умовах воєнного стану* : тези доп. Міжнар. наук.-практ. конф. (Харків, 25.11.2022). Харків, 2022. С. 368—371. URL: <https://dspace.univd.edu.ua/xmlui/handle/123456789/15094> (date accessed: 15.03.2023).

9 Павлюк Н. В. Поняття та інноваційні засади техніко-криміналістичного забезпечення розслідування злочинів. *Теорія та практика судової експертизи і криміналістики*. 2015. Вип. 15. С. 96—104. URL: http://nbuv.gov.ua/UJRN/Tpsek_2015_15_15 (date accessed: 10.03.2023).

telecommunication networks; geolocation data of vehicles equipped with GPS beacons; data from open sources of digital information, etc.;

- documentary — protocols; orders; plans for conducting military operations; supply order; personal documents of combatants; financial documents, etc.¹⁰.

Working with these sources of information requires the usage of the technical and forensic means that contribute to the rapid, complete and impartial investigation and trial of violations of the laws and customs of war.

Note that the technical and forensic support for the investigation of criminal offenses is implemented during:

- carrying out separate investigative (search) actions;
- appointing and conducting forensic examinations.

Forensic techniques are used at all stages of the investigation. It consists of the elements that make up the system: forensic photography, video recording; forensic investigation of traces; forensic investigation of signs of a person's appearance; technical forensic examination of documents; forensic writing research; forensic investigation of weapons, ammunition, explosive devices and traces of their use; forensic investigation of substances, materials and products; forensic investigation of the human voice; odorology and forensic registration.

Therefore, the means of forensic technique are diverse. Their use depends

on the type of criminal offense, available evidentiary information and technical forensic situations. We agree with V. S. Bondar that the technical and forensic situation is a situation that has developed at a certain moment of the investigation and necessitates the use of specific and technical means and methods¹¹.

Situational conditioning involves:

- the need to use scientific and technical means;
- a specific type of technical means or a complex of such means, ways, methods and subjects of their application;
- the nature of the objects, in respect of which it is necessary to apply scientific and technical means;
- certain results that are planned to be obtained as a result of the use of scientific and technical means and methods (in particular, to ensure the suitability of traces for further investigation)¹².

The technical and forensic support for the investigation of violations of laws and customs of war is determined by the specifics of their investigation — criminal-legal and forensic aspects. Among the forensic ones, it is worth mentioning the following:

- peculiarities of the traced picture of crimes;
- subjects of technical and forensic support (investigators, employees of operative units, experts);
- peculiarities of technical and forensic situations. This situation is affected by the following factors: the impossibility to carry out

10 Дуфенюк О. М. *Op. cit.* С. 372. DOI: [10.32782/2524-0374/2022-4/88](https://doi.org/10.32782/2524-0374/2022-4/88) (date accessed: 15.03.2023).

11 Бондар В. С. Особливості вирішення техніко-криміналістичних завдань досудового розслідування кримінальних правопорушень. *Криміналістика і судова експертиза*. 2021. Вип. 66. С. 284—296. DOI: [10.33994/kndise.2021.66.28](https://doi.org/10.33994/kndise.2021.66.28) (date accessed: 15.03.2023).

12 Бондар В. С. *Op. cit.* DOI: [10.33994/kndise.2021.66.28](https://doi.org/10.33994/kndise.2021.66.28) (date accessed: 15.03.2023).

investigative (research) actions in the occupied territories; the danger of conducting investigative (research) actions in the territories where active hostilities are taking place; the impossibility to detain guilty persons who are in the territory of the aggressor country.

Among the investigation situations that take place at the initial stage and that determine further technical and forensic situations, we will single out the following:

- violation of laws and customs of the war in the occupied territory;
- violation of laws and customs of the war in the territory controlled by Ukraine.

Consequently, among the typical technical and forensic situations, it is possible to single out scientific and technical means and methods of gathering evidence:

- in the occupied territory;
- on the territory controlled by Ukraine.

As O. V. Fesenko points out, if the crime was committed in the temporarily occupied territory, most often the sources of evidence are the information obtained: as a result of secret investigative (research) actions (in particular, as a result of the removal of information from transport telecommunication networks and electronic information systems: wiretapping the phones of

persons involved in the commission of a crime; gaining access to a person's electronic mailbox); from mass media and the worldwide Internet, as well as the interrogation of witnesses or victims who were able to leave the territory controlled by Ukraine¹³.

The situation indicates the special importance for such investigations of means of research of digital traces. Among them, it is important to single out the Berkeley Protocol on Digital Open Source Investigations¹⁴ (hereinafter referred to as *Berkeley Protocol*), developed by the Law School of the *University of California, Berkeley*, and the Office of the United Nations High Commissioner for Human Rights. Ukraine adopted foreign experience: this protocol is drawn up precisely during the inspection of the scene of the incident in the occupied territory.

Berkeley Protocol is a practical guide to the effective use of open source (access) digital information when investigating violations of international criminal law, human rights, humanitarian law, peace and human security¹⁵. We analyzed crime scene reports using the provision of the Berkeley Protocol which is a review of web pages that can be used as evidence.

Foreign experience shows that online material must be collected in their native format or as close as possible to such a format. Online information should be collected in such a way as to allow the

13 Фесенко О. В. Особливості процесуального доказування у кримінальних провадженнях про злочини, вчинені на тимчасово окупованих територіях. *Особливості процесуального доказування у кримінальних провадженнях про злочини, вчинені на тимчасово окупованих територіях*: мат-ли кругл. столу. (Київ, 26.07.2016). Київ, 2016. С. 122–125.

14 Протокол Берклі з ведення розслідувань з використанням відкритих цифрових даних / Управлін. Верховн. комісара ООН з прав людини та Центру з прав людини Каліфорн. ун-ту в Берклі, Юрид. шк., 2022. 119 с. URL: <https://www.law.berkeley.edu/wp-content/uploads/2022/03/Berkeley-Protocol-Ukrainian.pdf> (date accessed: 11.02.2023).

15 Ibid.

reliability and integrity of its data to be ascertained in the future ¹⁶.

Let's consider the collection of digital traces during the investigation of crimes in more detail. First of all, the investigator needs to use geospatial information, geospatial information. Such information can be obtained as a result of content analysis of cartographic applications of mobile devices and their memory cards, as well as cloud services that store data from geolocation programs. The need to collect such information is also evidenced by foreign experience ¹⁷.

Using digital information, it is possible to establish:

- persons involved in the crime;
- eyewitnesses;
- stolen property;
- place of crime;
- event time;
- length of stay of a person in a certain place;
- fact of staying in the same place of different persons, in particular accomplices of the crime.

In order to collect such digital traces, special software and hardware complexes are used for forensic content research, which make it possible:

- extract data from mobile devices (on *iOS*, *Android*, *BlackBerry*, *WindowsPhone* platforms);
- import backup copies of devices, as well as physical images (*JTAG*, *Chip-off*);
- receive data from cloud storage (physical data storage from

a computer on the servers of hosting companies);

- download and analyze data from automated accounting systems for services provided by mobile operators;
- extract contacts, messages, calls, file systems, location and deleted information;
- find common locations of several people and build their movement routes;
- detect connections between several devices;
- view all events in chronological order and identify periods of user activity;
- analyze content by keywords;
- use search filters to quickly find the necessary information.

In addition, such hardware and software complexes make it possible to examine the structures of the file system (including deleted data); remove username, passwords, history files, temporary files, analyze geospatial information about the suspect's previous locations.

Investigators and professionals who collect and examine such information must be mindful of security. This applies to software and telecommunications networks. Therefore, the mentioned subjects must have knowledge in the field of digital technologies and constantly improve them. That is, one of the features of the technical and forensic investigation of violations of the laws and customs of

¹⁶ Documenting International Crimes and Human Rights Violations for Criminal Accountability Purposes: Guidelines for Civil Society Organisations. 21 Sept 2022 / European Union Agency for Criminal Justice Cooperation. URL: <https://www.eurojust.europa.eu/publication/documenting-international-crimes-and-human-rights-violations> (date accessed: 15.03.2023).

¹⁷ Протокол Берклі URL: <https://www.law.berkeley.edu/wp-content/uploads/2022/03/Berkeley-Protocol-Ukrainian.pdf> (date accessed: 15.03.2023).

war committed in the occupied territory is the use of technical and forensic means and methods of collecting digital evidence.

Sources of evidence in the deoccupied territory are: inspection of the scene; interrogation of witnesses and victims; investigative experiments and other investigative (research) actions. It is important to remember that the deoccupied territory remains very dangerous. Therefore, investigative teams have to act in unfavorable conditions: increased risk; rapid changes in the situation; the presence of explosive objects; threats of shelling, collapses, destruction of buildings and structures; damage to transport and energy networks.

In such a situation, the security component is also an important task: for example, providing law enforcement officers with means of protection (special clothing), involving specialists in demining territories, etc.

Considering the specifics of the investigation of such crimes, it is possible to involve a military specialist in conducting investigative (search) actions, who, in accordance with Art. 71 of the Criminal Procedure Code of Ukraine¹⁸ has the status of a specialist.

The next feature of technical and forensic support for the investigation of crimes in the specified situation is the use of such technical means as: metal detectors, body detectors, magnetic lifters, sets for working with micro-objects, sets of technical means for detecting deleted images on metals, mobile explosive

laboratories (for example, “MO-Impulse”, device “BM”, riser “MR-1”, riser “Octopus”, set “Molecule”, “Trace-4”, “Ferrit-1”)¹⁹.

It is advisable for the investigator to use unnamed aerial vehicles during inspections of the places of events in the deoccupied territories. Quadcopters in the inspection process make it possible to assess the scale of destruction from a height and inspect the territory for the presence of suspicious objects (traps, stretch marks, etc.). Such aircraft simplify the inspection of the scene and increase the safety of its participants.

During the inspection of the crime scene, the investigator removes material evidence that needs to be investigated as soon as possible. However, foreign experts experienced in investigating violations of laws and customs of war recommend not to touch or collect dangerous objects. Instead, they advise capturing dangerous objects by photographing (filming) and describing them in detail in the protocol, but in no case remove them from the scene²⁰.

The list of technical means used at the scene depends on the available traces and the situation in which they are made. Most often, during the investigation of violations of the rules and customs of war, the investigator deals with traces of an explosion. Therefore, it should be known on special equipment: means of transporting explosive devices; means of detection and identification of explosive devices and substances; means of contact and remote work with explosive devices; special mobile explosive laboratories.

18 Кримінальний процесуальний кодекс України від 13.04.2012 р. № 4651-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 17.03.2023).

19 Маланчук П. М. Мантула А. П. Перспективи розвитку криміналістичної техніки в розслідуванні, розкритті і попередженні злочинів. *Young Scientist*. 2017. № 11 (51). С. 914–918. URL: http://nbuv.gov.ua/UJRN/molv_2017_11_223 (date accessed: 15.03.2023).

20 Documenting International Crimes ... URL: <https://www.eurojust.europa.eu/publication/documenting-international-crimes-and-human-rights-violations> (date accessed: 15.03.2023).

Technical and forensic means of investigation of explosive devices and substances are diverse and depend on the types of explosive materials and designs of explosive devices.

Thus, among the scientific and technical means used during the detection of explosive objects, today the means of photo and video technology are gaining special importance. As Yu. P. Prykhodko notes, this is due to the fact that explosives change their properties under the influence of oxygen, and this can subsequently negatively affect their preservation, transportation and research ²¹.

Explosive objects in solid, paste-like, liquid form are mostly removed using a set of tools from a special forensic suitcase. In the case of the bulkiness of such explosive objects or the impossibility of their transportation, flushing with swabs is carried out at the scene ²².

During the inspection, you should also take care of:

- specialized transport (minibusses for transportation of forensic equipment, recovered evidence; mobile forensic laboratories; earthmoving equipment; mobile

refrigerators for transporting corpses to forensic autopsies, etc.);

- technical and forensic means, intended for packing physical evidence, extracting objects, and conducting research in field conditions;
- other equipment (for inspection of territories and disposal of potentially dangerous explosive objects, special forensic-archaeological, X-ray, lighting, measuring equipment, etc.).

During the investigation of crimes, the investigator also has to turn to forensic records for information: dactyloscopic; DNA samples; search for missing persons; identification of unidentified corpses; wanted vehicles (in particular, in connection with the missing person); stolen, lost, seized, found, voluntarily surrendered weapons (among those that were illegally stored), etc.

It is worth noting that in the modern world of the latest technologies, multimodal forensic records are rapidly developing, which combine several parameters: for example, fingerprints, images of the face and retina ²³.

21 Приходько Ю. Особливості техніко-криміналістичного забезпечення розслідування злочинів, пов'язаних з кримінальними вибухами. *Visegrad Journal on Human Rights*. 2015. № 5/1. С. 106—113. URL: <http://elar.naiu.kiev.ua/bitstream/123456789/2305/1/%D0%9E%D1%81%D0%BE%D0%B1%D0%BB%D0%B8%D0%B2%D0%BE%D1%81%D1%82%D1%96%20%D1%82%D0%B5%D1%85%D0%BD%D1%96%D0%BA%D0%BE-%D0%BA%D1%80%D0%B8%D0%BC%D1%96%D0%BD%D0%B0%D0%BB%D1%96%D1%81%D1%82%D0%B8%D1%87%D0%BD%D0%BE%D0%B3%D0%BE%20%D0%B7%D0%B0%D0%B1%D0%B5%D0%B7%D0%BF%D0%B5%D1%87%D0%B5%D0%BD%D0%BD%D1%8F%20%D1%80%D0%BE%D0%B7%D1%81%D0%BB%D1%96%D0%B4%D1%83%D0%B2%D0%B0%D0%BD%D0%BD%D1%8F%20%D0%B7%D0%BB%D0%BE%D1%87%D0%B8%D0%BD%D1%96%D0%B2%2C%20%D0%BF%D0%BE%D0%B2%E2%80%99%D1%8F%D0%B7%D0%B0%D0%BD%D0%B8%D1%85%20%D0%B7%20%D0%BA%D1%80%D0%B8%D0%BC%D1%96%D0%BD%D0%B0%D0%BB%D1%8C%D0%BD%D0%B8%D0%BC%D0%B8%20%D0%B2%D0%B8%D0%B1%D1%83%D1%85%D0%B0%D0%BC%D0%B8.pdf> (date accessed: 15.03.2023).

22 Ibid.

23 Rajasekar V., Predić B., Saracevic M., Elhoseny M., Karabasevic D., Stanujkic D., Jayapaul P. Enhanced multimodal biometric recognition approach for smart cities based on an optimized fuzzy genetic algorithm. *Scientific Reports*. 2022. Vol. 12. Art. 622. DOI: [10.1038/s41598-021-04652-3](https://doi.org/10.1038/s41598-021-04652-3) (date accessed: 15.03.2023).

In order to improve dactyloscopic identification and automate dactyloscopic records, various methods of dactyloscopy are also being introduced, in particular contactless. With the help of these technologies, criminologists, experts, and police officers can quickly and easily compare fingerprints at the crime scene with an expanded virtual database. In addition, the use of contactless fingerprinting allows you to obtain high-quality fingerprints, without contamination and with minimal time consumption.

During the investigation of war crimes, it is often necessary to identify corpses. This can be done visually by the features of the appearance or with the help of forensic odontology research, genomic DNA. The work of a forensic pathologist is significantly complicated by: fragmentation of the body as a result of severe explosive, gunshot and other injuries; repeated movement of the corpse by outsiders; changes in the place of burial of human remains; long-term exposure of the body to open, moist air, burial in moist soil and/or in mass burials (as this accelerates the processes of rotting and saponification of the corpse).

Foreign colleagues advise involving specialists in forensic anthropology and forensic archeology for procedural actions in places of mass burials ²⁴.

British scientists claim: if signs of reburial of bodies are detected or if there is information about their movement by transport, it is advisable to examine the soil, vegetation, and pollen deposited in the form of sediment on the victim's body or clothing as a result of contact with them. Comparison of these data with data from ballistic studies and other samples allows to determine primary and secondary crime scenes: this method is called *environmental profiling* (it was first used during the investigation of war crimes in the International Tribunal for the former Yugoslavia) ²⁵.

As for DNA samples, genotyping tests currently mostly use so-called DNA profiling using evidence tracing (hair or skin samples). However, if these samples have a high degree of degradation, it is advisable to use a DNA sequencer to analyze old bones or teeth ²⁶.

Recently, the study of mixed DNA samples is gaining importance. This issue is especially acute when mass graves are found. Until recently, mixed DNA samples (DNA from several people) were considered unsuitable for research because they could not be separated. Today, methods and software have already been developed for the interpretation of complex DNA mixes that are capable of isolating the DNA of four individuals: these technologies are already being used in the USA, New Zealand, and Australia ²⁷.

24 Дүфенюк О. М. Op. cit. DOI: 10.32782/2524-0374/2022-4/88 (date accessed: 15.03.2023).

25 Brown A. G. The use of forensic botany and geology in war crimes investigations in NE Bosnia. *Forensic Science International*. 2006. Vol. 163. Is. 3. Pp. 204–210. DOI: 10.1016/j.forsciint.2006.05.025 (date accessed: 15.03.2023).

26 Kreeger L. R., Weiss D. M. *Forensic DNA Fundamentals for the Prosecutor*. Be not Afraid. USA : American Prosecutors Research Institute, 2003. 39 p. URL: <https://www.crime-scene-investigator.net/APRI-DNAfundamentalsprosecutor.pdf> (date accessed: 15.03.2023).

27 Bieber F. R., Buckleton J. S., Budowle B., Butler J. M., Coble M. D. Evaluation of forensic DNA mixture evidence: protocol for evaluation, interpretation, and statistical calculations using the combined probability of inclusion. *BMC Genetics*. 2016. Vol. 17. Art. 125. DOI: 10.1186/s12863-016-0429-7 (date accessed: 15.03.2023).

Such foreign experience is extremely relevant for Ukraine in the conditions of martial law.

For example, for the investigation of mass burials in Bucha and near Kharkiv, the Ukrainian experts successfully used a mobile DNA laboratory donated by French partners: thanks to its equipment, experts accurately determined genetic profiles even from cremated and mixed remains, which contributed to the prompt identification of the dead ²⁸.

In addition, forensic scientists are conducting numerous studies aimed at improving: methods of identification by DNA and by protein markers of human hair (185 unique protein markers can already be used (together with DNA profiling) to identify a person: their combinations make it possible to single out one person among a million ²⁹); methods of researching traces of blood at the scene and traces of a shot on various obstacles, etc.

Forensic 3D reconstruction of the face based on the skull bones found is also of great importance during the investigation of such crimes. The global scientific community continues to explore the possibilities of using 3D printing to reconstruct the face behind the bones of the skull ³⁰. The Luxembourg company

Artec3D provided Ukraine with 30 *Artec Leo* wireless 3D scanners, with the help of which domestic experts not only reconstruct the faces of victims but also quickly document human remains, preserve evidence of damage to buildings, vehicles and infrastructure ³¹.

As for the detection of injuries on the body of the victims, it is worth noting the positive experience of photographing with alternative lighting, which helps to detect injuries even before they appear on the skin (a special camera using blue light and orange filters is able to distinguish subcutaneous injuries that are invisible to the naked eye) ³².

Conclusions

Technical and forensic support for the investigation of violations of the laws and customs of war is determined by the specialists of their investigation — criminal-legal and forensic aspects. Among the forensic ones, it is worth mentioning the following:

- peculiarities of the trace picture of crimes;
- subjects of technical and forensic support (investigators, employees of operative units, experts);

28 Vergano D., Lisnych K. Ukraine is jump-starting its war-crimes investigations with a French mobile DNA lab / *TheMessenger*. 11/15/2022. URL: <https://themessenger.com/grid/a-french-mobile-dna-lab-is-helping-ukraine-investigate-war-crimes-and-mass-graves> (date accessed: 10.03.2023).

29 Степанюк Р. Л., Лапта С. П. Новітні зарубіжні розробки та перспективні дослідження у галузі техніко-криміналістичного забезпечення протидії злочинності. *Право і Безпека*. 2017. № 2. С. 96—101. URL: http://nbuv.gov.ua/UJRN/Pib_2017_2_19 (date accessed: 15.03.2023).

30 Gupta S., Gupta V., Vij H., Vij R., Tyagi N. Forensic Facial Reconstruction: The Final Frontier. *Journal of Clinical and Diagnostic Research*. 2015. Vol. 9. Is. 9. Pp. 26—28. DOI: [10.7860/JCDR/2015/14621.6568](https://doi.org/10.7860/JCDR/2015/14621.6568) (date accessed: 15.03.2023).

31 3D Scanning Will Be Used in Ukraine to Document Evidence of War Crimes / *TECH-LABS*. Aug 30, 2022. URL: <https://tech-labs.com/news/3d-scanning-will-be-used-ukraine-document-evidence-war-crimes> (date accessed: 10.03.2023).

32 Степанюк Р. Л., Лапта С. П. *Op. cit.* URL: http://nbuv.gov.ua/UJRN/Pib_2017_2_19 (date accessed: 15.03.2023).

- peculiarities of technical and forensic situations. The situation is affected by the following factors: the impossibility to carry out investigative (research) actions in the occupied territories; the danger of conducting investigative (research) actions in the territories where active hostilities are taking place; impossibility to detain guilty persons who are in the territory of the aggressor country.

Typical technical and forensic situations are scientific and technical means and methods of gathering evidence:

- in the occupied territory;
- on the territory controlled by Ukraine.

In the first situation, the technical and forensic means of researching digital traces become especially important, among which it is important to single out the Berkeley Protocol. Subjects of the application of technical and forensic means must take care of the security component software, telecommunication networks, etc.

Sources of evidence in the de-occupied territory are: inspection of the scene; interrogation of witnesses and victims; investigative experiments and other investigative (research) actions. It is important to remember that the de-occupied territory remains very dangerous. Therefore, investigative teams have to act in unfavorable conditions: increased risk; rapid changes in the situation; the presence of explosive objects; threats of shelling, collapses, destruction of buildings and structures; damage to transport and energy networks. In such a situation, the security component is also an important task: for example, providing law enforcement officers with means of

protection (special clothing), involving specialists in demining territories, etc.

It is advisable for the investigator to use unmanned aerial vehicles during inspections of the places of events in the deoccupied territories. Quadcopters in the inspection process make it possible to assess the scale of destruction from a height and inspect the territory for the presence of suspicious objects (traps, stretch marks, etc.). Such aircraft simplify the inspection of the scene and increase the safety of its participants. It is also advisable to send experts in the field of explosives, genomic analysis, forensic 3D reconstruction, environmental profiling, etc. to help investigators and law enforcement officers.

Forensic records used for such investigations (fingerprints; DNA samples; search for missing persons; identification of unidentified corpses; wanted vehicles (in particular, in connection with the disappearance of a person); stolen, lost, seized, found, voluntarily surrendered weapons (from among those that were illegally stored), etc.), in particular multimodal ones, need improvement with the use of the latest foreign experience, which will contribute to the identification of the maximum number of sources of evidentiary information and increase the efficiency and quality of its acquisition.

Техніко-криміналістичне забезпечення розслідування порушень законів і звичаїв війни

Валерій Сокурєнко

Розглянуто актуальні питання розслідування порушень законів і звичаїв війни, що потребує застосування криміналістичної техніки. Автор мав на меті (за допомогою формально-логічного та системно-структурного

методів): визначити чинники, які впливають на техніко-криміналістичне забезпечення розслідування порушень законів і звичаїв війни; схарактеризувати техніко-криміналістичні засоби відповідно до конкретних ситуацій досліджуваних злочинів; надати практичні рекомендації із використання видів і засобів криміналістичної техніки в цих ситуаціях. Зауважено, що техніко-криміналістичне забезпечення розслідування порушень законів і звичаїв війни обумовлено кримінально-правовими та криміналістичними аспектами. Обґрунтовано, що огляд місця події (як важливе джерело доказів) на окупованих і деокупованих територіях має свої особливості (через небезпеку територій, де ведуться активні бойові дії; фізичну неможливість здійснити слідчі (розшукові) дії і/або затримати винних осіб тощо): зокрема, важливого значення у цьому разі набувають техніко-криміналістичні засоби дослідження цифрових слідів. Доведено необхідність під час розслідування порушень законів і звичаїв війни забезпечити працівників правоохоронних органів засобами захисту й відрядити їм на допомогу фахівців у галузі вибухотехніки, геномного аналізу, криміналістичної 3D-реконструкції, профілювання довідки та ін. Використовувані для таких розслідувань криміналістичні обліки (зокрема, мультимодальні), потребують удосконалення із застосуванням новітнього іноземного досвіду, що сприятиме виявленню максимальної кількості джерел доказової інформації та підвищить оперативність і якість її отримання.

Ключові слова: воєнні злочини; розслідування кримінальних правопорушень; техніко-криміналістичне забезпечення; криміналістична методика; порушення законів і звичаїв війни; криміналістика.

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Declaration of Competing Interest

The author declares no conflict of interest.

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Forensic Thermal Analysis: Topic, Object, Tasks, Main Research Directions

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Formation procedure of thermal engineering researches as a separate species of forensic engineering based on principles of genesis in forensic science is considered. The latest research in the field of specific expertise use during production, distribution, transmission and consumption of energy resources is analyzed. A review of the results performed at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» multidisciplinary forensic researches on violations of accounting and theft of natural gas by interfering with operation of accounting devices, on determining the scope of performed works on installation, testing and operation of heating equipment. Purpose: formulate definition of the concepts of the topic and object of the forensic thermal analysis; compile a list of areas of forensic thermal research and form typical tasks for this type of forensic science based on. In order to achieve the goal, the methods of scientific cognition are applied: observation, comparison, abstraction, analysis, synthesis, modeling, etc. Abbreviated and expanded definition of topic of forensic thermal analysis is proposed. On the basis of general structure of the tasks of forensic engineering a, as well as the results of the analysis of the requests of the pre-trial investigation bodies and the court regarding the conduct of forensic examinations in the thermal direction, a general list of tasks of the forensic heat engineering examination with structuring into four groups was developed. A list of the main areas of research in forensic thermal analysis has been compiled.

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Keywords: object, topic, tasks, issues of forensic thermal analysis; praxeological approach; thermal engineering; thermal power equipment.

Research Problem Formulation

In the previous research paper, we noted, *“that on a praxeological basis there is a development of all kinds and species of forensic science (in particular: forensic engineering), that is, there is a path that can be considered as a “classical” way of genesis of new species of forensic examinations:*

a) first, investigator / court draws up a decision/ decision on appointment of forensic examinations/ involvement of forensic experts;

b) in the decision / decision, investigator / court forms a range of issues that need to be resolved within the framework of forensic examinations;

c) forensic experts of various specializations conduct a number of examinations, often multidisciplinary ones;

d) scientists generalize forensic expert practice, which results in offer to initiate a new type of forensic examination at the regulatory level.”¹

M. Shcherbakovskyi ² considers the praxeological approach to be the most important principle of forensic science phenomenon cognition, methodological significance of which lies in orientation of forensic science theory to solve its immediate issues as an applied science. Practical recommendations developed in accordance with principles of praxeology make it possible to use theoretically established patterns to build algorithms

for solving specific problems in typical expert situations that can be implemented, in forensic thermal engineering researches (on the example of forensic multidisciplinary examinations performed by professionals of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine, hereinafter referred to as NSC «Hon. Prof. M. S. Bokarius FSI»).

Initiation of a new engineering in the forensic specialization 10.30: *Forensic thermal researches* is a typical example of genesis in forensic science activity. Increase in the number of violations of regulatory requirements recorded by energy supply companies at heat engineering and energy facilities has increased the number of investigative proceedings on these issues and, accordingly, requests from pre-trial investigation bodies and courts to professionals of forensic science institutions knowledgeable in research on hydronics, metering devices, sources and verification of thermal energy consumption calculations, etc., that ultimately led to separation of thermal engineering research into a separate forensic science species. Determining the topic and object of Forensic thermal analysis, formulating the tasks of thermal engineering research is an urgent issue at the current stage of the formation of this forensic science species.

- 1 Богданюк І. Загальна система завдань інженерно-технічних судових експертиз. *Теорія та практика судової експертизи і криміналістики*. 2022. Вип. 4 (29). С. 110—123. DOI: [10.32353/khrife.4.2022.05](https://khrife.4.2022.05) (date accessed: 16.02.2023).
- 2 Щербаківський М. Г. Методологія дослідження феномена судових експертиз. *Вісник Луганського державного університету внутрішніх справ ім. Е. О. Дідоренка*. 2016. № 3 (75). С. 140. URL: <https://journal.lduvs.lg.ua/index.php/journal/article/view/496/434> (date accessed: 16.02.2023).

Analysis of Essential Researches and Publications

Interesting researches on engineering and technical aspects of violations of the Code of Gas Distribution Systems of Ukraine³ are research papers of D. Khomych and A. Husak⁴ (on specific expertise use of during investigation of theft of natural gas by training in the work of metering devices). At the same time, violations of technical and organizational requirements for commercial metering of thermal energy, hot and drinking water, as well as unauthorized dismantling, deliberate destruction, damage, dismantling, and other unauthorized interference with the operation of commercial metering units of thermal energy, hot or drinking water did not find appropriate coverage in the special literature on forensic expert studies.

Unfortunately, modern scientific publications in this area of research are rather limited and non-systematic in nature. Thus, M. Toporkova⁵ studied thermal energy as an object of civil rights, but did not pay attention to mechanisms and methods of committing offenses that nullify these rights. V. Kuts and Yu. Kyrychenko⁶ examined in detail the object of criminal encroachment in matters of application of Art. 188-1 of the Criminal Code of Ukraine regarding the consumption of energy resources. Criminal law characteristics of the offense provided for in Art. 188-1 of the Criminal Code of Ukraine⁷ as a subject of scientific research, was in the center of attention of T. Chumachenko⁸ (in particular, theft of thermal energy through its arbitrary use), O. Avdieieva⁹ and other scientists. O. Honcharenko¹⁰ noted that the energy sector functions in the form

- 3 Кодекс газорозподільних систем : затв. Постановою Нацком. енергетики, ком. послуг України від 30.09.2015 р. № 2494 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z1379-15#Text> (date accessed: 16.02.2023).
- 4 Хомич Д. Порухення та крадіжки при споживанні природного газу. *Історико-правовий часопис*. 2017. № 2 (10). С. 186—190. URL: http://nbuv.gov.ua/UJRN/ipch_2017_2_39 (date accessed: 16.02.2023) ; Гусак А., Хомич Д. Тактика слідчого огляду під час розслідування викрадень природного газу в газових лічильниках. *Ibid*. 2018. № 1 (11). С. 114—118. URL: <https://evnuir.vnu.edu.ua/handle/123456789/15138> (date accessed: 16.02.2023).
- 5 Топоркова М. М. Теплова енергія як об'єкт цивільних прав. *Право і Безпека*. 2010. № 5. С. 274—276. URL: http://nbuv.gov.ua/UJRN/Pib_2010_5_66 (date accessed: 16.02.2023).
- 6 Куц В., Кириченко Ю. Об'єкт незаконного використання електричної та теплової енергії. *Вісник Національної академії прокуратури України*. 2008. № 3. С. 49—54. URL: http://nbuv.gov.ua/UJRN/Vnapu_2008_3_9 (date accessed: 16.02.2023).
- 7 Кримінальний кодекс України від 05.04.2001 р. № 2341-III (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 16.02.2023).
- 8 Чумаченко Т. А. Предмет викрадення електричної та теплової енергії шляхом її самовільного використання: проблеми визначення. *Вісник Верховного Суду України*. 2007. № 8. С. 41—44 ; Eadem. Викрадення електричної або теплової енергії шляхом її самовільного використання (ст. 188-1 КК України): кримінально-правова характеристика : автореф. дис. ... канд. юрид. наук. Київ, 2008. С. 18.
- 9 Авдеев О. О. Кримінально-правова характеристика злочину, передбаченого статтею 188-1 Кримінального Кодексу України. *Вісник Кримінологічної асоціації України*. 2014. № 6. С. 25—35. URL: https://dspace.univd.edu.ua/xmlui/bitstream/handle/123456789/665/kriminal_no_pravova_harakteristika_zlochinu_peredbachenogo_statteyu_188_1_kriminal_nogo_kodeksu_ukrayini.pdf?sequence=2&isAllowed=y (date accessed: 16.02.2023).
- 10 Гончаренко О. А. Об'єкт викрадення електричної або теплової енергії шляхом її самовільного використання. *Вісник Одеського національного університету. Правознавство*. 2009. Вип. 1. Т. 14. С. 72—77. URL: <http://dspace.onu.edu.ua:8080/handle/123456789/711> (date accessed: 16.02.2023).

of a peculiar mechanism that subjects are interconnected. The mechanism of production, distribution, transmission and consumption of energy is uninterrupted and creates conditions for the reliable operation of fuel and energy complex in general that should be taken into account while investigating the theft of electrical or thermal energy through its arbitrary use. It is worth noting that a certain number of researches in expert proceedings regarding the arbitrary use of electric energy were carried out comprehensively until recently, solving the tasks of forensic electrical engineering and forensic economics.

Specialists of Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations (nowadays NSC «Hon. Prof. M. S. Bokarius FSI») as early as 2017 offered an appropriate forensic technique ¹¹. However, direct application of its best practices (certain principles) in forensic electrotechnical examinations for research on arbitrary use of thermal energy is impossible, although the use of some provisions of the mentioned methodology is expedient, requiring at the same time some refinement. The issue of expert practice regarding conducting research into the actual condition of gas, thermal energy, drinking water, etc. metering nodes requires separate consideration. The main publication devoted to the construction of gas meters and their operation is the handbook by M. Andriishyn and O. Karpash

with co-authors ¹², as well as the internet publication by V. Maksymchuk ¹³.

Analysis results of forensic examinations carried out at the NSC «Hon. Prof. M. S. Bokarius FSI» in this direction indicates that professionals most often examine gas meters for the purposes of forensic examination without taking into account general condition of the entire equipment (all measuring equipment) and its operating conditions. Trace evidence researches are primarily aimed at establishing the process of trace formation as a result of tampering with meters (in particular, examinations of locking and protective (control) devices, seals, etc.), instead to find out the facts of intentional destruction, damage, disassembly, other unauthorized interference in the work of a commercial node of thermal energy accounting, hot or drinking water, gas meters is impossible without specific expertise of the structure of these measuring equipment and specific expertise in the field of fluid and gas dynamics and technical thermodynamics that does not belong to competence of forensic trace evidence analyst. Science and technology literature on thermal engineering researches, where these physical processes are studied, described and explained, in scientific and engineering (applied) field, currently, is represented either by an outdated theoretical work (*Hydrodynamics* by L. Landau and E. Lifshitz ¹⁴), or by separate

11 Методика дослідження засобів обліку електричної енергії та схем їх підключення з метою вирішення діагностичних завдань (реєстр. код 0.1.21). Харків : ХНДІСЕ Мін'юсту України, 2017 / Реєстр методик проведення судових експертиз Мін'юсту України : офіц. сайт. URL: <http://rmpse.minjust.gov.ua/page/1> (date accessed: 16.02.2023).

12 Андріішин М. П., Карпаш О. М., Марчук Я. С., Петришин І. С., Середюк О. Є., Чеховський С. А. Облік природного газу : довідник. Івано-Франківськ, 2008. 180 с. : іл.

13 Максимчук В. Прилади обліку газу: основні типи та особливості експлуатації. *Журнал головного енергетика*. 2021. № 05. URL: <http://jge.techmedia.com.ua/zhurnal-golovnogo-energetika-2021-5/prylady-obliku-hazu-osnovni-typy-ta-osoblyvosti-eksploatatsiyi> (date accessed: 16.02.2023).

14 Ландау Л. Д., Лифшиц Е. М. Теоретическая физика. В 10 т. Т. VI: Гидродинамика. 3-е изд., перераб. Москва, 1986. 736 с.

research papers of Ukrainian scientists (*Fluid and gas dynamics* by S. Vasylenko with co-authors ¹⁵ and O. Husak with co-authors ¹⁶).

The next direction in conducting research, demanded by the bodies of pre-trial investigation and the court, is to resolve the issue of compliance of specific thermal equipment with the regulatory requirements and the requirements of the manufacturer, as well as the issue of the amount of performed work on installation, testing and operation of thermal equipment. Since heat engineering equipment is common in the modern world (both in industrial and domestic use), and differs in purpose, structure and principles of work, it is problematic to review the latest publications on these issues due to their diversity and significant volume.

In our opinion, on the territory of Ukraine, the *Power and heat engineering processes and equipment* ¹⁷ electronic news is currently the most authoritative in the field of heat engineering research; *East European Journal of Physics* ¹⁸ (in the part of publications on technical thermal physics and industrial thermal energy); *Thermophysics and Thermal Power Engineering* ¹⁹ (in the part of industrial thermal energy, conversion of renewable types of energy, measuring devices and methods of measuring thermal quantities, etc.).

The analysis results of scientific publications allow us to state that scientific developments in forensic thermal analysis require theoretical structuring, generalization and methodological concretization of individual cases under research that primarily involves determining the topic and object of forensic thermal analysis, formulating the tasks of thermal engineering research and developing typical issues that should be solved by forensic thermal analysis.

Article Purpose

This research purpose is to:

- 1) formulate concept definitions of: *forensic thermal analysis topic* and *forensic thermal analysis*;
- 2) compile a list of directions of forensic thermal engineering research in forensic examination (based on the results of analysis of requests of pre-trial investigation bodies, courts and appeals of individuals and legal entities);
- 3) identify typical tasks in certain areas of thermal engineering research.

Research methods

For achieving the goal, such methods of scientific cognition as observation, comparison, abstraction, analysis, synthesis, modeling, etc. were used.

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- 15 Василенко С. М., Кулінченко В. Р., Шевченко О. Ю., Піддубний В. А. Гідрогазодинаміка : монографія. Київ, 2016. 676 с.
- 16 Гусак О. Г., Шаратов С. О., Ратушний О. В. Гідрогазодинаміка : навч. посіб. Суми, 2022. 296 с.
- 17 Енергетичні та теплотехнічні процеси й устаткування / Вісник Національного технічного університету «Харківський політехнічний інститут». URL: <http://vestnik.kpi.kharkov.ua/etpo/uk/pro-zhurnal/> (date accessed: 16.02.2023).
- 18 Східно-європейський фізичний журнал / Вид-во ХНУ ім. В. Н. Каразіна. URL: <https://periodicals.karazin.ua/eejp/issue/view/1185> (date accessed: 16.02.2023).
- 19 Теплофізика та теплоенергетика / Вид-во Інституту технічної теплофізики НАН України. URL: <http://ittf.kiev.ua/vidavnicha-diyalnist/> (date accessed: 16.02.2023).

Main Content Presentation

In order to determine forensic thermal analysis topic, you need to refer to the formulation of the subject of forensic expertise as a science. We consider the wording: *“Forensic science topic is the factual data and circumstances of the case (proceedings), established by the forensic expert on the basis of specific expertise use through the use of appropriate means (methods) in the study of material and materialized media for the purpose of solving the tasks of forensic examination”* presented in the: *Forensic science fundamentals: Tutorial for professionals who intend to obtain or confirm forensic expert qualification book* ²⁰.

Regarding the definition of subject of forensic science topic, scientists are in one of two positions:

- 1) I. Aliiev, N. Klymenko and M. Sehai believe that forensic expertology topic should include patterns due to forensic science, since the theory of forensic examinations is formed in its depths and is largely based on its methodology. This requirement applies to the didactic component containing professional training of experts in various specializations;
- 2) F. Dzhavadov, S. Bychkova and I. Pyrih deny possibility of legal and organizational principles belonging to forensic expertology topic.

The research object and topic are categories of scientific process and are related to each other as basic and detailed, general and partial, primary

and secondary ones. Certainly, these concepts are not identical ones: for example, research topic can be common to different sciences, and the subject can be characteristic of only one science. The object concept is broader: it covers external world phenomena that are subject to knowledge and practical influence of subjects, persons. On the other hand, the topic is a component, a specific aspect of the object studied by this science, it is embodiment of the circle of the most essential studying issues. In order to simplify the difference perception between a topic and an object, it is advisable to apply the constructions *topic — goal* and *object — means* to these concepts. It may be stated that subject is the most essential, leading properties of the researched object (phenomenon), to which cognitive activity is directed. The topic concept of and the forensic examination task (if the task is not understood in a broad sense — as specific questions posed to the expert by the person or body that appointed the forensic examination, and in a narrow sense — as achievement of what the expert's cognitive activity is aimed at) are identical ones. Thus, the forensic examination topic is determined by its tasks, objects and methods of cognition. A constant connection between the topic and tasks is important for achieving our goal.

At the preparation stage for initiation of forensic thermal analysis, forensic experts of NSC «Hon. Prof. M. S. Bokarius FSI» prepared necessary changes to the Research guidelines on preparation and

20 Головченко Л. М., Лозовий А. І., Сімакова-Єфремян Е. Б. та ін. Основи судової експертизи: навчальний посібник для фахівців, які мають намір отримати або підтвердити кваліфікацію судового експерта. Харків, 2016. С. 25. URL: <https://expertize-journal.org.ua/attachments/article/924/ose.pdf> (date accessed: 09.11.2022).

appointment of forensic examinations and researches ²¹ (hereinafter referred to as RG). By order of the Ministry of Justice dated on 15.08.2022 No. 3430/5 ²² Sec. II RG supplemented Ch. 17, which clause 17.2 sets out the following main tasks of forensic thermal analysis:

- *determination of characteristics and parameters of objects related to production, transportation, supply and use (consumption) of thermal energy;*

- *compliance determination of district heating thermal engineering equipment, heating system, ventilation and air conditioning systems with requirements established in technical conditions, norms, standards and rules;*

- *determination of the technical condition of heat engineering equipment, heat power plants, pipelines of heating system with heating devices, heat exchangers and shut-off and control valves;*

- *establishment of causes and consequences of accidents and failures of thermal equipment of thermal power plants that led to violation of heat supply regimes of consumers;*

- *establishing causes and consequences of accidents and failures of the equipment under research, during which operation thermal processes occur with deviation of the parameters of this process from the standard one;*

- *establishment of operating modes of thermal installations and the mechanism of thermal processes during technical operation*

of thermal equipment and components of district heating;

- *establishing actual circumstances of the occurrence and course of thermal processes in thermal equipment, machines and mechanisms and/or their components;*

- *setting use volume of heat and/or fuel for heating, ventilation, water supply, technological, production needs.*

Other tasks can be assigned to thermal engineering research if specific expertise in the field of thermal engineering and energy-efficient technologies is required for their solving. Specific expertise use in the field of thermal engineering can also be applied in the complex solution of issues where it is necessary to apply specific expertise in other forensic expert specializations ²³.

The object of forensic examination is understood as “material (materialized) sources of information (objects, formations, etc.) that are investigated (recognized) by forensic expert on the basis of the of specific expertise application , within the framework of subject of expert research by certain methods and means in order to solve the tasks (issues) set by the authorized person (body)” ²⁴.

Systematizing the above, we can offer the following definition: **object of forensic thermal analysis** is a reflection in the form of material and materialized sources of material evidence information (thermal engineering equipment and equipment which energy transformation takes place in accompanied

21 Науково-методичні рекомендації з питань підготовки та призначення судових експертиз та експертних досліджень : затв. наказом Мін'юсту України від 08.01.1998 р. № 53/5 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 16.02.2023).

22 Зміни до деяких нормативно-правових актів з питань судово-експертної діяльності : затв. наказом Мін'юсту України від 15.08.2022 р. № 3430/5. URL: <https://zakon.rada.gov.ua/laws/show/z0922-22#n24> (date accessed: 16.02.2023).

23 Науково-методичні рекомендації URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 16.02.2023).

24 Головченко Л. М., Лозовий А. І., Сімакова-Єфремян Е. Б. та ін. *Op. cit.* С. 27. URL: <https://expertise-journal.org.ua/attachments/article/924/ose.pdf> (date accessed: 16.02.2023).

by heat processes; equipment for recording parameters; documents about phenomena and processes, schemes, drawings, etc.), placed in the case materials (proceedings). The given definition is quite concise, convenient for delineating the limits of the of specific expertise application, but it does not fully correspond to the constructions: *subject – goal and object – means*. It is worth noting that the objects of heat engineering research include: *heat engineering equipment and its components that produce heat energy by converting mechanical, electrical, and chemical energy; thermal energy equipment that uses thermal energy for heating, ventilation, water supply, technological, production or communal household needs; thermal power plants that convert heat into work or, conversely, work into heat; fuel and heat supply systems and other engineering and technical equipment or systems for converting any type of energy into thermal energy; components of such equipment where heating occurs; systems of cooling and heat-mass exchange of substances in solid, liquid and gaseous aggregate states; heat energy transmission (transportation, supply) systems, gas, heat, and water supply systems (gas pipelines, steam pipelines, hot water pipelines) along with auxiliary equipment that ensures transportation and control of these processes; equipment for accounting of energy resources (fuel, thermal energy, natural gas, water), measuring equipment for technical implementation of such accounting, other components and auxiliary equipment of accounting units; systems of utilization (recovery), accumulation (accumulation)*

of thermal energy; systems for registering operating parameters of heating equipment; operation modes (normal and emergency) of heating equipment; direct thermal processes as physical phenomena in all forms of their detection and impact on materials, substances, machines, mechanisms, equipment, etc.; drawings, technological schemes, instructions, instructions, regulations for the operation of heating equipment, etc.

Taking into account the above and the general system of tasks of forensic Engineering initiated by us earlier ²⁵, as well as analysis results of the requests of pre-trial investigation bodies and the court to conduct forensic examinations of the heat engineering direction, we propose to differentiate the tasks of forensic thermal analysis into the same four groups as the tasks of forensic engineering ²⁶:

- *First group* is research on the state of objects;
- *Second group* is establishment of compliance / non-compliance of the object state with certain requirements;
- *Third group* is determination of the mechanism of occurrence of investigated situation;
- *Fourth group* is clarification of cause-effect relation in the situation (event) under research.

Synthesizing the main tasks of heat engineering expertise fixed in RG ²⁷ and the general system of tasks of engineering and technical forensic examinations proposed by us ²⁸, we can characterize the general tasks of Forensic thermal analysis.

25 Богданюк І. О. цит. С. 120—121. DOI: [10.32353/khrife.4.2022.05](https://doi.org/10.32353/khrife.4.2022.05) (date accessed: 16.02.2023).

26 Ibid. С. 121.

27 Див. п. 17.2 гл. 17 розд. II Науково-методичних рекомендацій ... URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 16.02.2023).

28 Богданюк І. О. цит. С. 120—121. DOI: [10.32353/khrife.4.2022.05](https://doi.org/10.32353/khrife.4.2022.05) (date accessed: 16.02.2023).

General tasks of forensic thermal analysis

1. Investigation of the state of objects with definition of:

1.1. Designation of the object with identification of performed functions, identification of the object (type, brand, model, design, modification, etc.);

1.2. Characteristic parameters:

a) technical and operational indicators (temperature, pressure, concentration, density, speed, acceleration, current, flow, etc.), specific characteristics and parameters of objects related to production, transportation, supply and use (consumption) of thermal energy;

b) technical indicators (level, group, complexity, configuration, limits of application / use, etc.);

1.3. Actual condition of heat engineering equipment, heat power plants, heating pipelines with heating devices, heat exchangers, shut-off and control valves, metering units, measuring equipment and control, gas, heat, water supply systems (gas pipelines, steam pipelines, hot water pipelines) and air conditioning, heating and cooling systems:

a) integrity (complete, partial, set of fragments, fragment);

b) functionality (operable / inoperable, critical / limit state, etc.);

c) list of actual defects with their identification and

establishment of the of object malfunction type (partial, complete, critical, etc.) by defects recorded in the research;

d) type of malfunction by the method of detection (obvious / hidden);

1.4. Operation mode / mode of operating conditions; (change of mode in time);

1.5. Identification of operation mode (normal / abnormal / emergency);

1.6. Identification of the state with determination of type of the studied state (primary / changed). Determination of changes in the state (what they were);

1.7. Identification of the studied thermal process;

1.8. The type (nature) of malfunctions (loss of integrity; wear; destruction; thermal, mechanical damage, etc.) of the object as a whole or its individual parts, elements, fragments;

1.9. List (scope) of works on restoration, repair, elimination of consequences.

2. Establishment of conformity or non- compliance with the state of the object:

2.1. Requirements of regulatory and technical and regulatory docu- ments (technical requirements; technical specifications; tech- nical conditions; terms of the contract of sale / provision of services/supply/storage /prop- erty management/ lease / acces- sion; requirements of technolo- gical maps regulating compliance with certain parameters: fuel

- consumption, production, consumption / use of thermal energy, etc.);
- 2.2. Requirements of regulatory and technical documents (rules, instructions, guidelines) regarding the actions of certain persons;
- 2.3. The scope of performed work (manufacturing, construction, installation, other work, including modernization, repair, restoration); the requirements of regulatory and technical and regulatory documents, as well as contracts, project documentation and estimates.
3. Research on objects with mechanism establishment of occurrence of studied objects:
 - 3.1. Thermal process, event, incident, situation, accident, etc.;
 - 3.2. Actual operation mode, actual technological process;
 - 3.3. Actual condition, existing defects, malfunctions with the definition of the occurrence mechanism of malfunction type due to:
 - a) inept handling of equipment / appliance / component;
 - b) improper and inappropriate operation (maintenance), installation, storage;
 - c) overload;
 - d) weakness;
 - e) wear-and-tear
 - f) aging, degradation;
 - g) coincidence of operational resource;
 - h) constructive malfunction;
 - i) production or technological malfunction.
4. Establishment of causal and conditionality relations:
 - 4.1. Acquisition of actual state;
 - 4.2. Occurrence of an event, incident, situation, accident;
 - 4.3. Improper operation, improper use.

For a more complete understanding Forensic thermal analysis object, which definition is proposed above, it is important to have a good understanding of the types of heat engineering equipment and its features, for example: industrial and household; heat generating and heat using; with a developed structure in terms of the number of thermal processes in the workflow and with one type of thermal process; structurally complex and simple; systemic in composition and single-device; with the organization of the thermal process in a closed system and an open one; with the same or with different principles of work, etc. In view of infinity of this list, we will limit ourselves to analysis of the main types of thermal power equipment (only of industrial purpose and without taking into account constructive changes) as objects of forensic thermal analysis.

**Main types
 of thermal power equipment
 as objects of forensic researches**

- Boiler plants.
- Combustion chambers.
- Industrial furnaces.
- Steam turbines.
- Gas Turbine and Combined Units.
- Internal combustion engine,
- Jet engines.

- Utility blowers (pumps, fans, compressors).
- Pipeline systems and shut-off and control valves.
- Gas control points.
- Drying plants.
- Industrial heat and mass exchangers and installations.
- Refrigeration and cryogenic plants.
- Nuclear reactors.
- Steam generators.
- Other hydroelectric power stations
- Thermal power plants.
- Nuclear power plants.
- Plasma power plants.
- Heating systems
- Ventilation and air conditioning systems.
- Heating, heating, heat and power supply systems.
- Heat supply systems of industrial enterprises.
- Gas, water, steam, fuel metering units.

- Heat accumulators.

Main types of heat energy equipment include both separate types of equipment (which, although they are complete products, but according to their use or purpose are only elements, for example: boiler rooms, turbines, dryers, refrigeration units, heat and mass exchange devices), and systems containing several elements, structurally and functionally interconnected to perform system integral functions (for example: thermal and nuclear power stations; heating, ventilation and air conditioning systems; heating and heat energy supply systems). Such systems may contain the same elements (E.g., Figs. 1 and 2), but they should be considered as separate objects of study, since an incorrectly or poorly designed system cannot perform the functions assigned to it (or perform them improperly), even when individual elements fully meet the necessary quality and functional indicators.

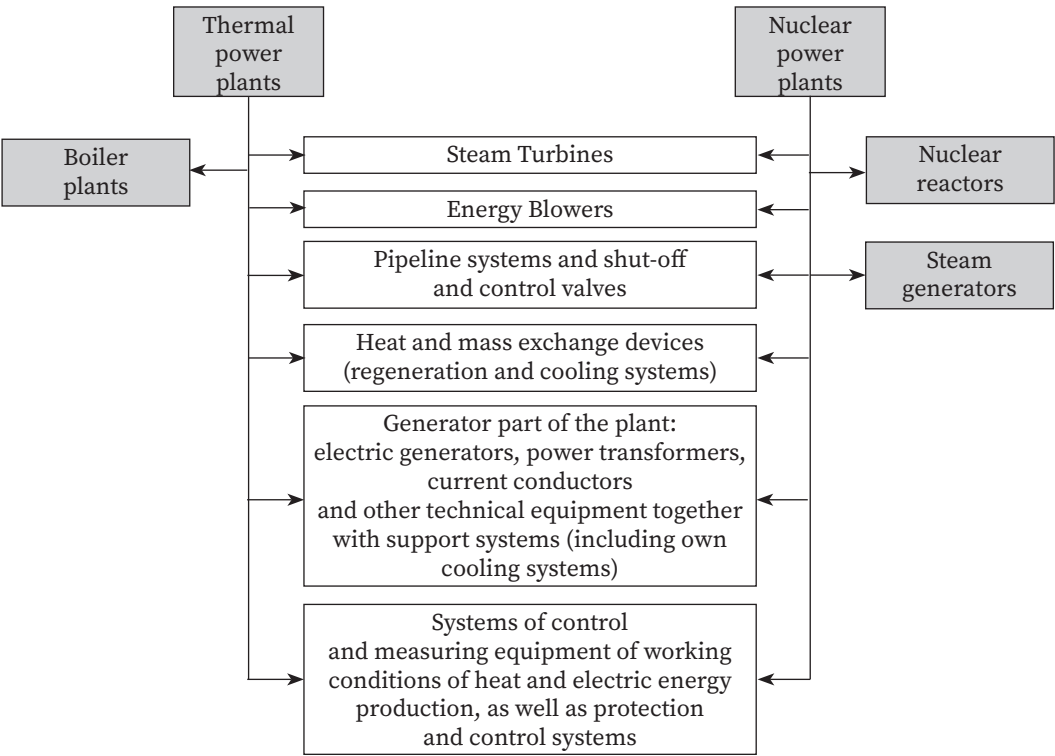


Fig. 1. Thermal and nuclear power plants as complex system objects of forensic thermal analysis

Shorthands:

■ system object

□ object that is an element of the system and can be a subsystem

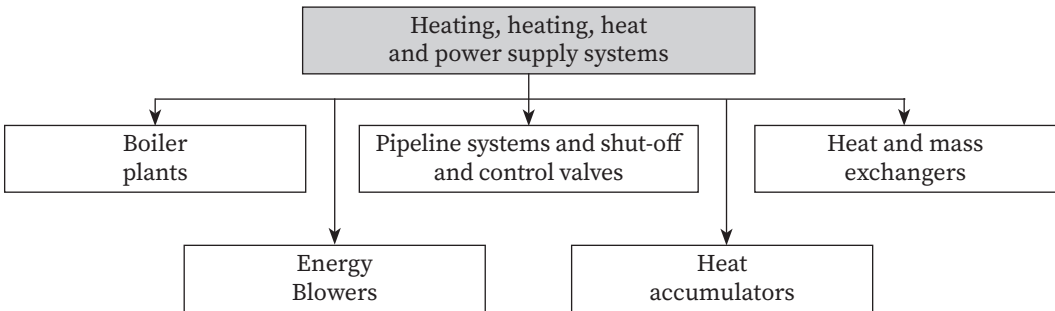


Fig. 2. Structure of a complex system object of forensic thermal expertise research

Shorthands:

■ system object

□ object that is an element of the system

Individual elements of thermal power equipment can have their own internal classifications (see, for example,

Fig. 3), and individual positions of these classifications can be separate research objects.

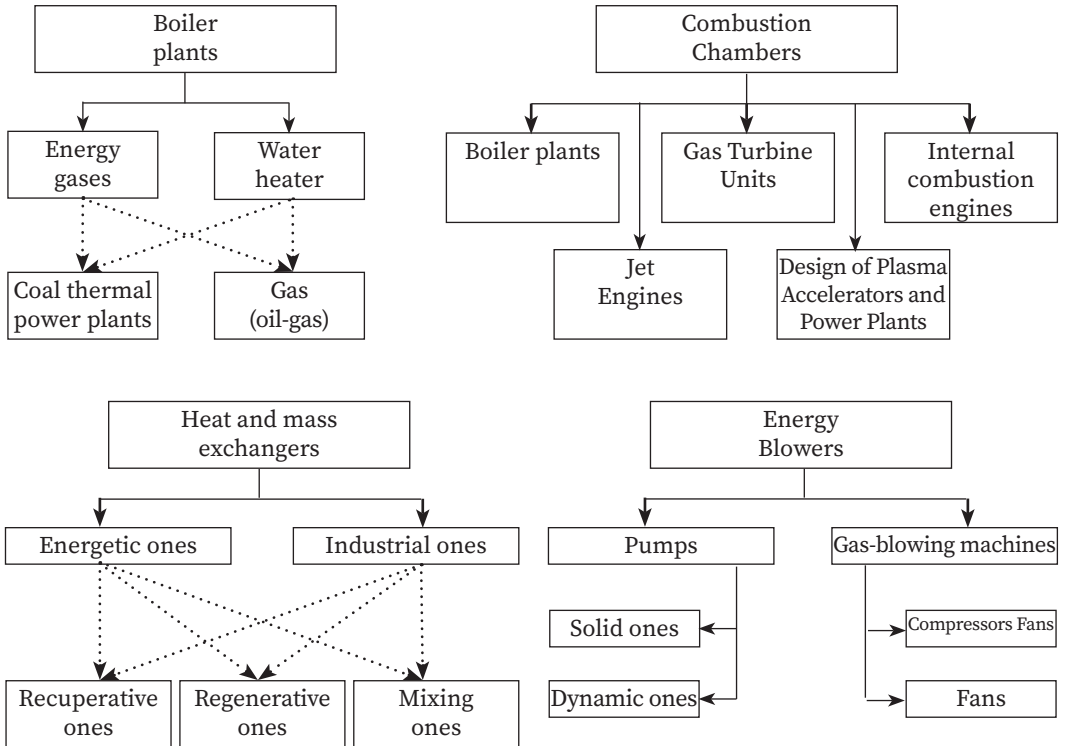


Fig. 3. Classification of elements of heating equipment systems

We should note that the same universal physical processes operate in all variety of objects of heat engineering equipment (both existing and those that can be

created): mechanical, thermodynamic, fluid and gas dynamics, heat and mass exchange (Fig. 4).

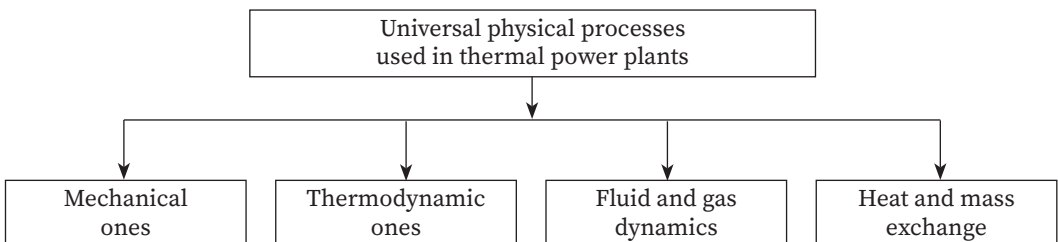


Fig. 4. Physical processes in thermal power plants

Compiling a comprehensive list of thermal energy equipment is an almost impossible task, because today mankind uses many different devices and equipment, which, moreover, are improved every day. We have provided an approximate list of such equipment for a holistic understanding of the topic, object and tasks of forensic thermal analysis and a comprehensive understanding of its methodology. Issues of the methodology of forensic thermal analysis require a separate research that is the goal of our further scientific investigations.

Conclusions

Formation procedure of thermal engineering researches as a separate type of forensic engineering and thermal analysis based on the principles of genesis in forensic expertise is considered. The latest research in the field of the use of special knowledge during the production, distribution, transmission and consumption of energy resources is analyzed. A review of the complex expert studies carried out at NSC «Hon. Prof. M. S. Bokarius FSI» on violations of accounting and theft of natural gas by interfering with the operation of accounting devices, on the determination of the scope of the completed works on installation, testing and operation of heating equipment was carried out. The need to define the concept of topic and object of forensic thermal engineering researches, formulate the tasks of thermal engineering research at the stage of formation of these species of forensic science is substantiated. Expanded definition of the subject of Forensic Thermal Analysis is proposed. On the basis of general structure of forensic tasks, as well as the results of the analysis of the requests of the pre-trial investigation bodies and the court regarding conduct

of forensic examinations in the heat engineering direction, general list of tasks of the forensic thermal analysis engineering examination structuring into four groups has been developed. A list of the main research areas of forensic thermal analysis has been compiled.

Судова теплотехнічна експертиза: предмет, об'єкт, завдання, основні напрями досліджень Ігор Богданюк

Розглянуто процес формування теплотехнічних досліджень як окремого виду судової інженерно-технічної експертизи за принципами генезису в судовій експертології. Проаналізовано останні дослідження в царині використання спеціальних знань під час виробництва, розподілу, передавання та споживання енергоресурсів. Здійснено огляд виконаних в Національному науковому центрі «Інститут судових експертиз ім. Засл. проф. М. С. Бокаріуса» комплексних експертних досліджень із порушень обліку та крадіжок природного газу шляхом утручання в роботу приладів обліку, із визначення обсягу виконаних робіт із монтажу, випробування й експлуатації теплотехнічного устаткування. Мета: сформулювати визначення понять предмета й об'єкта судової теплотехнічної експертизи; скласти перелік напрямів теплотехнічних досліджень і сформулювати за ними типові завдання для цього виду судової експертизи. Для досягнення поставленої мети застосовано методи наукового пізнання: спостереження, порівняння, абстрагування, аналіз, синтез, моделювання тощо. Запропоновано скорочене та розширене визначення предмета судової теплотехнічної експертизи. На підставі загальної структури завдань інженерно-технічних судових експертиз, а також за результатами аналізування запитів органів досудового розслідування й суду щодо проведення судових експертиз

теплотехнічного напряму розроблено загальний перелік завдань судової теплотехнічної експертизи зі структуруванням за чотирма групами. Складено перелік основних напрямів досліджень в судовій теплотехнічній експертизі.

Ключові слова: об'єкт, предмет, завдання, питання судової теплотехнічної експертизи; праксеологічний підхід; теплотехнічні дослідження; теплоенергетичне устаткування.

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Disclaimer

Founders had no role in the study design, data collection and analysis, decision to publish, or manuscript preparation.

Participants

Author contributed solely to the intellectual discussion underlying this document, case law research, writing and editing and assumes responsibility for its content and interpretation.

Declaration of Competing Interest

The author declares that there is no conflict of interest related to this topic; although Ihor Bohdaniuk is a member of the advisory board of the collection, he did not participate in the decision to publish and this article is subject to a full process of expert verification and editing.

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Importance of Forensic Expert Activity for Justice Administration in Ukraine

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This article is devoted to importance of forensic expert activity for the protection of the rights and freedoms of a person and citizen, as well as creation of appropriate conditions for the adoption of a legal, justified and fair decision by the court. This research purpose is to provide the “justice” concept with a modern meaningful characteristic as a special type of State activity and an object of forensic science support. For achieving this goal, theoretical foundations of functional distribution of State power were analyzed. Management, specifics and judicial power peculiarities, whose leading task is justice administration were separately studied. Ukrainian legislation on justice implementation is summarized and the subjects related to this type of State activity are identified. Examining magistrate status was traced and his competence was clarified. Available substantive and formal characteristics of “justice” legal category concept are outlined in order to form a circle of subjects which expert support is directed to. Possibilities of forensic science as the most qualified form of using specific expertise in legal proceedings are considered. Procedural provisions regulating the legal status forensic expert and his conclusion as one of the types of evidence are separately highlighted. The most common approaches to defining the concept of “forensic science activity” are analyzed, features and content of this type of State activity are revealed. The concept definition of “forensic science support to justice” is proposed, modern understanding of forensic science activity is formulated, and an up-to-date list of its directions is given.

Keywords: *State power, distribution of power, judiciary, legal proceedings, forensic science support to justice, forensic science, forensic expert, forensic expert activity, forensic expert conclusion.*

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Research Problem Formulation

Despite a significant amount of scientific research on law enforcement and law enforcement, which causes, in particular, the powers of the judiciary, the provisions on the legal nature of justice remain debatable to this day, due to the lack of a single scientifically based position on its essence as a legal phenomenon. Therefore, as of today, the issues of the form of administration of justice, its subject composition, content and connection with its integral interim component, namely: forensic expert activity (hereinafter referred to as the FEA) remain incompletely investigated.

Analysis of Essential Researches and Publications

At the present stage of procedural science development, many scientists in their

research often use the category of justice, which content and scope of to this day remain the subject of a lively discussion. Without defining basic, cornerstone concepts, it is impossible to conduct research on individual issues of this activity.

Understanding justice in a broad substantive definition makes possible to overcome the significant isolation of scientific research of the system individual elements of its direct provision, which one of components is forensic science.

The scientific basis of this work was made up of the works of foreign and domestic researchers, including: R. Zippelius¹; V. B. Averianov²; K. A. Babenko³; V. D. Bryntsev⁴; O. O. Vakulyk⁵; A. V. Vorontsov⁶; V. V. Halunko, O. H. Murashyn and D. H. Sevriukov⁷; L. M. Holovchenko⁸; I. S. Hrytsenko and M. A. Pohoretskyi⁹; S. S. Miroshnichenko¹⁰; I. V. Pyrih¹¹;

- 1 Zippelius R. Allgemeine Staatslehre: Politikwissenschaft : ein Studienbuch. 17.Auflage. München : C. H. BECK, 2017. 383 s.
- 2 Авер'янов В. Організація виконавчої влади: необхідність усунення внутрішніх суперечностей. *Право України*. 2009. № 5. С. 30–35.
- 3 Бабенко К. А. Конституційні засади розвитку і регулювання політико-правових відносин в Україні : монографія. Київ, 2008. 480 с.
- 4 Брынцев В. Д. Судебная власть /правосудие/: Пути реформирования в Украине. Харьков, 1998. 186 с.
- 5 Вакулик О. О. Особливості родового об'єкта злочинів проти правосуддя. *Науковий вісник публічного та приватного права*. 2018. Вип. 6. Т. 2. С. 183–187.
- 6 Воронцов А. В. Родовий об'єкт злочинів проти правосуддя: шляхи удосконалення. *Південноукраїнський правовий часопис*. 2014. № 2. С. 41–44. URL: http://nbuv.gov.ua/UJRN/Pupch_2014_2_14 (date accessed: 25.11.2022).
- 7 Теорія держави і права : навч. посіб. для студ. юрид. спец. заоч. форми навч. / авт.-упоряд.: В. В. Галунько, О. Г. Мурашин, Д. Г. Севрюков. Київ, 2012. 218 с.
- 8 Головченко Л. М. Про необхідність вдосконалення законодавства про судово-експертну діяльність в Україні. *Криміналістика и судебная экспертиза*. 2013. Вып. 58. Ч. 1. С. 5–12. URL: http://nbuv.gov.ua/UJRN/krise_2013_58%281%29__3 (date accessed: 25.11.2022).
- 9 Гриценко І. С., Погорецький М. А. Судова влада в Україні: до визначення поняття. *Право і суспільство*. 2012. № 2. С. 23–27. URL: http://nbuv.gov.ua/UJRN/Pis_2012_2_8 (date accessed: 25.11.2022).
- 10 Мірошніченко С. С. Злочини проти правосуддя: теоретичні і прикладні проблеми запобігання та протидії : дис. ... д-ра юрид. наук. Київ, 2012. 462 с.
- 11 Пиріг І. В. Теоретичні основи експертної діяльності органів внутрішніх справ : монографія. Дніпропетровськ, 2011. 312 с.

P. M. Rabinovych¹²; P. I. Repeshko¹³; M. Ya. Sehai¹⁴; A. O. Selivanov¹⁵; V. V. Serdiuk¹⁶; S. M. Tymchenko¹⁷; M. G. Shcherbakovskiy¹⁸ et al. However, these scientists paid attention to the questions we studied only indirectly, considering other, more general, specifics or related challenges.

Article Purpose

Reveal content and peculiarities of the justice administration in Ukraine, as well as to provide a modern substantiated description of the FEA and forensic science support to justice.

Research methods

While research, as general scientific as special methods of scientific knowledge were used. Their application is due to a systematic approach which made possible to consider the issues under research in unity of their social content and legal form.

Main Content Presentation

One of priority directions of ensuring proper level of realization of human and

civil rights and freedoms, ensuring their observance by the subjects of a multi-vector social system is introduction and implementation of democratic values that determine the development of modern society, as well as the creation of a rule of law state in which judiciary (along with legislative and executive) is one of the most important structures of state power.

Existence of the judiciary, which the main form of implementation is justice, and its separation from the rest of the State-power structures testifies to advancement of State in terms of implementation of the principles of the rule of law and the ideas of freedom and justice enshrined in. Thus, implementation of rule of law principles and separation of powers are closely related.

Adopted in 1996, the Constitution proclaimed Ukraine a democratic, rule of law State, and also consolidated priority of a person, his life and health, honor and dignity, inviolability and security. This demonstrated Ukraine recognition of the European approach to the relationship between State and law.

Management and activity of public authorities in Ukraine is based on pan-European principles which include

- 12 Рабінович П. М. Державна влада / Юридична енциклопедія : в 6 т. / НАН України, Ін-т держави і права ім. В. М. Корецького, Вид-во «Українська енциклопедія» ім. М. П. Бажана ; редкол.: Шемшученко Ю. С. (відп. ред.) та ін. Київ, 1998—2004. Т. 2 : Д—Й. 1999. С. 85—86. URL: http://leksika.com.ua/10701026/legal/derzhavna_vlada (date accessed: 25.11.2022).
- 13 Репешко П. І. Щодо сутності судово-експертної діяльності як об'єкта державного регулювання. *Криміналістика и судебная экспертиза*. 2013. Вып. 58. Ч. 1. С. 45—52. URL: http://nbuv.gov.ua/UJRN/krise_2013_58%281%29__8 (date accessed: 25.11.2022).
- 14 Сегай М. Судова експертологія — наука про судово-експертну діяльність. *Вісник Академії правових наук*. 2003. № 2—3 (33—34). С. 740—742.
- 15 Селіванов А. О. Конституція. Громадянин. Суд. Професійні та суспільні погляди. Київ, 2009. 560 с.
- 16 Сердюк В. В. Судова влада та її місце в теорії поділу влади. *Вісник Академії адвокатури України*. 2006. № 5. С. 38—46. URL: http://nbuv.gov.ua/UJRN/vaau_2006_5_6 (date accessed: 25.11.2022).
- 17 Тимченко С. М. Судові та правоохоронні органи України : навч. посіб. Київ, 2004. 304 с.
- 18 Щербаковский М. Г. Судебные экспертизы: назначение, производство, использование : учеб.-практ. пособ. Харьков, 2005. 544 с. URL: https://library.nlu.edu.ua/POLN_TEXT/UP/SHERBAKOVSKIY_2005.pdf (date accessed: 25.11.2022).

principle of separation of powers, which, according to K. A. Babenko, is one of the main principles of state development in the twentieth and early XXI centuries ¹⁹. The principle of power separation should be understood as the dispersal of state power into some political institutions independent of each other who have their own rights and obligations in the field of law and power, as well as deterrence and counterweights.

The power separation doctrine according to reasoning of R. Zippelius, distinguishes between the most important areas of the functional activity of the state and related competencies and requires creation of its own bodies for each such realm. For its part, each of these bodies should fundamentally limit its activities to function performance that is subordinate to. In the end, everything is reduced to preventing the concentration of power in the hands of the same political entity ²⁰.

In a general sense, optimal competence model is impossibility of legislators interfering in justice and executive branch. Executive bodies should not assume justice functions, as well as engage in lawmaking and issue legal acts.

The classical theory power separation formed as a scientific justification for such a structure of the state apparatus that ensures democracy and freedom. Thus, Sh.-L. Montesquieu, noting the legal meaning of the separation of powers, observes: *"If legislative and executive powers are united in one person or institution, then there will be no freedom, since one can fear that this monarch or senate will create tyrannical*

laws in order to apply them in a tyrannical way. There will be no freedom even when the judiciary is not separated from the power of the legislative and executive. If it is combined with the legislature, then the life and freedom of citizens will be at the mercy of arbitrariness, because the judge will be the legislator. If the judiciary is combined with the executive, then the judge will have the opportunity to become an oppressor" ²¹. The thinker considered the division of power in three variants — functional, structural and personal.

As V. B. Averianov rightly points out, State power is a holistic phenomenon that integrates all manifestations of the political will of the people as the exclusive source (sovereign) of power in the state. In other words, it is not the power itself that is divided, but the organizational mechanism for its implementation. According to this principle, the organizational mechanism for the exercise of state power should be made up of legislative, executive and judicial authorities ²². It is the judicial branch of state power that is designed to protect the rights and interests of man and citizen, as well as to promote their restoration.

At the present stage of society development, the classical doctrine of separation of powers, according to V. V. Serdiuk, should be understood as a division not of its own power, but of its functions, with the provision of each function to a separate body of the state. Delimitation of the functions of state power is, in fact, the division of labor by spheres of activity at the state level, which objectively arise from the tasks

19 Бабенко К. А. О.р. cit. С. 156.

20 Zippelius R. Ibid. Pp. 317—318.

21 Montesquieu. De l'Esprit des lois. Paris : GF Flammarion, 2013. Livre XI. Chap. 6. P. 328. URL: <https://www.les-philosophes.fr/montesquieu/esprit-des-lois/philosophie/Page-6.html> (date accessed: 25.11.2022).

22 Авер'янов В. Б. О.р. cit. С. 30.

and functions of the state and society²³. The separation of state power has two aspects: institutional (assumes that each branch of state power — legislative, executive, judicial — is represented by normatively defined, organizationally separate bodies) and functional (reflects the level of independence and autonomy of implementation by the relevant state bodies) legislative and executive power depending on the competence relationships of the head of state, parliament and government)²⁴. In other words, the functional judiciary determination is an integral factor of its legal nature.

In art. Article 6 of the Constitution of Ukraine states that *“State power in Ukraine is exercised on the basis of its division into legislative, executive and judicial one”*²⁵. Functional distribution of the triad of branches of power in a modern developed state is logically built on the mechanisms of organization of the state apparatus and its rational component in the aspect of preventing dictatorship.

The Law of Ukraine: *On the Judiciary and the Status of Judges* defines: *“organization of the “judiciary and the administration of justice in Ukraine, which operates on the basis of the rule of law in accordance with European standards and ensures the right of everyone to a fair trial”*²⁶.

It should be noted that until today in the legal literature there is no single approach

to the definition of the term “judicial power”. For example, P. M. Rabinovych defines the judicial power as a type of public power exercised by the state and its bodies, the ability to subordinate to its will the behavior of people and the activities of associations located on its territory²⁷; H. O. Murashyn — as a system of independent state bodies: courts obliged to administer justice on behalf of the state, to resolve legal disputes and conflicts in court sessions²⁸. The opinion of A. O. Selivanov is correct, he notes that the judicial power is an independent type of state power, which cannot be limited only to the system of general and specialized courts, therefore it functions in two forms of organization — as a judicial system and as a judicial system. Under the latter, the scientist proposes to understand justice, and the judicial system may include other entities that do not directly perform the functions of justice²⁹. At the same time, V. D. Bryntsev considers the judicial power as a legitimate activity of all branches of the judicial system to ensure and implement constitutional, economic, criminal, administrative and civil justice³⁰. Similar understanding of the judiciary is actually recorded in the Constitution of Ukraine, which Ch. VIII is dedicated to this branch of government and is called *Justice*.

In our opinion, the most acceptable definition of judiciary is the formulation of

23 Сердюк В. В. О.р. cit. С. 43. URL: http://nbuv.gov.ua/UJRN/vaau_2006_5_6 (date accessed: 25.11.2022).

24 Теорія держави і права ... С. 45—46.

25 Конституція України : Закон України від 28.06.1996 р. № 254к/96-ВР (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/254к/96-вр#Text> (date accessed: 25.11.2022).

26 Про судоустрій і статус суддів : Закон України від 02.06.2016 р. № 1402-VIII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1402-19#Text> (date accessed: 25.11.2022).

27 Рабінович П. М. О.р. cit. С. 86. URL: http://leksika.com.ua/10701026/legal/derzhavna_vlada (date accessed: 25.11.2022).

28 Мурашин Г. О. До питання реформування судової влади. *Правова держава*. 1997. Вип. 7. С. 71.

29 Селіванов А. О. О.р. cit. С. 305.

30 Брынцев В. Д. О.р. cit. С. 25, 26—27.

I. S. Hrytsenko and M. A. Pohoretskyi: by judicial power they mean an independent branch of power belonging to the courts, which form a single judicial system, the unity of which is ensured by the unified principles of organization and activity of the courts, the main tasks of which are to resolve on the basis of the law social conflicts between the state and citizens, citizens themselves, citizens and legal entities, legal entities among themselves, as well as control over the constitutionality of laws, protection of citizens' rights in their relations with executive authorities and officials, control over observance of citizens' rights during the investigation of crimes and conducting operational-search activities, establishment of the most significant legal facts³¹. In addition, researching the concept of judicial power, scientists identified its main essential signs:

- judicial power is exercised exclusively by special State bodies: courts;
- judicial power in Ukraine belongs to the courts that constitute a single judicial system;
- unity of the system of courts of general jurisdiction is ensured by the uniform principles of the organization and activity of courts, uniform status of judges, the rules of judicial procedure binding for all courts, the uniform order of organizational support for the activities of judges, financing of courts exclusively from the Government Budget of Ukraine, the resolution of issues of internal activity of judges by bodies of judicial self-government;

- judiciary is autonomous and independent;
- for implementation of judicial power, law gives the courts all the necessary powers;
- main tasks of all courts are to protect the rights and freedoms of man and citizen guaranteed by the Constitution of Ukraine and laws, rights and legitimate interests of legal entities, interests of society and the state;
- jurisdiction of the courts extends to all legal relations in the state;
- decision on the case by the court means that the court applies the norms of substantive law to the specific legal relations that were the subject of consideration in the court session, and renders a reasoned decision based on;
- judicial power is exercised on the basis of and in accordance with requirements of procedural law;
- court decisions are binding throughout the territory of Ukraine;
- court powers have an authoritative nature;
- fulfillment of court requirements and execution of its decisions is ensured by the State power³².

Taking into account the above, judicial power can be defined as the exclusive power of the courts to resolve conflicts of a legal nature that arise in society by exercising justice within the limits of a special procedural form and making decisions that are mandatory for all members of society.

The practical implementation of democratic humanistic principles (as the basis for the formation of the rule of law) directly depends on the availability of an

31 Гриценко І. С., Погорельський М. А. Оп. cit. С. 27. URL: http://nbuv.gov.ua/UJRN/Pis_2012_2_8 (date accessed: 25.11.2022).

32 Гриценко І. С., Погорельський М. А. Оп. cit. С. 26–27. URL: http://nbuv.gov.ua/UJRN/Pis_2012_2_8 (date accessed: 25.11.2022).

effective and efficient legal mechanism for the protection of human and civil rights and freedoms proclaimed by law. One of important components of this mechanism is the system of judicial protection, designed to exercise in the State of justice: general function of the judiciary.

Article 55 of the Constitution of Ukraine states that everyone is guaranteed *“right to appeal in court against decisions, actions or omissions of state authorities, local self-government bodies, officials and officials”*³³, which fully meets the requirements of Article 8 of the Universal Declaration of Human Rights: *“Everyone has the right to effective restoration of his rights by competent national courts in case of violation of his fundamental rights granted to him by the Constitution or the law.”* Consequently, the protection of human rights and freedoms is carried out by the judicial authorities through the administration of justice, which is regulated by Articles 124–131² (sect. VIII) of the Constitution of Ukraine, legislation on the judiciary, constitutional, civil, criminal, administrative and arbitration proceedings³⁴.

Despite the fact that the concepts of *judicial power*, *judicial system* and *justice* are closely related and are in meaningful interdependence, they should not be identified with such a concept as “justice”, since the latter implements the main functional areas of the judicial power,

namely: an independent and independent institution (branch) of State power.

Justice in Ukraine is exercised exclusively by courts that are an independent branch of power and act independently of the legislative and executive authorities (Article 124 of the Constitution of Ukraine and Article 5 of the Law of Ukraine: *On the Judiciary and the Status of Judges*)³⁵. In interpreting the constitutional provisions on justice, the Constitutional Court of Ukraine in 1997 noted that (in accordance with Article 124 of the Constitution of Ukraine) *“justice is an independent branch of state activity that courts carry out by considering and deciding in court sessions in a special procedural form of civil, criminal and other cases established by law”*³⁶.

Taking into account the provisions of Art. 124 of the Basic Law of Ukraine, it can be stated that the legislator identifies the concepts of *justice* and *judicial power*. Because of this, most scientists, exploring the problematic issues of modern justice, in their works rely on this “narrow” legal interpretation. Within the framework of legislative definitions, the narrow liquid approach, in our opinion, does not allow us to see the problem as a whole, which results in minimizing the effectiveness of judicial and legal transformations in the State.

The provisions of Article 127 of the Constitution of Ukraine *“Judges shall*

33 Конституція України URL: <https://zakon.rada.gov.ua/laws/show/254к/96-вр#Text> (date accessed: 25.11.2022).

34 Загальна декларація прав людини : прийнята і проголош. резолюцією 217 А (III) Генасамблеї ООН від 10.12.1948 р. URL: https://zakon.rada.gov.ua/laws/show/995_015#Text (date accessed: 25.11.2022).

35 Конституція України URL: <https://zakon.rada.gov.ua/laws/show/254к/96-вр#Text> (date accessed: 25.11.2022) ; Про судоустрій і статус суддів URL: <https://zakon.rada.gov.ua/laws/show/1402-19#Text> (date accessed: 25.11.2022).

36 Про відмову у відкритті конституційного провадження у справі за конституційним зверненням державного зовнішньоекономічного підприємства «Славутич-Сталь» щодо тлумачення статті 124 Конституції України і Закону України «Про міжнародний комерційний арбітраж» : ухвала КС України від 14.10.1997 р. № 44-з у справі № 016/1241-97. URL: <https://zakon.rada.gov.ua/laws/show/vz44u710-97#Text> (date accessed: 25.11.2022).

administer justice. In cases specified by law, justice is carried out with the participation of a jury” specifies the principles of Art. 124, namely: that the functions of justice are carried out only by judges, the guarantees of independence and inviolability of which are devoted to Art. 127–129 of the Basic Law.

2016 Ch. VIII *Judiciary* of the Constitution of Ukraine is supplemented with norms that regulate the activities of the prosecutor’s office and the bar. In Art. 131¹ states that the prosecutor’s office carries out “organization and procedural management of pre-trial investigations, resolution of other issues in accordance with the law during criminal proceedings, supervision of covert and other investigative and search actions of law enforcement agencies, in Article 131² that the bar provides defense against criminal charges.”³⁷ The above demonstrates that activities of these bodies go beyond the exercise of their functions by judges. Therefore, the sphere of justice includes both the activity of the court to resolve any legal dispute and criminal accusation, as well as the activity of the prosecutor office and the bar at the stages of pre-trial investigation and trial.

With adoption by Verkhovna Rada of Ukraine in 2012 of the Criminal Procedural Code of Ukraine, institution of an investigating judge was introduced, the functional focus of which is to perform the functions of judicial control over the observance of the rights, freedoms and interests of persons in criminal proceedings³⁸.

Section VIII: *Justice* of the Constitution of Ukraine defines the subjects related to this type of state activity: courts, judges, juries, the High Council of Justice, the prosecutor’s office and the bar. At the same time, there is no mention of such a subject as *examining magistrate*.

Since the investigative judge is a professional judge, he is subject to the relevant provisions of the Constitution of Ukraine and the Law of Ukraine: *On the Judiciary and the Status of Judges*. His procedural status (as a subject of exclusively criminal proceedings) is determined by the norms of criminal procedural legislation: according to Clause 18, Part 1 of Art. 3 of the Criminal Procedural Code of Ukraine, an investigating judge is a “judge of a court of first instance whose authority includes the exercise of judicial control over the observance of the rights, freedoms and interests of persons in criminal proceedings in accordance with the procedure provided for by this Code, and in the case provided for by Article 247 of this Code,— the chairman or, as determined by him, another judge of the relevant court of appeal. Examining magistrate(examining magistrates) in the court of first instance is elected by the meeting of judges from among the judges of this court”³⁹. Examining magistrate competence is to resolve the motions and complaints of the parties to the criminal proceedings only at the stage of the pre-trial investigation, since he does not decide the merits of criminal proceedings and generally does not consider cases of any jurisdiction. Therefore, the investigating judge does not administer justice by exercising judicial control.

37 Про внесення змін до Конституції України (щодо правосуддя) : Закон України від 02.06.2016 р. № 1401-VIII URL: <https://zakon.rada.gov.ua/laws/show/1401-19#n6> (date accessed: 25.11.2022).

38 Кримінальний процесуальний кодекс України від 13.04.2012 р. № 4651-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 25.11.2022).

39 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 25.11.2022).

At the same time, the examining magistrate (as a new subject of criminal proceedings in Ukraine) is the bearer of judicial power. It carries out activities aimed at preventing unlawful and unreasonable restriction of constitutional rights and freedoms of a person at the pre-trial stages of criminal proceedings by preventing and protecting the rights and freedoms of a person, in other words to restore them in case of violation.

Despite the significant number of normative acts relating to the implementation of justice, domestic legislation does not define its concepts. Content and specifics of this type of activity are also not disclosed, which is associated with the excessive complexity and multidimensional nature of this social and legal phenomenon. In domestic everyday linguistic practice, the interpretation of the concept of *justice* is limited only by its identification with the *lawful, true and fair court*, whose decisions are made impartially.

In *Etymological Dictionary of the Ukrainian Language* the words *justice, justice, judge* is interpreted as *just* (right) judge (borrowing from the Church Slavonic language: “правосѣдище” formed from

the basis of the adjective *right* that means *right, correct, fair* and the noun “сѣдѣ”⁴⁰ that means *court*). In *Academic Explanatory Dictionary of Ukrainian Language*, the word *justice* is defined as follows: “1. *Court, judicial activity of the State, justice. // Institutions that carry out judicial activities of the state.* 2. *Consideration of court cases; proceedings.* 3. *A fair court*”⁴¹, and in *Great Ukrainian Legal Encyclopedia* it is “1) *law-enforcing jurisdictional activity in the implementation of administrative, economic, criminal, civil and constitutional proceedings;* 2) *the procedural form of application of legal norms by making court decisions*”⁴². Therefore, the meaning of the concept of *justice* in the mentioned dictionaries is limited only to the activity of the court and legal proceedings.

It is worth noting that a synonym of justice (besides judiciary) is also *justice*⁴³ (lat. *iūstitia: justice, justice; law, set of laws* derives from the Latin *iustus: just*)⁴⁴. In *Academic Explanatory Dictionary...* the word *justice* is interpreted, in particular, as follows: “1. *Court, judicial activity of the state; justice.* 2. *Set of state bodies engaged in legal proceedings*”⁴⁵ and in the *Legal Encyclopedia* — “as a system of judicial institutions (a system of courts), as well as their activities in the administration of

40 Етимологічний словник української мови : в 7 т. Т. 4 : Н—П / ред. кол.: О. С. Мельничук (голов. ред.) та ін. ; уклад.: Р. В. Болдирев та ін. НАН України. Ін-т мовознавства ім. О. О. Потебні. Київ, 2003. С. 552. URL: http://history.org.ua/LiberUA/EtSIUkrM_2003/EtSIUkrM_2003.pdf (date accessed: 25.11.2022).

41 Академічний тлумачний словник української мови : в 11 т. ; за ред. І. К. Білодіда. Київ, 1970—1980. Т. 7. 1976. С. 509. URL: <http://sum.in.ua/s/pravosuddja> (date accessed: 25.11.2022).

42 Велика українська юридична енциклопедія : у 20 т. Харків, 2016—2020. Т. 19 : Кримінальний процес, судоустрій, прокуратура та адвокатура / редкол.: В. Т. Нор (голова) та ін. 2020. С. 663.

43 Караванський С. Практичний словник синонімів української мови. 2-ге вид., доп. й опрац. Київ, 2000. С. 323. URL: http://kropivnitsky.maup.com.ua/assets/files/praktichnij_slovník_sinonimiv_ukrajinskoji_movi.pdf (date accessed: 25.11.2022).

44 Етимологічний словник Т. 6: У—Я ... ; уклад.: Г. П. Півторак та ін. 2012. С. 526. URL: <http://history.org.ua/LiberUA/978-966-00-0197-8/978-966-00-0197-8.pdf> (date accessed: 25.11.2022).

45 Академічний тлумачний словник Т. 11. 1980. С. 617. URL: <http://sum.in.ua/s/justycja> (date accessed: 25.11.2022).

justice”⁴⁶. The encyclopedia also states this system (in addition to the courts) includes the prosecutor office, investigative bodies, the bar, the notary, etc. The common principles for them are serving the triumph of justice, legality and justice, ensuring the rights of citizens⁴⁷. Analysis of norms of the Constitution of Ukraine indicates that the Examining magistrate, investigative bodies, prosecutor’s offices and advocates (unlike judges) do not administer justice. However, we should state that without the performance of functions by these bodies, the activity of the court is impossible.

In modern legal science, there is no single position on the definition of the concept of *justice*, instead, substantive and formal characteristics of the legal category of this concept are the subject of lively discussion. Formation of the circle of subjects to which forensic expert support is directed depends on the resolution of the mentioned issue. Thus, M. I. Shevchuk is convinced: justice is an exclusive activity of the judiciary, called to consider cases and make decisions on them, which is implemented in a strictly defined procedural form, with observance of the principle of competition and other principles (fundamentals) of judiciary, determined by the law that gives be able to perform the tasks of the court and the judiciary in general⁴⁸. Sharing this position, S. S. Miroschnychenko notes that justice is the main function of the judicial power, which in its essence is a type of state activity, which consists in the resolution

of legal disputes by the courts. For the implementation of justice, there are general procedural forms clearly determined by the laws of Ukraine: civil, economic, administrative, criminal, constitutional proceedings and proceedings on cases of administrative offenses. Subjects of justice in Ukraine today are only professional judges (in some cases, people assessors and jurors)⁴⁹. S. M. Timchenko considers justice as the activity of the court in the form of civil, administrative, criminal, economic and constitutional proceedings, which takes place in procedural forms defined by law in court sessions with the participation of the parties and other participants in the process and consists in establishing the factual circumstances of the case and elucidation of the truth in the considered case through the investigation of evidence, which ends with the adoption of a decision in the case with the application of the norms of the relevant substantive law⁵⁰. In other words, justice is understood as the procedurally regulated activity of the courts in the objective consideration of constitutional, civil, criminal, economic and administrative cases and rendering a legal and impartial decision on.

At the same time, some scientists insist that justice in criminal law outlines a wider range of legal relations and can be achieved only by the joint, well-organized efforts of many subjects (pre-trial investigation bodies, the prosecutor’s office, the investigating judge, enforcement bodies of decisions that have entered into force,

46 Велика українська юридична енциклопедія ... Т. 20 : Криміналістика, судова експертиза, юридична психологія / редкол.: В. Ю. Шепітько (голова) та ін. ... 2018. С. 925.

47 Шемшученко Ю. С. Юстиція / Юридична енциклопедія : у 6 т. ... Т. 6 : Т—Я. 2004. С. 499. URL: <https://leksika.com.ua/19200421/legal/yustitsiya> (date accessed: 25.11.2022).

48 Шевчук М. Функції суду в сучасному кримінальному провадженні України. Вісник Львівського університету. Сер.: Юридична. 2014. Вип. 59. С. 373. URL: http://nbuv.gov.ua/UJRN/Vlnu_yu_2014_59_53 (date accessed: 25.11.2022).

49 Мірошніченко С. С. Оp. cit. С. 46.

50 Тимченко С. М. Оp. cit. С. 25.

etc.). An important role in this process is played by activities aimed at performing the functions of pre-trial investigation and judicial acts. In the considered hierarchy of subjects of justice, the court occupies a special and decisive place. That is, justice is considered as the direct activity of the court, as well as the activity of all bodies (officials) that do not belong to the judicial system, but contribute to the implementation of justice. For example, A. V. Vorontsov understands justice in a broad sense as the activity of not only the court, but also those bodies that contribute (help) the court in the implementation of the goals and tasks before justice (pre-trial investigation, prosecutor's office, etc.)⁵¹. O. O. Vakulyk calls justice the activity of judicial bodies in the consideration of cases or proceedings of all forms of judicial proceedings, as well as other bodies and persons entrusted with the duty to facilitate the administration of justice by the court and ensure the implementation of its decisions⁵². In this aspect, in our opinion, under justice, it is appropriate to understand the state activity of the court in the consideration of criminal proceedings on the merits, the imposition of punishment, as well as the consideration and resolution of issues related to the execution of the sentence. At the same time, the activity of authorized persons, regulated by the criminal procedural legislation, related to the investigation and consideration of criminal proceedings (at pre-trial stages) is the prerogative of the criminal justice system, i.e., justice covers only the activities of the court, while the justice system also includes the stages of the pre-trial investigation.

To summarize: *justice* is a component of the main functional content of the judiciary, carried out in accordance with the procedural procedure stipulated by law, the activities of judicial bodies for the consideration and resolution of civil, criminal and other cases. Distinctive features of justice (compared to other types of State activity) are as follows:

- is carried out exclusively by courts that is enshrined not only in constitutional provisions, but also in sectoral legislation;
- is carried out only by legally defined means with provision of procedural guarantees in a strictly regulated form;
- as a type of state activity ends with the adoption of a decision binding on all bodies, organizations, institutions and citizens under the threat of responsibility for its non-fulfillment.

It should be noted that justice is not only a form of exercising judicial power, but a reflection of its content, since the judgment on the right reflected in the relevant acts following the results of the court session belongs only to the court (regardless of the type of proceedings).

It is well known that the task of protecting the rights and freedoms of man and citizen, as well as creation of appropriate conditions for a court decision of a legal, reasonable and fair decision cannot be implemented without proper expert support, regulated by relevant legislation.

Objectivization of proceedings largely depends on its proper provision with the means of using special knowledge to

51 Воронцов А. В. Оп. cit. С. 41. URL: http://nbuv.gov.ua/UJRN/Pupch_2014_2_14 (date accessed: 25.11.2022).

52 Вакулик О. О. Оп. cit. С. 186.

achieve legal goals in a certain procedural form. The most common and effective form of using this knowledge is forensic science that is a procedural action regulated by law, the essence of which is to study the materials of the case (proceedings) provided at the disposal of the court by an expert on behalf of court in order to establish factual data that are essential for solving the tasks. Based on the results of the study, forensic expert draws up a conclusion which is one of the sources of evidence provided for by law.

According to clause 14 of Art. 92 of the Basic Law *“judiciary, legal procedure, status of judges; principles of forensic examination; organization and activity of the prosecutor’s office, notary, pre-trial investigation bodies, bodies and institutions for the execution of punishments; procedure for execution of court decisions; the principles of the organization and activity of the bar”* are defined exclusively by the laws of Ukraine⁵³. The Institute of Forensic Expertise is regulated by the provisions of the Constitution of Ukraine, the procedural legislation of Ukraine, international treaties (binding consent of which was given by Verkhovna Rada of Ukraine), the Law of Ukraine: *On Judicial Examination*⁵⁴ (hereinafter referred to as the *relevant Law*) and other normative legal acts, which complementing each other, determine the general provisions, tasks and principles of activity in this field. The legal institute of forensic examination is a stable complex of norms separated in the procedural legal system

not only by the subject and method of legal regulation, but also by its specific structure, which is expressed in the internal, dialectically interconnected and mutually conditioned organization of the normative material covered by it. Thus, the relevant Law defines the legal, organizational and financial foundations of FEA with the aim of ensuring the justice of Ukraine with independent, qualified and objective expertise, focused on the maximum use of the achievements of science and technology⁵⁵. However, there is no direct definition of the concept of FEA in the relevant Law, but in the preamble and individual articles (for example, Article 3: *Principles of forensic expert activity*, Article 7: *Subjects of forensic expert activity*, Article 8: *Scientific methodical and organizational methodical support of forensic expert activity*, Article 15: *Financing of forensic expert activity*), some components of its content are revealed.

Analyzing the provisions of some of these articles of the relevant Law, S. M. Sehai emphasizes that the FEA can be defined as the constitutional based activities of State authorities, legal entities and individuals to ensure justice with an independent, objective, qualified forensic examination based on the achievements of science and technology⁵⁶.

According to M. G. Shcherbakovskyi, FEA is a system of procedural and organizational procedures related to conducting forensic examinations⁵⁷. I. V. Pyrih considers FEA as a legally

53 Конституція України ... URL: <https://zakon.rada.gov.ua/laws/show/254%D0%BA/96-%D0%B2%D1%80#Text> (date accessed: 25.11.2022).

54 Про судову експертизу : Закон України від 25.02.1994 р. № 4038-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 25.11.2022).

55 Про судову експертизу ... URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 25.11.2022).

56 Серай М. Оп. cit. С. 752.

57 Щербаковский М. Г. Оп. cit. С. 26. URL: https://library.nlu.edu.ua/POLN_TEXT/UP/SHERBAKOVSKIY_2005.pdf (date accessed: 25.11.2022).

regulated activity of persons who have specific expertise and are authorized by the parties to the proceedings to perform actions, the content of which is the study of certain objects, processes and phenomena with the aim of providing scientifically based conclusions for their use during pre-trial and judicial investigation ⁵⁸. P. I. Repeshko defines the FEA as an object of state regulation; activity of the State, legal entities and individuals to ensure justice through independent, objective, competent and qualified expertise, carried out by professional (certified) forensic experts on the basis of the relevant Law and other persons in within the limits of their competence, in the order and on the grounds determined by the relevant norms of the current legislation of Ukraine ⁵⁹. L. M. Holovchenko proposed the most meaningful interpretation of forensic science; it is an activity related to state administration and scientific and methodological support in the field of forensic examination, the organization and conduct of forensic examinations, aimed at ensuring justice with an independent, qualified and objective examination. oriented to the maximum use of the achievements of science and technology ⁶⁰. In our opinion, the essence of FEA(as one of the types of state activity) consists in the organization and conduct of forensic examinations and forensic research aimed at providing authorized persons (bodies), as well as legal entities and individuals with qualified and objective conclusions, oriented to the use modern achievements of science and technology. In this context, authorized persons (bodies) include

entities authorized to appoint a forensic expert (forensic expert recruitment) in accordance with procedure provided for by the legislation of Ukraine:

- *in criminal proceedings*: parties to criminal proceedings, examining magistrate, court;
- *in civil, economic and administrative proceedings*: court, a party to the case;
- *in cases of administrative offense*: court, an official (body) in which proceedings there is a case on an administrative offense;
- *in enforcement proceedings*: state executor.

Forensic expert activity as a complex system includes the following areas:

- conducting forensic examinations;
- conducting forensic researches in order to provide conclusions outside the legal proceedings in cases stipulated by law and executive proceedings;
- State regulation;
- organizational, managerial, scientific and methodological support;
- financial support;
- information support;
- international cooperation;
- training, attestation and advanced training (postgraduate education for persons with higher education);
- training of higher education applicants at the third (educational, scientific) and scientific levels of higher education in order to obtain a degree of higher education of a Doctor of Philosophy and a Doctor, respectively.

58 Пиріг І. В. О.р. cit. С. 27.

59 Репешко П. І. О.р. cit. С. 51. URL: http://nbuv.gov.ua/UJRN/krise_2013_58%281%29__8 (date accessed: 25.11.2022).

60 Головченко Л. М. О.р. cit. С. 7. URL: http://nbuv.gov.ua/UJRN/krise_2013_58%281%29__3 (date accessed: 25.11.2022).

The preamble of relevant Law clearly states that activities in the field of forensic science are aimed directly at ensuring justice in Ukraine.

It should be noted that the list of normative legal acts, in the names, preambles and texts of which the word *provision* is placed, is quite long, indicating active use of this term by state authorities in law-making activities. However, lack of a definition of this key, fundamental element in such acts significantly complicates its correct perception and understanding.

Taking into account the dynamics of positive transformations in the field of FEA, the participants of the Round Table: *Problems of Reforming the Basic Legislation of Ukraine on Expert Justice Provision* (organized in February 2020 on the basis of Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations (now National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute») of the Ministry of Justice of Ukraine with the participation of scientists from institutions of higher education, academic science, scientists and practitioners of forensic expert institutions of Ukraine, representatives of public organizations of judicial experts) considered the proposals regarding the implementation of the norms of the current procedural codes to the acts

that ensure the implementation of the FEA, unambiguous terminological definition of the conceptual apparatus in the relevant Law and provided valid proposals for the formation of the concept of the project of the Law of Ukraine on forensic science support to justice in Ukraine ⁶¹.

In 2021, the Verkhovna Rada of Ukraine submitted 4 draft laws on the regulation of FEA, in three of which the concept of *forensic science support to justice* is identical in content to forensic expert activity. So, in draft laws No. 6284 dated on November 5, 2021 ⁶² (hereinafter referred to as draft law No. 6284), No. 6284-1 dated on November 19, 2021 ⁶³, No. 6284-2 dated on November 22, 2021 ⁶⁴, and No. 6284-2 dated on November 23, 2021 6284-3 ⁶⁵ (hereinafter referred to as Draft Law No. 6284-1, Draft Law No. 6284-2, and Draft Law No. 6284-3, respectively) it is stated that the state regulation of FEA consists in ensuring regulatory, legal, organizational, managerial, scientific, methodological and informational foundations in the field forensic examination in order to create conditions for effective forensic science support to justice. This concept is also used in draft law No. 6284-1 (Article 3: “Content of forensic expert activity”): “1. Forensic expert activity includes: <...> 7) training of highly qualified scientific personnel for the purpose of

61 Проблеми реформування базового законодавства України з питань експертного забезпечення правосуддя : мат-ли кругл. столу (Харків, 06—07.02.2020). Харків, 2020. 136 с. URL: https://www.hniise.gov.ua/user_files/File/other/13%20%D0%BF%D0%BE%D1%81%D0%B-B%D0%B5%D0%B4%D0%BD%D1%8F%D1%8F%20%D0%BD%D0%B0%20%D0%B-F%D0%B5%D1%87%D0%B0%D1%82%D1%8C.pdf (date accessed: 25.11.2022).

62 Проект закону про судово-експертну діяльність від 05.11.2021 р. № 6284. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=73154 (date accessed: 25.11.2022).

63 Проект закону про судово-експертну діяльність від 19.11.2021 р. № 6284-1. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?id=&pf3511=73246 (date accessed: 25.11.2022).

64 Проект закону про судово-експертну діяльність та самоврядування судових експертів від 22.11.2021 р. № 6284-2. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?id=&pf3511=73258 (date accessed: 25.11.2022).

65 Проект закону про внесення змін до Закону України «Про судову експертизу» від 23.11.2021 р. № 6284-3. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=73261 (date accessed: 25.11.2022).

expert provision of justice”, Art. 23 “Subjects of forensic examination and forensic activity”: “2. Subjects of judicial expert activity include: <...> relevant subdivisions (authorized persons) for expert provision of justice of state bodies, to the sphere of management of which these institutions belong,” Art. 57 “Features of social protection of a forensic expert”: “1. The grounds for applying <...> social protection of a forensic expert are <...>: a complex scientific nature, intensity of intellectual work, its unregulated duration under the conditions of the performance of urgent and particularly important tasks of expert justice provision”) ⁶⁶ and in draft law No. 6284-2 (Article 1: “Definition of the main terms”: 19) forensic expert activity - the activity of the state, legal entities and individuals with the aim of ensuring the justice of Ukraine with independent, qualified and objective expertise, focused on the maximum use of the achievements of science, technology, art and craft”) ⁶⁷.

In the explanatory note to draft law No. 6284, its purpose is defined as “improvement of the legal basis of the modern system of expert justice provision with the aim of providing justice with independent, qualified and objective expertisethatwouldmeettherequirements of international standards and modern challenges. <...> “Implementation of the act will contribute to the improvement of the regulatory and legal basis of the modern system of expert provision of justice and the provision of justice by independent, qualified and objective expertise” ⁶⁸. The purpose of the development of draft law No. 6284-2 is

stated in the explanatory note to optimize the structure of FEA subjects, “creation of a new, modern model — a single state institution for expert justice provision and improvement of the regulatory and legal framework” ⁶⁹. This draft law proposes to improve the regulation of FEA at the legislative level in order to create conditions for proper and effective forensic science support to justice , in particular, related to the implementation of judicial reform.

In addition to the legislative sphere, the concept of forensic science support to justice is also found in many scientific publications devoted to the problematic issues of forensics and criminology. It is worth noting that the control over the activities of scientific and research institutions of forensic examinations belonging to the Ministry of Justice of Ukraine and judicial experts who are not employees of state specialized institutions, as well as the organization of scientific and methodological support of FEA and the organization of the work of the Central Expert Qualification Commissions under the Ministry of Justice of Ukraine are assigned to the Department of Expert Justice Support of the said Ministry.

Despite the wide range of application of the concept studied above, its definition and legal characteristics have not been scientifically substantiated to date. Therefore, revealing the meaning of the phrase forensic science support to justice will contribute to a clearer formulation of the conceptual and categorical apparatus of

66 Проект закону ... № 6284-1. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?id=&pf3511=73246 (date accessed: 25.11.2022).

67 Проект закону ... № 6284-2. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?id=&pf3511=73258 (date accessed: 25.11.2022).

68 Проект закону ... № 6284. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=73154 (date accessed: 25.11.2022).

69 Проект закону ... № 6284-2. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?id=&pf3511=73258 (date accessed: 25.11.2022).

administrative and legal science in general and the specific application of this concept in particular.

As is well known, the theory of state and law is a basic science in relation to other legal sciences, because it is its competence to develop a general legal conceptual apparatus. However, the concept of *support* as a separate legal category in this field of knowledge is not the object of scientific research.

In *Academic Explanatory Dictionary...* the word “support” is defined as an action with the meaning *provide*, “, namely: “1. By supplying something in sufficient quantity, to satisfy someone, something in some needs. // To provide someone with sufficient material means of subsistence. 2. To create reliable conditions for doing something; guarantee something 3. To protect, protect someone, something from danger”⁷⁰. In our opinion, in terms of the functional orientation of forensic expert activity in relation to justice, the first definition is more acceptable, in which the leading word is “satisfy”: “1. Fulfill someone’s demands, wishes, claims, etc. // Provide, satisfy someone by giving something desired, needed in sufficient quantity, to complete satisfaction. // To appease, appease some feelings, aspirations, etc. 2. To make someone feel satisfied with something. 3. To be, to be appropriate to someone’s demands, expectations”⁷¹. In other words, provision directly depends on the fulfillment and satisfaction of certain requirements.

In order to form within legal science, the concept of *support* and give it an expert orientation, it is first of all necessary to find out the purpose of such an action, which is considered in normalization with the help of certain legal measures of social relations that arise in the process of appointing and organizing forensic examinations.

According to *Great Ukrainian Legal Encyclopedia*, forensic examination is research by a forensic expert based on specific expertise of material (materialized) objects (tangible evidence) of various types of materials and documents that contain evidentiary information, with the aim of establishing relevant factual data for the correct resolution of the case (proceedings)⁷².

At the legislative level, the term: *forensic science* was established in 1994 with the adoption of the relevant Law (Article 1). Until October 5, 2004, the concept of forensic examination was defined as “*examination by an expert on the basis of special knowledge of material objects, phenomena and processes that contain information about the circumstances of a case that is being investigated by bodies of inquiry, preliminary investigation or court*”⁷³. However, in 2004, the legislator replaced the words “*preliminary investigation or court*” with the words “*pre-trial and judicial investigation*”⁷⁴, and in 2012 (with the adoption of the new Code of Criminal Procedure of Ukraine) the words “*authorities of inquiry, pre-trial and judicial*

70 Академічний тлумачний словник Т. 3. 1972. С. 18. URL: <http://sum.in.ua/s/zabezpechuvaty> (date accessed: 25.11.2022).

71 Ibid. С. 113. URL: <http://sum.in.ua/s/zadovoljnjaty> (date accessed: 25.11.2022).

72 Велика українська юридична енциклопедія Т. 20 : Криміналістика, судова експертиза, юридична психологія / редкол.: В. Ю. Шепітько (голова) та ін. 2018. С. 256–257.

73 Про судову експертизу URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 25.11.2022).

74 Про внесення змін до Закону України «Про судову експертизу» : Закон України від 09.09.2004 р. № 1992-IV. URL: <https://zakon.rada.gov.ua/laws/show/1992-15/ed20041005#Text> (date accessed: 25.11.2022).

investigation” with the words “bodies of pre-trial investigation or court”⁷⁵.

With the changes of 2017, Art. 1 of the profile Law is set out in the following wording: “Forensic examination is a study based on special knowledge in the field of science, technology, art, craft, etc., of objects, phenomena and processes with the aim of providing a conclusion on issues that are or will be the subject of judicial proceedings”⁷⁶. In our opinion, this edition has certain flaws, as the direct subject of the research – the forensic expert – has been lost. Taking into account the current definition of forensic examination, its performance is allowed to any person who has specific expertise (is a specialist or other professional), but at the same time does not meet the requirements that are put forward specifically for a forensic expert (Articles 10–11 of the Law).

Forensic expert is a person who has special knowledge and qualifications in a certain expert specialty and the right to conduct a forensic examination regulated by the procedural legislation of Ukraine. The qualification of a forensic expert is determined by the scope of his theoretical knowledge and practical skills and abilities necessary for conducting an examination in the relevant specialty, as well as determined by attestation in accordance with the procedure

provided for in Art. 16 of the Law. In his professional activity, when providing an opinion, forensic expert combines the statuses of a specialist in the relevant field of knowledge and a procedural person. Thus, according to the Criminal Procedural Code of Ukraine, an expert in criminal proceedings is a person who has the right in accordance with the Law to conduct an examination and who is assigned to conduct research on objects, phenomena and processes that contain information about the circumstances of the commission of a criminal offense and to give a conclusion on issues that arise during criminal proceedings and relate to the field of her knowledge⁷⁷. The current codes stipulate that an expert can be a person who has special knowledge necessary to clarify the relevant circumstances of the case, i.e. a judicial expert is a knowledgeable person engaged by the investigator (court, investigating judge, defense party, etc.) to conduct the examination, who has scientific, technical or other special knowledge and the necessary qualification to provide a conclusion on the investigated issues, which is defined as one of the sources of evidence in the judicial proceedings (Article 84 of the Criminal Procedural Code of Ukraine of Ukraine⁷⁸, Article 76 of the Civil Procedure Code of Ukraine⁷⁹,

75 Про внесення змін до деяких законодавчих актів України у зв'язку з прийняттям Кримінального процесуального кодексу України : Закон України від 13.04.2012 р. № 4652-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4652-17/ed20121119#Text> (date accessed: 25.11.2022).

76 Про внесення змін до Господарського процесуального кодексу України, Цивільного процесуального кодексу України, Кодексу адміністративного судочинства України та інших законодавчих актів : Закон України від 03.10.2017 р. № 2147-VIII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2147%D0%B0-19/ed20171215#Text> (date accessed: 25.11.2022).

77 Кримінальний процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 25.11.2022).

78 Ibid.

79 Цивільний процесуальний кодекс України від 18.03.2004 р. № 1618-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 25.11.2022).

Article 73 of the Commercial Procedure Code of Ukraine⁸⁰, Article 72 of Code of Administrative Proceedings of Ukraine⁸¹; Article 251 of the Code of Ukraine on Administrative Offenses⁸²).

In accordance with Part 1 of Art. 101 of the Criminal Procedural Code of Ukraine *“expert conclusion is a detailed description of the research carried out by the expert and the conclusions drawn based on their results, substantiated answers to the questions posed by the person who engaged the expert, or by the investigating judge or the court that commissioned the examination”*⁸³. Since the procedural sources of evidence in Art. 84 of the Criminal Procedure Code of Ukraine is called *“testimony, physical evidence, documents, expert conclusions”*⁸⁴, then we can come to the conclusion that with the help of forensic examination, as well as during the analysis of other evidence, availability or lack of facts and circumstances that are of significant importance for the correct decision are established criminal proceedings. As evidenced by court practice, the opinion of an expert is often decisive during investigation and detection of crimes.

Despite the fact that the expert conclusions an independent source of evidence, all the collected evidence is considered as a whole for the purpose of

completing the pre-trial investigation and considering the merits of the criminal proceedings by the court. Therefore, an expert opinion, like any other source of evidence, should be subjected to careful research, comprehensive examination and critical evaluation together with others collected in accordance with Art. 93 of the Criminal Procedural Code of Ukraine as evidence in criminal proceedings.

The subject of an expert opinion in civil, economic and administrative proceedings may be the investigation of circumstances that belong to the subject of proof and the establishment of which requires the expert's special knowledge (Article 102 of the Civil Procedural Code of Ukraine of Ukraine⁸⁵, Article 98 of Commercial and Procedural Code of Ukraine⁸⁶ and Article 101 of Code of Administrative Proceedings of Ukraine⁸⁷).

Forensic expert activity is aimed at the successful solution of tasks arising in investigative and judicial practice, namely, at the transformation of potential evidentiary information contained in the materials provided for research into actual evidentiary information that can be used for the correct resolution of the case (proceedings). The above indicates the extreme importance and prevalence (in the practice of crime investigation and

80 Господарський процесуальний кодекс України від 06.11.1991 р. № 1798-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 25.11.2022).

81 Кодекс адміністративного судочинства України від 06.07.2005 р. № 2747-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 25.11.2022).

82 Кодекс України про адміністративні правопорушення від 07.12.1984 р. № 8037-X (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/80732-10#Text> (date accessed: 25.11.2022).

83 Кримінальний процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 25.11.2022).

84 Ibid.

85 Цивільний процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 25.11.2022).

86 Господарський процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 25.11.2022).

87 Кодекс адміністративного судочинства URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 25.11.2022).

court proceedings) of the appointment of forensic experts, which make it possible to use the entire arsenal of scientific research and tools. It is worth noting that in recent years there has been a positive trend in the appointment and conduct of forensic examinations, which is due to increased requirements for improving the quality of the judiciary, strengthening the guarantees and freedoms of citizens, as well as the development of democratic foundations of State and public life.

In Ukraine, FEA is carried out on the principles of legality, independence, objectivity and completeness of the research ⁸⁸: the legislation obliges the forensic expert to provide an objective opinion, which the expert implements in the truth of the conducted research and the establishment of relevant facts that characterize criminal crimes, as well as civil, economic or administrative offenses from different sides. Since the aspiration of the investigator or the court is aimed at finding out the objective truth in each case, forensic expert conclusion on the established facts plays an important role in the administration of justice. In addition, the expert conclusion makes it possible to discover new facts and determine the connection between facts, contributes to the verification of investigative (judicial) versions, and also helps to assess the reliability of other evidence.

Conclusions

Consequently, the FEA provides substantial assistance to justice in the implementation of the most important constitutional provision, namely: a person is considered innocent of committing a crime and cannot

be subjected to criminal punishment until his guilt is proved in a legal manner and established by a court verdict (Article 62 of the Constitution of Ukraine) ⁸⁹.

Forensic science support to justice should be understood as functionally directed activity of the subjects of FEA to ensure judicial proceedings of Ukraine with independent, qualified and objective expertise, focused on the maximum use of scientific and technological achievements.

Значення судово-експертної діяльності для здійснення правосуддя в Україні Вадим Хоша

Статтю присвячено значенню судово-експертної діяльності для захисту прав і свобод людини та громадянина, а також створення належних умов для ухвалення судом законного, обґрунтованого та справедливого рішення. Метою наукового дослідження є надання поняттю «правосуддя» сучасної змістовної характеристики як особливому виду державної діяльності й об'єкту експертного забезпечення. Для досягнення поставленої мети проаналізовано теоретичні засади функційного розподілу державної влади. Окремо досліджено організацію, специфіку й особливості судової влади, провідним завданням якої є здійснення правосуддя. Узагальнено законодавство України щодо реалізації правосуддя і визначено суб'єктів, дотичних до цього виду державної діяльності. Простежено правовий статус слідчого судді та з'ясовано його компетенцію. Окреслено наявні змістовні й формальні характеристики правової категорії поняття «правосуддя» з метою формування кола суб'єктів, на яких спрямовано експертне забезпечення. Розглянуто можливості судової експертизи як

88 Про судову експертизу URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 25.11.2022).

89 Конституція України URL: <https://zakon.rada.gov.ua/laws/show/254к/96-вр#Text> (date accessed: 25.11.2022).

найбільш кваліфікованої форми використання спеціальних знань у судочинстві. Окремо висвітлено процесуальні положення, якими регламентовано правовий статус судового експерта та його висновку як одного із видів доказів. Проаналізовано найпоширеніші підходи до визначення поняття «судово-експертна діяльність», розкрито особливості та зміст цього виду державної діяльності. Запропоновано визначення поняття «експертне забезпечення правосуддя», сформульовано сучасне розуміння судово-експертної діяльності й наведено актуальний перелік її напрямів.

Ключові слова: державна влада; розподіл влади; судова влада; судочинство; експертне забезпечення правосуддя; судова експертиза; судовий експерт; судово-експертна діяльність; висновок експерта.

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The author declares no conflict of interest related to this topic, although he is Advisory Board member of research paper collection; he was not involved in publishing decision, and this article has undergone a full peer review and editing procedure.

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Legal Status and Epistemological Characteristics of Forensic Veterinary Science Objects

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This research paper purpose is to reveal the legal status and provide the epistemological characteristics of objects of forensic veterinary science. General specific research methods were used to achieve the goal. For the first time, the definition of “objects of forensic veterinary research” was formulated as material and materialized sources of information about the crime, that forensic expert comprehensively, completely, objectively and directly investigates while forensic veterinary examination based on specific expertise using mutual complex of methods and means for solving diagnostic and situational expert tasks set in the procedural document on the appointment of forensic veterinary examination (forensic expert recruitment). It is argued that tangible objects of forensic veterinary examination are live examinee animals and examinee carcasses of animals, feed and feed supplements, biological material of animal origin and elements of physical environment of the scene, and material objects are case materials (proceedings) and materials obtained during operative search and/or investigative activities (reports of inspection of the scene, diagrams, photo and video documents, etc.), veterinary documents (protocols of the pathological autopsy of animal corpses, acts of farm epizootic inspection, logs of registration and treatment of sick animals and issuance of veterinary documents, medical

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history and an extract from the animal's outpatient card, the results of laboratory tests of biological body fluids (blood, urine, bile, feces, gastric juice, etc.) and bacteriological, virology, mycology tests of biological material, clinical diagnostic tests, operating permit, etc.).

Keywords: forensic science activity; definition of objects of forensic veterinary research; theory, legal status, epistemological characteristics of forensic veterinary examination; tangible and materialized objects of forensic veterinary research.

Research Problem Formulation

Currently, forensic veterinary examination (as new forensic veterinary science species in many countries of the world) is at the stage of formation, therefore, it requires development of its own theoretical, organizational, legal and praxeological conceptual foundations¹. Scientists are actively developing its theoretical basis (in particular, regarding definition of subject of forensic veterinary research, place of forensic veterinary science in the system of

forensic sciences and its importance for legal proceedings)², however, principles of forensic veterinary science have not yet been formulated, methodology of scientific and forensic research has not been developed, tested and introduced into practice, solved tasks have not been substantiated, range of specific objects of its research has not been outlined³.

Lack of theoretical substantiation (in particular, definition, characteristics and classification of objects) of forensic veterinary examination negatively affects practice of appointing and conducting

- 1 Ключев О. М. Удосконалення експертного забезпечення правосуддя: теоретичні, правові та організаційні аспекти. *Теорія та практика судової експертизи і криміналістики*. 2019. Вип. 19. С. 102—117. DOI: [10.32353/khrife.1.2019.08](https://doi.org/10.32353/khrife.1.2019.08) (date accessed: 01.02.2023) ; McDonough S. P., McEwen B. J. Veterinary Forensic Pathology: The Search for Truth. *Veterinary pathology*. 2016. Vol. 53. Is. 5. Pp. 875—877. DOI: [10.1177/0300985816647450](https://doi.org/10.1177/0300985816647450) (date accessed: 10.03.2022).
- 2 Яценко І. В. Місце судово-ветеринарної експертизи в системі судових експертиз та її значення у судочинстві. *Eurasian scientific discussions*. Proceedings of the 4th International scientific and practical conference. Barca Academy Publishing. Barcelona, Spain. 2022. Pp. 27—39. URL: <https://sci-conf.com.ua/wp-content/uploads/2022/05/EURASIAN-SCIENTIFIC-DISCUSSIONS-8-10.05.22.pdf> (date accessed: 01.02.2023) ; Idem. Можливості судово-ветеринарної експертизи у забезпеченні відшкодування шкоди, завданої внаслідок ведення агресивної війни. *Актуальні питання судової експертології, криміналістики та кримінального процесу* : мат-ли IV Міжнар. наук.-практ. конф. (Київ, 16.12.2022). Київ, 2022. С. 510—514 ; Idem. Предмет судово-ветеринарної експертизи та його значення в теорії і практиці судової експертизи. *Науковий вісник Ужгородського Національного університету. Серія: Право*. 2022. Вип. 73. Ч. 2. С. 154—173. DOI: [10.24144/2307-3322.2022.73.55](https://doi.org/10.24144/2307-3322.2022.73.55) (date accessed: 01.02.2023).
- 3 Яценко І. В., Дереча Л. М. Можливості судово-ветеринарної експертизи як нового виду судових експертиз. *Теорія та практика судової експертизи і криміналістики*. 2019. Вип. 19. С. 550—567. DOI: [10.32353/khrife.1.2019.044](https://doi.org/10.32353/khrife.1.2019.044) (date accessed: 01.02.2023).

this type of forensic examination, causes unreasonable refusals to its conducting, substitution of forensic examination with other procedural actions, raising issues in the procedural document on its appointment that go beyond the of forensic expert competence.

Analysis of Essential Researches and Publications

One of fundamental science concepts of forensic examination and forensic expert practice is concept of *object of forensic examination*. Object essence is reflected in the tasks that subject of appointment of forensic examination (forensic expert involvement) puts to forensic expert. Prerequisite for effective resolution of any case (proceedings) is a correct understanding of research objects, outlining their range and specific

characteristics, clear and substantiated determination of the grounds for appointment and conducting forensic examination, correct application of legal norms that contain this concept, because the relationship between the object and the topic of forensic examination and proof topic (range of circumstances to be established in each case) is proven ⁴.

Essence of forensic science objects as a field of practical activity was studied by: O. Bondarenko ⁵ and M. Scherbakovskiy ⁶ (outlined object of forensic science in criminal proceedings); F. Dzhabadov ⁷ (identified the main elements characterizing forensic science activity, in particular, object general forensic science theory); O. Dufeniuk ⁸ (proposed criteria for classification of forensic science objects o); N. Klymenko ⁹ (found out nature forensic science objects); O. Moisieiev ¹⁰ (detailed the object of expert forensic

- 4 Головченко Л. М., Лозовий А. І., Сімакова-Єфремян Е. Б. та ін. Основи судової експертизи: навчальний посібник для фахівців, які мають намір отримати або підтвердити кваліфікацію судового експерта. Харків, 2016. С. 70—73.
- 5 Бондаренко О. О. Об'єкт і предмет судової експертизи у кримінальному судочинстві. *Вісник Харківського національного університету ім. В. Н. Каразіна*. № 1082. Серія «Право». 2013. Вип. 16. С. 216—218. URL: <https://dspace.univd.edu.ua/xmlui/handle/123456789/2480?locale-attribute=uk> (date accessed: 01.02.2023).
- 6 Щербаківський М. Г. Проведення та використання судових експертиз у кримінальному провадженні : монографія. Харків, 2015. С. 98—132. URL: <https://dspace.univd.edu.ua/xmlui/handle/123456789/6020> (date accessed: 01.02.2023).
- 7 Джавадов Ф. М. огли. Концептуальні основи розвитку судової експертизи в сучасних умовах : автореф. дис.... канд. юрид. наук. Київ, 2000. 30 с. URL: <https://dspace.nlu.edu.ua/handle/123456789/16795> (date accessed: 01.02.2023).
- 8 Дуфенюк О. М. Експертиза у кримінальному провадженні за законодавством України та Польщі: порівняльне дослідження : монографія. Львів, 2018. С. 33—38. URL: <https://dspace.lvduvs.edu.ua/bitstream/1234567890/3601/1/%D0%9C%D0%BE%D0%BD%D0%BE%D0%B3%D1%80%D0%B0%D1%84%D1%96%D1%8F%D0%94%D1%83%D1%84%D0%B5%D0%BD%D1%8E%D0%BA%20%D0%BC%D0%B0%D0%BA%D0%B5%D1%82%20%D0%925-28.10.pdf> (date accessed: 01.02.2023).
- 9 Клименко Н. І. Природа об'єктів судової експертизи. *Актуальні питання кримінального процесу, криміналістики та судової експертизи* : мат-ли міжвідом. наук-практ. конф. (Київ, 24.11.2017). У 2 ч. Київ, 2017. Ч. 1. С. 309—312. URL: https://www.naiu.kiev.ua/files/naukova-diyalnist/naukovi-zaxodi/zbirniki/2017/materialy_1_24112017.pdf (date accessed: 01.02.2023).
- 10 Моїсєєв О. М. Експертна технологія та предмет, об'єкт, задачі судової експертизи. *Право і Безпека*. 2005. № 4/2. С. 27.

technology); M. Sehai¹¹ (defined the forensic science object as a science); E. Simakova-Yefremian¹² (substantiated legal object status of multidisciplinary forensic research); V. Khomutenko and A. Khomutenko¹³ (revealed relationships between categorical concepts *object and topic of knowledge* in the context of cognitive process in forensic science system).

Many scientists paid attention to the definition issues, classification and characteristics of objects of various types of forensic examinations: O. Hrosheva¹⁴ defined objects of multidisciplinary forensic

biological and trace evidence examination; S. Yevdokymenko¹⁵ outlined the object of forensic economics; A. Krupka and co-authors¹⁶ found out object of forensic aviation examination; O. Mieshkov¹⁷ investigated object of forensic engineering of accidents related to electrocution; H. Prokhorov-Lukin¹⁸ detailed the object of forensic examination of intellectual property; V. Sezonov¹⁹ characterized vehicles and accompanying documents as objects of forensic investigation; S. Stratonov²⁰ singled out the object of forensic examination to establish document antiquity; V. Fedorenko and

- 11 Серай М. Я. Судебная экспертология: объект, предмет, природа и система науки. *Теорія та практика судової експертизи і криміналістики*. 2003. Вип. 3. С. 25–32.
- 12 Сімакова-Єфреміан Е. Б. Теоретико-правові та методологічні засади комплексних судово-експертних досліджень : дис. ... д-ра юрид. наук. Харків, 2017. 516 с.
- 13 Хомутенко В., Хомутенко А. Дуалістична природа судової експертизи. *Юридичний вісник*. 2022. № 2. С. 139–147. DOI: [10.32837/yuv.v0i2.2332](https://doi.org/10.32837/yuv.v0i2.2332) (date accessed: 01.02.2023).
- 14 Грошева О. Ю. Організаційно-правові, загально-методичні засади комплексної судової біолого-трасологічної експертизи та її оцінка судом : дис. ... д-ра філос. за спец. 081 «Право». Харків, 2021. С. 65–84.
- 15 Євдокименко С. В. Судово-економічна експертиза: теоретико-методологічні засади і практика реалізації : автореф. дис. ... д-ра юрид. наук. Харків, 2017. 44 с. URL: https://dspace.univd.edu.ua/xmlui/bitstream/handle/123456789/2585/aref_yev_2017.pdf?sequence=2&isAllowed=y (date accessed: 01.02.2023).
- 16 Крупка А. А., Дузь Л. Є., Кралюк М. О., Крупка Я. А., Яковлева Є. О. Теоретичний базис судового експертного дослідження надзвичайних подій на повітряному транспорті. *Вісник Національного технічного університету України «Київський політехнічний інститут»*. Політологія. Соціологія. Право. 2021. № 1 (49). С. 121–127. DOI: [10.20535/2308-5053.2021.1\(49\).233054](https://doi.org/10.20535/2308-5053.2021.1(49).233054) (date accessed: 01.06.2023).
- 17 Мешков О. О. Об'єкт, предмет і завдання судової інженерно-технічної експертизи нещасних випадків, пов'язаних з електротравмуванням. *Теорія та практика судової експертизи і криміналістики*. 2019. Вип. 19. С. 367–378. DOI: [10.32353/khrife.1.2019.028](https://doi.org/10.32353/khrife.1.2019.028) (date accessed: 01.02.2023).
- 18 Прохоров-Лукін Г. Судова експертиза: поняття та види об'єктів інтелектуальної власності. *Теорія і практика інтелектуальної власності*. 2016. № 6. С. 17–24. URL: <https://drive.google.com/file/d/1rMcpBdvvF6Wq29fhuu1IJ5DTiV6dHDax/view?pli=1> (date accessed: 01.02.2023).
- 19 Сезонов В. С. Комплексне експертно-криміналістичне дослідження транспортних засобів : автореф. дис. ... канд. юрид. наук. Харків, 2018. 23 с. URL: https://dspace.univd.edu.ua/xmlui/bitstream/handle/123456789/5880/aref_Sezonov%20V%20S_2018.pdf?sequence=1&isAllowed=y (date accessed: 01.02.2023).
- 20 Стратонов С. Ю. Теоретичні та методичні основи експертизи встановлення давності документу : дис. ... канд. юрид. наук. Київ, 2020. С. 38–52. URL: http://elar.naiu.kiev.ua/bitstream/123456789/17598/4/dys_stratonov_.pdf (date accessed: 01.02.2023).

co-authors ²¹ singled out the object of copyright in forensic examination of literary works of a scientific nature; S. Chvankin ²² outlined the object of computer forensic science.

Best practices of foreign and domestic scientists have improved certain theoretical provisions of forensic science, enriched forensic science and streamlined certain types of forensic science objects. Instead, up to date, forensic veterinary examination objects have not been singled out and characterized (as a basic concept in theory of this class of forensic examination). Consequently, this issue has theoretical and practical significance and is relevant for both jurisprudence and forensic veterinary science.

Article Purpose

Formulate author's definition of *objects of forensic veterinary research* as a fundamental concept of one of the types of forensic examination, as well as to characterize such objects for the needs of forensic expert practice.

Research methods

For achieving the goal, general scientific and special scientific methods were applied: analysis, synthesis, analogy;

formal and logical; comparative legal; logical and grammatical; legal analysis; systemic and structural; sociological; statistical; modeling; comparative legal ones.

Main Content Presentation

One of the most complex and at the same time the most basic categories of forensic science in general and forensic veterinary science in particular is the topic and objects of research. It is important to determine content of these definitions to clarify forensic veterinary examination essence and improve its theoretical aspects and methodological foundations to solve practical forensic issues. Forensic examination object is a marker of the type of forensic research, information source about facts (events) and specific expertise of forensic expert; it is the object determining the tasks solved by examination and the relationship with research topic, outlines limits of forensic expert competence (in in default of the object, it is impossible to conduct forensic research, correctly and assess the expert's conclusion) ²³. Therefore, the definition formation of *objects of forensic veterinary science* is of fundamental importance for further development of forensic veterinary science.

21 Федоренко В. Л., Голікова О. В. Літературні твори наукового характеру як об'єкти авторського права: поняття та класифікація. *Криміналістика і судова експертиза*. 2018. Вип. 63. С. 215–223. URL: <https://digest.kndise.gov.ua/wp-content/uploads/2019/03/23-1.pdf> (date accessed: 01.02.2023) ; Федоренко В. Л., Чернеженко О. М., Голікова О. В. Наукові твори як об'єкти судової експертизи з питань інтелектуальної власності: генеза, поняття та кваліфікуючі ознаки. *Експерт: парадигми юридичних наук і державного управління*. 2019. № 4 (6). С. 11–24. DOI: 10.32689/2617-9660-2019-4(6)-11-24 (date accessed: 01.02.2023).

22 Чванкін С. А. Комп'ютерно-технічна експертиза у цивільному судочинстві. *Право та державне управління*. 2021. № 1. С. 45–51. DOI: 10.32840/pdu.2021.1.7 (date accessed: 01.02.2023).

23 Гуменський О. А., Будко Т. В. Місце експертизи спеціальних технічних засобів негласного отримання інформації (СТЗ) в системі судових експертиз. *Криміналістика і судова експертиза*. 2018. Вип. 63 (1). С. 67–80. URL: [http://nbuv.gov.ua/UJRN/krise_2018_63\(1\)__11](http://nbuv.gov.ua/UJRN/krise_2018_63(1)__11) (date accessed: 01.02.2023).

Unfortunately, in forensic expertology, the object issue remains debatable up to date. Noteworthy is V. Sezonov' opinion, according to which obligatory specifics of any kind, type (subspecies) of forensic examination are objects containing the necessary information to solve the subject range of issues to clarify circumstances of the event ²⁴. In addition, the range of research objects determines generic (species) affiliation of forensic science.

In philosophical sources ²⁵, cognition object is a topic, phenomenon of material or spiritual world or a sphere of reality, that cognitive activity of the subject is directed to, because it determines characteristics of this object. M. Shcherbakovskiy considers forensic examination object to be an epistemological category ²⁶.

The object of expert knowledge is a component of the cognitive process characterized as interaction of the object and the subject ²⁷. For example, if the expert knowledge object is the corpse of an animal which death caused animal by cruelty (hereinafter referred to as AC),

this leads to participation in the cognitive process of forensic veterinary expert who has special veterinary knowledge to research on this corpse and determine actual circumstances of the animal death.

O. Paladiichuk ²⁸ notes that object of forensic examination is the topic(s) that are usually material evidence(s) that are investigated by forensic expert, as well as events, facts, phenomena and other intangible objects studied by examining material carriers of information about them with specific expertise use, in connection with it distinguishes two groups of objects of forensic science: tangible and intangible ones.

O. Bondarenko ²⁹ understands the object of forensic examination as tangible objects, phenomena and processes that are subject to expert research. F. Dzhabadov ³⁰ defines forensic examination object as material carriers of information (material evidence) that are subject to direct examination by forensic experts and proposes to divide these objects into direct (material

24 Сезонов В. С. *Op. cit.* С. 67. URL: https://dspace.univd.edu.ua/xmlui/bitstream/handle/123456789/5880/aref_Sezonov%20V%20S_2018.pdf?sequence=1&isAllowed=y (date accessed: 01.02.2023).

25 Основи філософських знань. URL: <https://subject.com.ua/philosophy/osnovi/128.html> (date accessed: 01.02.2023).

26 Щербаковський М. Г. Гносеологічні та правові підстави класифікації об'єктів судової експертизи. *Теорія та практика судової експертизи і криміналістики*. 2010. Вип. 10. С. 177—185. URL: http://nbuv.gov.ua/UJRN/Tpsek_2010_10_29 (date accessed: 01.02.2023).

27 Об'єкт / Філософський енциклопедичний словник // редкол.: В. І. Шинкарук (голова) та ін. Київ, 2002. С. 438—439. URL: https://archive.org/details/filosofskiy_entsyklop/page/438/mode/2up (date accessed: 01.02.2023).

28 Паладійчук О. Ю. Значення судової експертизи у вирішенні завдань кримінального провадження. *Науковий вісник Ужгородського національного університету. Серія Право*. 2015. Вип. 34. Т. 3. С. 88. URL: <https://dspace.uzhnu.edu.ua/jspui/bitstream/lib/15056/1/%D0%97%D0%9D%D0%90%D0%A7%D0%95%D0%9D%D0%9D%D0%AF%20%D0%A1%D0%A3%D0%94%D0%9E%D0%92%D0%9E%D0%87%20%D0%95%D0%9A%D0%A1%D0%9F%D0%95%D0%A0%D0%A2%D0%98%D0%97%D0%98.pdf> (date accessed: 01.02.2023).

29 Бондаренко О. О. *Op. cit.* URL: <https://dspace.univd.edu.ua/xmlui/handle/123456789/2480?locale-attribute=uk> (date accessed: 01.02.2023).

30 Джавадов Ф. М. *Op. cit.* URL: <https://dspace.nlu.edu.ua/handle/123456789/16795> (date accessed: 01.02.2023).

carriers that are subject to examination) and auxiliary (phenomena existing or existed in the past and which forensic examination is aimed at establishing). E. Simakova-Yefremian³¹: does not agree with this division: forensic expert does not directly investigate phenomena or processes related to the crime, since they happened in the past. The scientist claims that forensic expert examines tangible and materialized information carriers. We consider this position to be justified and fully share it.

According to H. Prokhorov-Lukin, since the objects of scientific knowledge are understood as the objective world, material existence with its properties and regularities, then *“objects of forensic examination can potentially become any objectively related to the known < ... > an event is material and immaterial (however reflected in material reality) formations and phenomena, <...> their material reflections and mechanisms of creation and reflection of such objects, and these reflections actually contain information about facts and phenomena caused by events that have a legal value”*³².

It is noteworthy that V. Khomutenko and A. Khomutenko formulated interpretation of expert knowledge object as a carrier of information, that is subject to the knowledge and practical influence of knowledge subjects in order to acquire and form new knowledge about knowledge object³³.

M. Scherbakovskiy thus argues feasibility of a narrow understanding of general object of forensic research (as tangible objects and things requiring expert research): *firstly*, if the object is considered to be events, then concepts of object and topic (tasks) of forensic examination are mixed (research objects are provided to forensic expert by forensic examination customer; research on reflection of processes in the objects or identification and evaluation by forensic expert of the signs that are characteristic for this object is a matter of forensic examination topic); *secondly*, of forensic research object is as epistemological as legal concept³⁴. Phenomena and processes existing or existed in the past can be known exclusively through the research on tangible objects that have changed under influence of the process, or objects that were in environment where the process took place³⁵.

A. Lozovyi and E. E. Simakova-Yefremian interpret the *objects of forensic examination* definition as tangible and materialized carriers of information investigated by forensic expert on the basis of specific expertise application within the topic of forensic research: material evidence, derivative of material evidence, sample, document, body of living person, his psyche state, a human corpse (its parts), animal (its corpse or body fragments), plant (its parts), a substance, object, building, structure,

31 Сімакова-Єфреміян Е. Б. Комплексні судово-експертні дослідження: теорія та практика : монографія. Харків, 2016. 456 с.

32 Прохоров-Лукін Г. О. р. cit. URL: <https://drive.google.com/file/d/1rMcpBdvvF6Wq29fhuu1IJ5D-TiV6dHDax/view?pli=1> (date accessed: 01.02.2023).

33 Хомутенко В., Хомутенко А. О. р. cit. DOI: 10.32837/yuv.v0i2.2332 (date accessed: 01.02.2023).

34 Щербаківський М. Г. Проведення та використання С. 106—107. URL: <https://dspace.uni-ud.edu.ua/xmlui/handle/123456789/6020> (date accessed: 01.02.2023).

35 Ibid.

area, etc., as well as information recorded in the case files and other media ³⁶.

O. Hrosheva formulated integration object of multidisciplinary forensic biological and trace examination as a systemic tangible (materialized) formation of biological and trace origin, combined with a common research object of its various aspects (properties), for forensic experts to solve issues using specific expertise in the fields of forensic biology and forensic trace evidence analysis ³⁷.

According to V. Khomutenko and A. Khomutenko, research topic is specific circumstances making possible to obtain information about properties, parties and relations of the objects to be studied. In other words, new circumstances revealed by forensic expert on the basis of specific expertise, because they are research result and are reflected in the forensic expert conclusion. This substantiates the close relationship between the topic and the subject as elements of forensic system ³⁸.

Summarizing of scientists' opinions, we note that most of them understand research object in forensic examination as a source of factual data, according to which certain facts are established: media of information that need to be investigated and which are of interest to the investigation at the stage of pre-trial offense investigation.

The author of this publication analyzed the concept interpretation of *objects of forensic examination* as in scientific sources as in normative legal acts regulating forensic expert activity. Thus, the Law of Ukraine: *On Judicial Examination* ³⁹ (hereinafter referred to as the *Specialized Law*) does not contain a special definition of the concept of *forensic science object*: only in Art. 1 it is stated that "*forensic science n is a research based on specific expertise in the field of science, technology, art, craft, etc., **objects** [Emphasis added], phenomena and processes in order to provide an opinion on issues that are or will be the subject of litigation*" ⁴⁰. However, the *object* term often occurs in the articles of the analyzed Law, which regulate the activities of a forensic expert.

In accordance with Part 1 of Art. 69 of the Criminal Procedure Code of Ukraine ⁴¹ forensic expert in criminal proceedings is a person who has scientific, technical or other specific expertise and the right to conduct an examination in accordance with the relevant Law and who is instructed to conduct a research on *objects*, phenomena and processes containing information about the circumstances of the commission of a criminal offense, and to give an opinion on issues that arise during criminal proceedings and relate to the scope of his knowledge ⁴².

36 Лозовий А. І., Сімакова-Єфремян Е. Б. Актуальні питання реформування законодавства у сфері судово-експертної діяльності в Україні. *Теорія та практики судової експертизи і криміналістики*. 2014. Вип. 14. С. 164. URL: http://nbuv.gov.ua/UJRN/Tpsek_2014_14_26 (date accessed: 01.02.2023).

37 Грошева О. Ю. *Op. cit.* С. 19.

38 Хомутенко В., Хомутенко А. *Op. cit.* DOI: [10.32837/yuv.v0i2.2332](https://doi.org/10.32837/yuv.v0i2.2332) (date accessed: 01.02.2023).

39 Про судову експертизу : Закон України від 25.02.1994 р. № 4038-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 01.02.2023).

40 Ibid.

41 Кримінальний процесуальний кодекс України від 13.04.2012 р. № 4651-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

42 Ibid.

E. Simakova-Yefremian calls shortcoming of the norms of the Specialized Law and the Criminal Procedural Code of Ukraine of mixing the concept of the topic and object of forensic research, because according to them, range of objects of forensic research includes phenomena and processes related to the crime. The scientist justifies her position by the fact that forensic expert does not investigate the very phenomenon associated with the crime, because it has already happened in the past. On the contrary: the forensic expert examines the material, as well as materialized media of information reflected in certain documents. In this regard, E. Simakova-Yefremian recommended in Art. 1 of the Specialized Law and in Part 1 of Art. 69 of Criminal Procedural Code of Ukraine to replace the words *phenomena and processes* with the words *materialized objects* ⁴³. O. Hrosheva considers such a proposal as a reasonable and proposed new versions of Art. 1 of the Specialized Law and Part 1 of Art. 69 of the Criminal Procedural Code of Ukraine taking into account these changes ⁴⁴.

We share the position of E. Simakova-Yefremian ⁴⁵ and O. Hrosheva ⁴⁶ on inadmissibility of mixing the concepts of the topic and object of forensic research and expediency of removing the phrase about phenomena and processes associated with the crime from the range of forensic research objects.

In the draft laws relating to forensic expert activity in Ukraine, similar definitions are proposed: “**Forensic**

examination objects are tangible and materialized carriers of information that are examined by forensic an expert by means of specific expertise within the scope of expert research topic (material evidence, derivatives of material evidence, samples, documents, the body and mental state of a person, corpses (their parts), animals (their parts), plants (their parts), buildings, constructions, terrain, etc., as well as information recorded in case materials” (project of the Law on Forensic Expert Activity in Ukraine dated March 30, 2017 No. 6264) ⁴⁷ and “objects of research: tangible and intangible (informational) objects that are examined by forensic expert using special means of scientific knowledge within the scope of the subject of forensic research (physical evidence, derivatives of physical evidence, samples, documents, the body and mental state of a person, corpses (their parts), animals (their parts), plants (their parts), buildings, constructions, terrain, etc., as well as information recorded in the case files, or in the materials provided by the persons at whose request the examination is carried out by an expert” (draft law on forensic examination and self-governance of forensic experts dated on 04/03/2018 № 8223, hereinafter referred to as *draft law №. 8223*) ⁴⁸. It is good that analyzed draft laws mention animals as objects of forensic examination (research), however, other objects (feed, feed additives, biological objects of animal origin, etc.) are important for forensic veterinary examination that are also necessary to be taken into account while appointing and conducting forensic examination.

43 Сімакова-Єфремян Е. Б. Комплексні судово-експертні дослідження С. 146—147.

44 Грошева О. Ю. Ор. cit. С. 75—76.

45 Сімакова-Єфремян Е. Б. Комплексні судово-експертні дослідження

46 Грошева О. Ю. Ор. cit.

47 Проект закону про судово-експертну діяльність в Україні від 30.03.2017 р. № 6264. URL: <https://ips.ligazakon.net/document/JH4U000I> (date accessed: 01.12.2022).

48 Проект закону про судову експертизу та самоврядування судових експертів від 03.04.2018 р. № 8223. URL: <https://ips.ligazakon.net/document/JH6CF00A> (date accessed: 01.12.2022).

Procedural legislation of Ukraine uses the terms *object of forensic examination* (research) and *materials and samples*. Thus, according to Part 3 of Art. 69 of the Criminal Procedural Code of Ukraine ⁴⁹, Part 6 of Art. 72 of Civil Procedural Code of Ukraine ⁵⁰, Part 6 of Art. 69 of Commercial and Procedural Code of Ukraine ⁵¹ and part 6 of Art. 68 of Code of Administrative Proceedings of Ukraine ⁵², forensic expert has the right to: request provision of additional materials and samples; to be present during execution of procedural actions related to topics and objects of research; ask questions (submit requests to interview case participants and witnesses) related to the topic and objects of research to persons participating in criminal proceedings. According to things. 2 part 4 art. 69 of Criminal Procedural Code of Ukraine ⁵³, Part 8 of Art. 72 of Civil Procedural Code of Ukraine ⁵⁴, Part 8 of Art. 69 Commercial and Procedural Code

of Ukraine ⁵⁵ and Part 8 of Art. 68 Code of Administrative Proceedings of Ukraine ⁵⁶, forensic expert may refuse to provide conclusion if *materials* provided to him are insufficient to fulfill the duties assigned to him, and at the same time, he does not have the right to collect *materials* for forensic examination on his own initiative (Article 1, Part 4, Article 69 of Criminal Procedural Code of Ukraine ⁵⁷, Part 2 Article 107 of Civil Procedural Code of Ukraine ⁵⁸, Part 2 of Article 102 of Commercial and Procedural Code of Ukraine ⁵⁹ and Part 2 of Article 105 Code of Administrative Proceedings of Ukraine ⁶⁰).

Most of forensic veterinary examination objects after their removal at the scene, during forensic veterinary examination and after it require special conditions and treatment: for example, live animals under examination should be kept in an animal shelter or in another specially designated institution, a corpse the animal

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- 49 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).
- 50 Цивільний процесуальний кодекс України від 18.03.2004 р. № 1618-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).
- 51 Господарський процесуальний кодекс України від 06.11.1991 р. № 1798-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).
- 52 Кодекс адміністративного судочинства України від 06.07.2005 р. № 2747-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).
- 53 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).
- 54 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).
- 55 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).
- 56 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).
- 57 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).
- 58 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).
- 59 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).
- 60 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).

should be in a refrigerator to prevent it from rotting⁶¹, and feed and feed additives should be placed in clean glass containers and stored in the refrigerator. After conducting a comprehensive research, forensic veterinary examination objects return to the subject the purpose of this examination (forensic expert recruitment). Taking into account specificity of the objects of forensic veterinary examination, scientists of the Kharkiv Scientific School of Forensic Veterinary Experts (for the first time in forensic practice) detailed procedure for storing and issuing animal corpses in the *Rules for forensic veterinary determination of the degree of severity of damage caused to the health of an animal (guidelines)*⁶² (hereinafter referred to as “Rules ... for determining the severity of damage”) that should have a positive effect on preservation and handling of forensic veterinary examination objects.

Forensic expert authority in relation to research objects is provided for by the Instruction on appointment and conducting

forensic examinations and researches⁶³ (hereinafter referred to as *Instruction № 1*) and (to a lesser extent) by the Instruction on Peculiarities of the Implementation of Forensic Expert Activity by Certified Forensic Experts Not Working in State Specialized Expert Agencies institutions⁶⁴ (hereinafter referred to as *Instruction № 2*), in particular, forensic expert has the right, with the permission of forensic examination customer, to be present during the execution of procedural, executive actions and to ask questions to the participants of the process concerning the subject or object of the examination (par. 5, clause 2.1 Chapter II of Instruction № 1⁶⁵ and Clause 3 of Clause 1 of Chapter II of Instruction № 2⁶⁶) is obliged to ensure preservation of forensic examination objects (paragraph 7 of Clause 2.2 of Chapter II of Instruction № 1⁶⁷ and Clause II of Instruction № 2⁶⁸). instead, he is prohibited from storing case files and objects of expert research outside official premises (paragraph 7, paragraph 2.3, chapter II of Instruction № 1⁶⁹ and

61 Яценко І. В. Гносеологічна характеристика та процесуальне значення етапів і стадій призначення та проведення судово-ветеринарної експертизи. *Теорія та практика судової експертизи і криміналістики*. 2023. Вип. 1 (30). С. 83–84. DOI: 10.32353/khrife.1.2023.05 (date accessed: 01.06.2023).

62 Яценко І. В., Парилівський О. І. Правила судово-ветеринарного визначення ступеня тяжкості шкоди, заподіяної здоров'ю тварини (методичні рекомендації). Харків, 2022. 47 с.

63 Інструкція про призначення та проведення судових експертиз та експертних досліджень : затв. наказом Мін'юсту України від 08.10.1998 р. № 53/5 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

64 Інструкція про особливості здійснення судово-експертної діяльності атестованими судовими експертами, що не працюють у державних спеціалізованих експертних установах : затв. наказом Мін'юсту України від 12.12.2011 р. № 3505/5 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z1431-11#Text> (date accessed: 01.06.2023).

65 Інструкція про призначення та проведення URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

66 Інструкція про особливості здійснення URL: <https://zakon.rada.gov.ua/laws/show/z1431-11#Text> (date accessed: 01.06.2023).

67 Інструкція про призначення та проведення URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

68 Інструкція про особливості здійснення URL: <https://zakon.rada.gov.ua/laws/show/z1431-11#Text> (date accessed: 01.06.2023).

69 Інструкція про призначення та проведення URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

paragraph 5, paragraph 4, chapter II Instruction № 2⁷⁰). The Codes of Ukraine, Specialized Law and Instructions № 1 and 2 contain other powers of the expert related to the research objects.

We believe that powers and duties of forensic experts should not depend on the form of ownership of the institution where they work, so we consider it necessary to improve Instruction № 2⁷¹ to the level of Instruction № 1⁷².

Considerable attention in the legislation of Ukraine is paid to the treatment of research object. Thus, in accordance with clause 1.8 of Section I of Instruction № 1⁷³ basis for forensic examination is a procedural document, that should indicate *the objects* to be examined. In procedural document on the appointment of a forensic veterinary examination, the subject of its appointment (forensic expert involvement) should indicate the exact name of forensic examination objects (for any object), their number (for corpses of animals and live animals), weight and batch number (for feed and feed additives), number of sheets (for veterinary documents and other materials), as well as other information that is relevant for conducting forensic examination.

Compliance with the *maximum preservation of objects* requirement is one of the cornerstones of forensic activity in Ukraine: at the legislator request during forensic examinations, the objects of research are allowed to be damaged or spent only to the extent necessary for the study (see, for example, paragraph 3 of Part 5 of Article 69 of Criminal Procedural Code of Ukraine⁷⁴, Part 3 of Article 108 of the Civil Procedural Code of Ukraine⁷⁵, Article 5 of Specialized Law⁷⁶, paragraph 1 of paragraph 4.11 of Section IV of Instructions № 1⁷⁷ etc.).

Application to forensic examination objects of methods that destroy or damage this object or change its properties is allowed with the written permission of appointment subject of forensic examination (forensic expert involvement) and reasonable grounds to argue that it is impossible to use other methods for conducting forensic research (see paragraph 3 of Part 5 of Article 69 of the Criminal Procedural Code of Ukraine⁷⁸, paragraph 7 of paragraph 2.2 of Section II and paragraph 2 of clause 4.11 of section IV of Instruction № 1⁷⁹).

In clause 4.11 of section IV of Instruction № 1 provides for the requirement to make

70 Інструкція про особливості здійснення URL: <https://zakon.rada.gov.ua/laws/show/z1431-11#Text> (date accessed: 01.06.2023).

71 Ibid.

72 Інструкція про призначення та проведення URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

73 Ibid.

74 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

75 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (дата звернення: 01.02.2023).

76 Про судову експертизу : Закон URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 01.02.2023).

77 Інструкція про призначення та проведення URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

78 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

79 Інструкція про призначення та проведення URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

an appropriate entry in the conclusion of the forensic expert in case of damage or destruction of the object during research (paragraph 3), on the need to return to the customer of forensic examination of objects or their remains damaged during research (paragraphs 3 and 1), as well as (after marking with appropriate stamps) documentary materials and samples provided for comparative research on samples (paragraph 4) ⁸⁰.

The Codes of Ukraine, in addition to the Criminal Procedural Code of Ukraine, do not contain explicit prohibition to store the materials of proceedings (cases) and objects of examination outside workplace of forensic expert (specially designated storage sites), in connection with which the author of this work proposed to coordinate this issue in the codes, Specialized Law and Instructions № 1 and 2 ⁸¹.

Unhindered access to research object and ensuring the customer's examination of the proper working conditions of the forensic expert is provided for in Article 6 of the relevant Law ⁸² and paragraph 3.9 of Section III of Instruction № 1 ⁸³. Regardless of the type of legal proceedings, the forensic expert has the right to file a petition for provision of additional materials (in

particular, research objects, see paragraph 1 of Part 1 of Article 13 of Specialized Law ⁸⁴).

We consider the proposal in Part 4 of Art. 25 of draft law № 8223 ⁸⁵, the norm according to which objects, in which respect the State has established restrictions on circulation and use (for example, animals listed in the Red Data Book of Ukraine) are examined exclusively by state specialized forensic science institutions.

The *forensic examination object* term can be found in legal regulations that regulate the categories of examinations: primary, additional and repeated (clause 1.2.14, clause 1.2, chapter I of Instruction № 1 ⁸⁶) and in the requirements for the expert's conclusion: in the introductory part specify, in particular, the list of objects subject to research; method of delivery and type of packaging of the researched objects, indicating (if necessary) information about whether the method of packaging affected their preservation; compliance of materials and objects received by forensic expert institution (expert) with the materials specified in the document on forensic expert involvement (forensic expert recruitment), para. 7, 9 and 10 clauses 4.12 ch. IV of Instructions № 1 ⁸⁷, and in the research part: information about the state of

80 Інструкція про призначення та проведення ... URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

81 Яценко І. Правовий статус судово-ветеринарного експерта як суб'єкта судово-експертної діяльності у контексті новітнього законодавства України. *Теорія та практика судової експертизи і криміналістики*. 2022. Вип. 4 (29). С. 102–103. DOI: 10.32353/khrife.4.2022.04 (date accessed: 01.02.2023).

82 Про судову експертизу : Закон ... URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 01.02.2023).

83 Інструкція про призначення та проведення ... URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

84 Про судову експертизу : Закон ... URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 01.02.2023).

85 Проект закону ... № 8223. URL: <https://ips.ligazakon.net/document/JH6CF00A> (date accessed: 01.12.2022).

86 Інструкція про призначення та проведення ... URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

87 Ibid.

research objects (paragraph 3, clause 4.13, chapter IV of Instructions № 1) ⁸⁸.

In legal acts regulating the activities of expert units of the Ministry of Internal Affairs of Ukraine, the *research objects term* means “any material carriers of information (traces or their copies, documents, substances, images, raw data, etc.) and/or information about them and comparative material received by SSRFC, SRFC for the research purpose during forensic examination or expert research” ⁸⁹.

Thus, the above indicates that forensic examination objects in general and forensic in veterinary examination in particular are tangible and materialized carriers of information. Usually, tangible objects of forensic veterinary examination are physical evidence, documents, animals, animal corpses, their remains, samples for comparative research, the scene.

Analyzed current legal acts and departmental documents and draft laws make it possible to assert that the basis of the professional activity of a forensic expert is the forensic research of objects provided by forensic examination customer (forensic expert recruitment). The powers of forensic expert in relation to the forensic examination objects should not go beyond the legally regulated requirements ⁹⁰. In case of a violation of this prohibition, conditions are created for recognizing forensic expert

conclusion as inadmissible evidence (Article 89 of the Criminal Procedural Code of Ukraine ⁹¹) that cannot be used to make procedural decisions (it cannot be referred to by investigating officer or inquirer when drawing up indictment and a court while passing court decision).

The *forensic examination object* concept (tangible objects) is used in forensic legislation of foreign countries. For example, in the Law of the Republic of Azerbaijan: *On Forensic Expert Activity* the *forensic examination term* is interpreted as “research carried out on the basis of specific expertise about tangible objects, events and processes that carry information about the facts of the case in progress body of inquiry, preliminary investigation or court (judge)” ⁹².

According to Law of the Republic of Kazakhstan: *On Forensic Expert Activity*, the concept of *forensic examination objects* should be understood as “material evidence, documents, human body, state of human psyche, corpses, animals, samples, as well as information belonging to the forensic examination topic, contained in the materials of the case for which the forensic examination is carried out” ⁹³.

The Law of the Kyrgyz Republic: *On Forensic Expert Activity* does not contain definition of *examination object* or *research object*, but these phrases are present in the

88 Інструкція про призначення та проведення ... URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 01.06.2023).

89 Інструкція з організації проведення та оформлення експертних проваджень у підрозділах Експертної служби Міністерства внутрішніх справ України : затв. наказом МВС України від 17.07.2017 р. № 591. URL: <https://zakon.rada.gov.ua/laws/show/z1024-17#Text> (date accessed: 01.02.2023).

90 Яценко І. В. Предмет судово-ветеринарної експертизи DOI: 10.24144/2307-3322.2022.73.55 (date accessed: 01.06.2023).

91 Кримінальний процесуальний кодекс України ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

92 О судебно-экспертной деятельности : Закон Азербайджанской Республики от 18.11.1999 г. № 758-IQ (с изм. и доп.). URL: https://online.zakon.kz/document/?doc_id=30602371 (date accessed: 01.06.2023).

93 О судебно-экспертной деятельности : Закон Республики Казахстан от 10.02.2017 г. № 44-VI (с изм. и доп.). URL: https://online.zakon.kz/Document/?doc_id=37215312&pos=3;-106#pos=3;-106 (date accessed: 01.06.2023).

definition of other basic concepts of this Law: *forensic expert conclusion, additional forensic examination, damage to research object, forensic expert specialization, forensic research* ⁹⁴.

Forensic examination objects in the Law of the Republic of Tajikistan: *On State Forensic Examination* are called “*material evidence, samples for examination, documents, objects, animals, corpses and their parts, as well as materials of the case for which a state forensic examination is conducted*” ⁹⁵, and samples for conducting an examination: “*objects reflecting personal characteristics, corpse, animal, object, material or substance, environment of the scene, comparative samples and other things necessary for forensic expert to conduct an examination and provide a conclusion*” ⁹⁶.

Law of Turkmenistan: *On Forensic Expert Activity* contains the concept definition of *forensic examination objects*: it is “*material evidence, documents, body and mental state of a person, corpses, animals and other samples intended for expert research, as well as information that belong to the subject of the forensic examination and are contained in case files*

which forensic examination is conducted for” ⁹⁷.

In accordance with Law of the Republic of Uzbekistan: *On Forensic Examination*, the of research objects are named: “*material evidence, samples for research, other material objects, corpses and their parts, documents, as well as materials of the case for which forensic examination is being conducted for*” ⁹⁸.

Law of Republic of Moldova: *On Forensic Examination, Scientific-Technical and Forensic-Medical Researches* ⁹⁹ states that “*objects of expert research can be material evidence, corpses and their parts, living persons, documents, objects, samples and other case materials, according to which forensic examination, a forensic technical and medical research is prescribed*” ¹⁰⁰.

Analysis of current legislation on forensic expert activity in different countries has shown a certain similarity in legal status of forensic examination objects in these States and in Ukraine.

Close attention in researches of foreign scientists to individual objects of forensic and veterinary research contributes to development of this direction of forensic expert activity ¹⁰¹. Researchers are most

94 О судебно-экспертной деятельности : Закон Кыргызской Республики от 24.06.2013 г. № 100 (с изм. и доп.). URL: <http://cbd.minjust.gov.kg/act/view/ru-ru/203908/10?mode=tekst> (date accessed: 01.02.2023).

95 О государственной судебной экспертизе : Закон Республики Таджикистан от 25.07.2005 г. № 102 (с изм. и доп.). URL: https://base.spininform.ru/show_doc.fwx?rgn=9038 (date accessed: 01.02.2023).

96 Ibid.

97 О судебно-экспертной деятельности : Закон Туркменистана от 08.11.2014 г. № 137-V (с изм. и доп.). URL: https://base.spininform.ru/show_doc.fwx?rgn=71160 (date accessed: 01.02.2023).

98 О судебной экспертизе : Закон Республики Узбекистан от 01.06.2010 г. № ЗРУ-249 (с изм. и доп.). URL: <https://lex.uz/ru/docs/1633100> (date accessed: 01.02.2023).

99 О судебной экспертизе, научно-технических и судебно-медицинских исследованиях : Закон Республики Молдова от 23.06.2000 г. № 1086-XIV (с изм. и доп.). URL: https://www.legis.md/cautare/getResults?doc_id=65637&lang=ru (date accessed: 01.06.2023).

100 Ibid.

101 Munro R., Ressel L., Gröne A., Hetzel U., Jensen H. E., Paciello O., Kipar A. European Forensic Veterinary Pathology Comes of Age. *Journal of Comparative Pathology*. 2020. Vol. 179. Pp. 83–88. DOI: [10.1016/j.jcpa.2020.08.003](https://doi.org/10.1016/j.jcpa.2020.08.003) (date accessed: 01.06.2023) ; McDonough S. P., McEwen B. J. Op. cit. DOI: [10.1177/0300985816647450](https://doi.org/10.1177/0300985816647450) (date accessed: 01.06.2023).

interested in the corpses of animals with signs of violent death¹⁰² or live animals affected by AC, for example, domestic dogs¹⁰³, domestic cats¹⁰⁴, domestic pigs¹⁰⁵, roe deer¹⁰⁶, deer¹⁰⁷, otters¹⁰⁸, eagles¹⁰⁹, birds of prey¹¹⁰, flamingos¹¹¹, foxes¹¹², whales¹¹³,

- 102 Wolf C., Gerst K., Gerst S., Priemer G. Post-mortem clinical pathology in cattle — an additional tool for the veterinary pathologist. *Tierarztl Prax Ausg G Grosstiere Nutztiere*. 2021. Vol. 49. Is. 6. Pp. 403—412. DOI: [10.1055/a-1593-6948](https://doi.org/10.1055/a-1593-6948) (date accessed: 01.06.2023).
- 103 Gottlieb D. L., Prittie J., Buriko Y., Lamb K. E. Evaluation of acute traumatic coagulopathy in dogs and cats following blunt force trauma. *Journal of Veterinary Emergency and Critical Care (San Antonio)*. 2016. Vol. 27. Is. 1. Pp. 35—43. DOI: [10.1111/vec.12525](https://doi.org/10.1111/vec.12525) (date accessed: 01.06.2023); Listos P., Gryzinska M., Batkowska J., Grela M., Jakubczak A. Algorithm for establishing the time of death of a dog based on temperature measurements in selected sites of the body during the early post-mortem period. *Forensic Science International*. 2018. Vol. 289. Pp. 124—129. DOI: [10.1016/j.forsciint.2018.05.004](https://doi.org/10.1016/j.forsciint.2018.05.004) (date accessed: 01.06.2023).
- 104 Nation P. N., St. Clair C. C. A Forensic Pathology Investigation of Dismembered Domestic Cats: Coyotes or Culps? *Veterinary Pathology*. 2019. Vol. 56. Is. 3. Pp. 444—451. DOI: [10.1177/0300985819827968](https://doi.org/10.1177/0300985819827968) (date accessed: 01.06.2023); Hsiou Ch.-L., Hsu Ch.-Ch., Liao P.-W., Yang F.-H., Lee A. N., Huang W.-H. Forensic Death Investigations of Dog Bite Injuries in 31 Cats. *Animals (Basel)*. 2022. Vol. 12. Is. 18. P. 2404. DOI: [10.3390/ani12182404](https://doi.org/10.3390/ani12182404) (date accessed: 01.02.2023).
- 105 Hill M. A., Pokines J. T. Comparative analysis of fetal pig decomposition processes in burials of variable depths and wrapping. *Journal of Forensic Sciences*. 2022. Vol. 67. Is. 6. Pp. 2192—2202. DOI: [10.1111/1556-4029.15120](https://doi.org/10.1111/1556-4029.15120) (date accessed: 01.02.2023).
- 106 Fucci N., Campobasso C. P., Mastrogiuseppe L., Puccinelli C., Marcheggiani S., Mancini L., Marino L., Pascali V. L. Diatoms in drowning cases in forensic veterinary context: a preliminary study. *International Journal of Legal Medicine*. 2017. Vol. 131. Is. 6. Pp. 1573—1580. DOI: [10.1007/s00414-017-1565-y](https://doi.org/10.1007/s00414-017-1565-y) (date accessed: 01.02.2023).
- 107 Uvíra M., Marecová K., Dokoupil M., Dvořáček I., Handlos P. Fatal deer attack in a rutting season. *Forensic Science, Medicine and Pathology*. 2019. Vol. 15. Is. 1. Pp. 93—96. DOI: [10.1007/s12024-018-0048-x](https://doi.org/10.1007/s12024-018-0048-x) (date accessed: 01.06.2023).
- 108 Gaydos J. K., Delaney M. A., Raverty S. Causes of Mortality in a Population of Marine-Foraging River Otters (*Lontra canadensis*). *Journal of Wildlife Diseases*. 2020. Vol. 56. Is. 4. Pp. 941—946. DOI: [10.7589/JWD-D-20-00031](https://doi.org/10.7589/JWD-D-20-00031) (date accessed: 01.06.2023).
- 109 Viner T. C., Hamlin B. C., McClure P. J., Yates B. C. Integrating the Forensic Sciences in Wildlife Case Investigations: A Case Report of Pentobarbital and Phenytoin Toxicosis in a Bald Eagle (*Haliaeetus leucocephalus*). *Veterinary Pathology*. 2016. Vol. 53. Is. 5. Pp. 1103—1106. DOI: [10.1177/0300985816641176](https://doi.org/10.1177/0300985816641176) (date accessed: 01.06.2023).
- 110 Valverde I., Espín S., María-Mojica P., García-Fernández A. J. Protocol to classify the stages of carcass decomposition and estimate the time of death in small-size raptors. *European Journal of Wildlife Research*. 2020. Vol. 66. Art. 93. DOI: [10.1007/s10344-020-01429-3](https://doi.org/10.1007/s10344-020-01429-3) (date accessed: 01.02.2023).
- 111 Rubini S., Barbieri S., Gaudio R. M., Govoni G., Berna G. R., Fico R., Lorenzini R., Fontana M. C., Taddei R., Tassinari M., Frisoni P., Guidi E., Bergamini M. Veterinary forensic sciences to solve a fatal case of predation on flamingos (*Phoenicopterus roseus*). *Veterinaria Italiana*. 2018. Vol. 54. Is. 2. Pp. 175—180. DOI: [10.12834/VetIt.1360.7488.1](https://doi.org/10.12834/VetIt.1360.7488.1) (date accessed: 01.02.2023).
- 112 Franckenberg S., Kern F., Vogt M., Thali M. J., Flach P. M. Fatal gunshot to a fox: The Virtopsy approach in a forensic veterinary case. *Journal of Forensic Radiology and Imaging*. 2015. Vol. 3. Is. 1. Pp. 72—75. DOI: [10.1016/j.jofri.2014.11.001](https://doi.org/10.1016/j.jofri.2014.11.001) (date accessed: 01.02.2023).
- 113 Díaz-Delgado J., Fernández A., Sierra E., Sacchini S., Andrada M., Vela A. I., Quesada-Canales Ó., Paz Ya., Zucca D., Groch K., Arbelo M. Pathologic findings and causes of death of stranded cetaceans in the Canary Islands (2006—2012). *PLOS ONE*. 2018. Vol. 13. Is. 10:e0204444. DOI: [10.1371/journal.pone.0204444](https://doi.org/10.1371/journal.pone.0204444) (date accessed: 01.02.2023).

dolphins¹¹⁴, macaques¹¹⁵, horses¹¹⁶, cattle¹¹⁷, rabbits¹¹⁸, bees¹¹⁹, fish¹²⁰, etc.

All the above mentioned objects are a source of information, by which means of forensic veterinarian finds out facts and circumstances that constitute examination topic. Let us emphasize that forensic veterinary examination object makes possible to single out terminology, methodology, information content in a broad subject area and ensures systemic unity, and using specific expertise, conclude an expert's conclusion with answers to those questions that were not even asked before forensic examination solution.

System unity of forensic veterinary examination object, for its part, makes possible to study the system of its properties thanks to the outlined specific signs. While choosing the of forensic veterinary research methods; it is important to correctly compile algorithm of such research for objective solution of forensic expert tasks

in a categorical form and in compliance with principle of maximum preservation of objects. For example, during autopsy of animal corpse and making a forensic veterinary diagnosis, forensic expert in a clear sequence first conducts an external and then an its internal examination. During external examination, architecture and postmortem changes, visible mucous membranes, skin and its derivatives are first evaluated, then a sectional examination of the eyes, nose, auricles, condition of the neck, abdomen, thoracic and pelvic limbs, mammary glands, external genitalia, and scrotal opening is performed. Internal examination of the animal carcass involves first evaluating the subcutaneous tissue and skeletal muscles and then the somatic lymph nodes, oral cavity, salivary glands, tongue, pharynx, esophagus, larynx, trachea, thyroid gland, parathyroid gland, chest cavity, pleura, lungs, heart, abdominal cavity, peritoneum, foreign contents in the

- 114 Sun X., Guo L., Luo D., Yu R.-Q., Yu X., Liang Yu., Liu Zh., Wu Yu. Long-term increase in mortality of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary following anthropic activities: Evidence from the stranded dolphin mortality analysis from 2003 to 2017. *Environmental Pollution*. 2022. Vol. 307. Art. 119526. DOI: [10.1016/j.envpol.2022.119526](https://doi.org/10.1016/j.envpol.2022.119526) (date accessed: 01.02.2023).
- 115 Doelling Ch. R., Cronin K. A., Ross St. R., Hopper L. M. The relationship between personality, season, and wounding receipt in zoo-housed Japanese macaques (*Macaca fuscata*): A multi-institutional study. *American Journal of Primatology*. 2021. Vol. 83. Is. 12. E23332. DOI: [10.1002/ajp.23332](https://doi.org/10.1002/ajp.23332) (date accessed: 01.02.2023).
- 116 Sprayberry K. A., Barrett E. J. Thoracic trauma in horses. *The Veterinary Clinics of North America. Equine Practice*. 2015. Vol. 31. Is. 1. Pp. 199—219. DOI: [10.1016/j.cveq.2014.12.001](https://doi.org/10.1016/j.cveq.2014.12.001) (date accessed: 01.02.2023).
- 117 Wolf C., Gerst K., Gerst S., Priemer G. Op. cit. DOI: [10.1055/a-1593-6948](https://doi.org/10.1055/a-1593-6948) (date accessed: 01.06.2023).
- 118 Dautartas A., Kenyhercz M. W., Vidoli G. M., Jantz L. M., Mundorff A., Steadman D. W. Differential Decomposition Among Pig, Rabbit, and Human Remains. *Journal of Forensic Sciences*. 2018. Vol. 63. Is. 6. Pp. 1673—1683. DOI: [10.1111/1556-4029.13784](https://doi.org/10.1111/1556-4029.13784) (date accessed: 01.06.2023).
- 119 Abay Z., Bezabeh A., Gela A., Tassew A. Evaluating the Impact of Commonly Used Pesticides on Honeybees (*Apis mellifera*) in North Gonder of Amhara Region, Ethiopia. *Journal of Toxicology*. 2023. Art. 2634158. DOI: [10.1155/2023/2634158](https://doi.org/10.1155/2023/2634158) (date accessed: 01.06.2023).
- 120 Benayache N.-Ya., Afri-Mehennaoui F.-Z., Kherief-Nacereddine S., Vo-Quoc B., Hushchyna K., Nguyen-Quang T., Bouaïcha N. Massive fish death associated with the toxic cyanobacterial Planktothrix sp. bloom in the Béni-Haroun Reservoir (Algeria). *Environmental Science and Pollution Research International*. 2022. Vol. 29. Is. 53. Pp. 80849—80859. DOI: [10.1007/s11356-022-21538-7](https://doi.org/10.1007/s11356-022-21538-7) (date accessed: 01.06.2023).

peritoneal cavity, spleen, liver, gall bladder, pancreas, kidneys, adrenal glands, ureters, bladder, stomach, intestines, genitals, head and brain, spinal column and spinal cord, bones of the skeleton, joints.

Compliance with established order of forensic veterinary examination of animal corpse under forensic examination will make possible to assess condition of body cavities, each organ separately and in their relationship, as well as body parts. Since autopsy is accompanied by destruction of integrity, during research on each organ, its shape, color, size, consistency is first evaluated, their appearance is photographed and only then organs are dissected and signs of the internal structure are evaluated, pathological changes are detected and internal appearance is photographed. In case of sequence violation of corpse autopsy, it is possible to lose certain valuable signs from expert's point of view.

While learning, forensic veterinarian carries out a comprehensive analysis of research object, applying specific expertise in the field of forensic veterinary science. Holistic view of complex object of forensic veterinary examination enables forensic expert to reach a new, higher level of knowledge.

Quality of forensic veterinarian conclusion (as evidence in the case) based on the results of research on materials submitted for forensic examination is largely determined by accurate and conscientious compliance by the person (body) who appointed forensic

examination (engaged forensic expert), rules of handling research objects. Thus, perishable objects of forensic veterinary research (for example, animal carcass) are immediately examined and examined by forensic expert, as well as photographed and videotaped. After inspection, they are returned to the person (body) from whom they were received.

In order to guarantee authenticity of the case files provided for conducting a forensic veterinary examination, in order to prevent damage or changes in properties of objects, if their dimensions and properties allow it, they are handed over to forensic expert in a packaged and sealed form. Otherwise, the subject of appointment of a forensic veterinary examination (expert involvement) should ensure expert unhindered access to the location of research objects, guarantee the propriety, reliability and admissibility of the evidence of expert examination (in particular, physical evidence, such as a corpse animals or examinee live animal, fodder, feed additives, etc.).

Forensic expert conclusion is *proper evidence* if the object contains information about proof topic (Part 1 of Article 85 of Criminal Procedural Code of Ukraine ¹²¹; Part 1 of Article 77 of Civil Procedural Code of Ukraine ¹²²; Part 1 of Article 76 of Commercial and Procedural Code of Ukraine ¹²³, Part 1 of Article 73 of Code of Administrative Proceedings of Ukraine ¹²⁴). For example, if it was seriously injured as a result of animal cruelty, then the subject of proof will be the damage

121 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

122 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).

123 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).

124 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).

caused to animal health¹²⁵. Forensic veterinarian conducts clinical forensic veterinary examination of the subject animal, establishes a forensic veterinary diagnosis and referring to the “Rules ... for determining the severity of damage”¹²⁶, determines the severity of bodily injuries. Objects that do not relate to the subject of evidence, that is, circumstances and facts that are not important for a forensic veterinary examination, forensic expert does not examine and does not refer to them in the conclusion. Legal violation consequence of requirements for evidence propriety is recognition of the conclusion of forensic expert as improper evidence and its rejection for consideration by the court (Article 85 of Criminal Procedural Code of Ukraine¹²⁷, Part 4 of Article 77 of Civil Procedural Code of Ukraine¹²⁸, Part 1 of Article 76 of Commercial and Procedural Code of Ukraine¹²⁹, Part 4 of Article 73 of the Criminal Procedure Code¹³⁰).

Forensic expert's conclusion is admissible evidence, if the rules for

collecting, providing and researching objects of research are observed; they are obtained in accordance with the procedure stipulated by legislation (Part 1 of Article 86 of Criminal Procedural Code of Ukraine¹³¹, Part 1 of Article 78 of Civil Procedural Code of Ukraine¹³², Part 2 of Article 77 of Commercial and Procedural Code of Ukraine¹³³). For example, the AC caused serious bodily injuries incompatible with life, as a result of which the animal died. In this case, law enforcement authorities should carry out procedural measures aimed at opening criminal proceedings, inspecting the scene of the incident, removing the animal corpse by authorized person conducting investigation, concluding a resolution on the appointment of forensic veterinary examination, delivering the corpse to a specialized forensic science institution for forensic veterinary examination¹³⁴. Legal violation consequence of such an order is recognition of forensic expert conclusion

125 Яценко І. В. Предмет судово-ветеринарної експертизи DOI: 10.24144/2307-3322.2022.73.55 (date accessed: 01.02.2023).

126 Яценко І. В., Парилівський О. І. Правила судово-ветеринарного визначення

127 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

128 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).

129 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).

130 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).

131 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

132 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).

133 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).

134 Яценко І. В., Казанцев Р. Г. Порядок проведення судово-ветеринарної експертизи трупів тварин в секційній залі спеціалізованої експертної установи. *Ветеринарія, технології тваринництва та природокористування*. 2021. № 7. С. 179–191. DOI: 10.31890/vttp.2021.07.28 (date accessed: 01.06.2023) ; Yatsenko I. Theoretical justification and praxeological significance of the stages of expert research of a living animal. *Law. Human. Environment*. 2023. Vol. 14. No. 1. Pp. 107–131. DOI: 10.31548/law/1.2023.107 (date accessed: 01.06.2023) ; Яценко І. В. Гносеологічна характеристика С. 70–111. DOI: 10.32353/khrife.1.2023.05 (date accessed: 01.06.2023).

as improper evidence and rejection of it for consideration by the court (Part 1 of Article 86 of the Criminal Procedural Code of Ukraine ¹³⁵, Part 1 of Article 78 of Civil Procedural Code of Ukraine ¹³⁶, Part 2 of Article 77 of Commercial and Procedural Code of Ukraine ¹³⁷, Part 1 of Article 74 of Code of Administrative Proceedings of Ukraine ¹³⁸).

Forensic expert conclusion is reliable evidence if it can be used to establish the actual case circumstances (Article 79 of Civil Procedural Code of Ukraine ¹³⁹, Article 75 Code of Administrative Proceedings of Ukraine ¹⁴⁰) and if it (as evidence in the case) was created (obtained) in the absence of influence aimed at forming a false impression of the circumstances cases that are important for the case (Part 1 of Article 78 of Commercial and Procedural Code of Ukraine ¹⁴¹). For example: based on the results of forensic veterinary examination of an animal's corpse, nature and localization of the injury was established,

mechanism and age of the injury was determined, object that caused the injury was determined, cause-effect relation between the injury and the animal death was proven, etc. Therefore, the corpse of animal subject to expert examination is a material object that has retained traces of an offense used as evidence of the fact or circumstances of offense. In other words, it is material evidence in accordance with Part 1 of Art. 98 Criminal Procedural Code of Ukraine ¹⁴².

Forensic expert conclusion is sufficient evidence if it allows to reach a conclusion about availability or lack of case circumstances belonging to topic proof (Part 1 of Article 80 of Civil Procedural Code of Ukraine ¹⁴³, Part 1 of Article 76 Code of Administrative Proceedings of Ukraine ¹⁴⁴).

Let us sum up intermediate results. Since forensic veterinary examination object is knowledge object (epistemological category), it is advisable to divide all objects of forensic veterinary examination into tangible and materialized ones (*q.v.* Fig. 1).

135 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

136 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).

137 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).

138 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).

139 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).

140 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).

141 Господарський процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1798-12#Text> (date accessed: 01.06.2023).

142 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.02.2023).

143 Цивільний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/1618-15#Text> (date accessed: 01.02.2022).

144 Кодекс адміністративного судочинства України URL: <https://zakon.rada.gov.ua/laws/show/2747-15#Text> (date accessed: 01.06.2023).

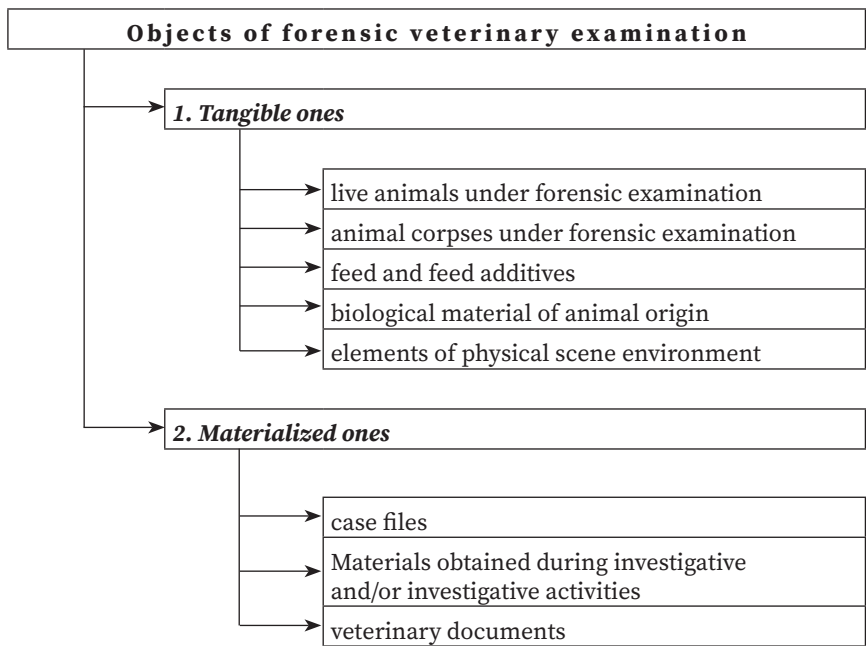


Fig. 1 Objects of forensic veterinary examination

We will single out the Specifics of forensic veterinary examination object:

- material nature, informational role;
- connection of established facts with the event under research;
- thing, reality fragment;
- close relation between object and subject of forensic knowledge;
- object reproduction in mind of the subject;
- procedural status (ability to use information received by forensic expert as evidence in legal proceedings).

As for other types of forensic examination, we distinguish three

independent groups of objects in forensic veterinary science:

- 1) basic ones (material evidence as objects of material world, containing information about circumstances that are relevant to the case (proceedings)): live animals, animal corpses, feed, etc.;
- 2) samples for comparative research;
- 3) reference materials (handbooks, atlases, national standards, instructions, guidelines, etc.).

According to the analysis results of objects of forensic veterinary examinations performed at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» during 2019–2022, we compiled Table 1.

Table 1

Dynamics of objects of forensic veterinary researches in 2019–2022

Research Object \ Year	2019		2020		2021		2022	
	Q-ty	%	Q-ty	%	Q-ty	%	Q-ty	%
Total number of forensic veterinary examinations	32	100	35	100	61	100	15	100

Research Object \ Year	2019		2020		2021		2022	
	Q-ty	%	Q-ty	%	Q-ty	%	Q-ty	%
Live animals	13	40,6	11	31,4	3	4,9	4	26,7
Animal corpses under forensic examination	19	59,4	24	68,6	58	95,1	11	73,3
Dogs alive	11	31,4	8	22,9	1	1,6	4	26,7
corpses	12	34,4	11	31,4	11	18,0	11	73,3
Cats alive	2	6,25	3	8,6	2	3,3	—	—
corpses	7	21,9	9	25,7	1	1,6	—	—
Common crane, corpses	—	—	—	—	45	73,9	—	—
Wild pigs, corpses	—	—	—	—	1	1,6	—	—
Horses	—	—	—	—	—	—	—	—
Deer, corpses	—	—	3	8,6	—	—	—	—
Deer	—	—	—	—	—	—	—	—
Hares, corpses	—	—	1	—	—	—	—	—
Bees	—	—	*	—	—	—	—	—
Fish and other aquatic organisms	—	—	—	—	—	—	—	—

* The number of studied bees is not indicated.

Dynamics of objects of forensic veterinary research in 2019–2022 indicates an increase in their number: in 2020 (compared to 2019) by 9.4 %, and in 2021 (compared to 2020) by 74.3 %. Beginning in 2019 at the initiative of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of forensic veterinary examination in the system of forensic science institutions of the Ministry of Justice of Ukraine contributed to the rapid development of the theory and praxeology of this type of forensic examination, active development and effective application in practice of basic methods, algorithms and guidelines of forensic veterinary research. As a result of the full-scale war of the Russian Federation against Ukraine in 2022, the number of such examinations decreased sharply: by 24.6 % compared to

the previous year and by 46.9 % compared to 2019.

Let us characterize tangible and materialized objects of forensic examination type under consideration (in particular, from the standpoint of their legal status) in more detail.

1. Tangible objects of forensic veterinary examination

1.1. Live animals under forensic examination

Definitions of *animal*, *humane treatment of animals* (hereinafter referred to as ATG) and *animal cruelty* in Ukrainian legislation and in professional readings are diverse.

Article 1 of Law of Ukraine: *On the Protection of Animals from Brutal Treatment* (hereinafter referred to as: *Law On Protection of Animals...*) defines the concept of *animals* and distinguishes

their species¹⁴⁵. According to the Law of Ukraine: On Veterinary Medicine, animals are “*all vertebrate and invertebrate animals, that is, living beings that are different from humans, but endowed with sensitivity*”¹⁴⁶. O. Hrinenko and M. Miroshnychenko note importance of sensory perception in terms of protection against AC¹⁴⁷.

In modern Ukrainian legislation, legal responsibility for AC extends only to vertebrate animals (fish, amphibians, reptiles, birds and mammals). Animals are special object of civil rights, which is subject to the legal regime of the thing (Part 1 of Art. 180 of the Civil Code of Ukraine¹⁴⁸), providing for emergence of such an object ownership¹⁴⁹.

We share the opinion of O. Ustymenko¹⁵⁰ that animal is a non-consuming, movable, indivisible thing, capable of responding to external stimuli, with certain needs to meet its existence, which has marketable qualities (this property determines the

legal features of the acquisition, exercise, limits of realization and termination of material rights to animals¹⁵¹), so V. Turska quite appropriately considers animals to be creatures, not a thing¹⁵².

At para. 2 Art. 1 of the Law “*On the Protection of Animals...*” states that animals are “*biological objects related to fauna: agricultural, domestic, wild, including domestic and wild poultry, fur, laboratory, zoo, circus*”¹⁵³, allowing distinguish types of animals. Thus, under pets, legislator understands dogs, cats, and other animals that “*for a long historical period have traditionally been kept and bred by humans, as well as animals of species or breeds artificially bred by humans to satisfy aesthetic needs and needs for communication, which <...> do not have viable wild populations, which consist of individuals with similar morphological features and exist for a long time in their natural range*”¹⁵⁴. European Convention on the Protection of Pets,

145 Про захист тварин від жорсткого поводження : Закон України від 21.02.2006 р. № 3447-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

146 Про ветеринарну медицину : Закон України від 04.02.2021 р. № 1206-IX (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1206-20#Text> (date accessed: 01.06.2023).

147 Грінєнко О. О., Мірошніченко М. П. Формування етичного ставлення до тварин: міжнародно-правовий та внутрішньодержавний аспекти. *Український часопис міжнародного права*. 2013. Спецвипуск: Міжнародно-правові стандарти поводження з тваринами та їх захисту і практика України. С. 12–14.

148 Цивільний кодекс України від 16.01.2003 р. № 435-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/435-15#Text> (date accessed: 01.06.2023).

149 Спектор О. М. Тварина як особливий об'єкт речових прав. *Прикарпатський юридичний вісник*. 2015. Вип. 3 (9). С. 70–76. URL: http://nbuv.gov.ua/UJRN/Pjuv_2015_3_15 (date accessed: 01.06.2023).

150 Устименко О. А. Щодо можливості сприйняття тварини як суб'єкта цивільних прав: деякі загальнотеоретичні аспекти. *Форум права*. 2014. № 1. С. 497–501. URL: http://nbuv.gov.ua/UJRN/FP_index.htm_2014_1_87 (date accessed: 01.06.2023).

151 Луц Д. М. Тварини як об'єкт цивільних правовідносин : дис. ... канд. юрид. наук. Запоріжжя, 2015. 231 с.

152 Турська В. Зміст та характеристика поняття «права тварин». *Evropský politický a právní diskurz*. 2015. Sv. 2. Vyd. 1. С. 181–187. URL: http://nbuv.gov.ua/UJRN/evrpol_2015_2_1_27 (date accessed: 01.06.2023).

153 Про захист тварин від жорсткого поводження URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

154 Ibid.

ratified by Ukraine, contains a slightly different definition: “A pet is any animal kept or intended to be kept by a person, in particular in his home for his own pleasure and companionship”¹⁵⁵.

Agricultural animals are defined in the Law “On the Protection of Animals...” as animals “that are kept and bred by humans to obtain products and raw materials of animal origin” (paragraph 5 of Article 1)¹⁵⁶, and wild animals are animals “whose natural habitat is wild nature, including those that are in captivity or semi-free conditions” (paragraph 3 of Article 1)¹⁵⁷, therefore the norms of Law of Ukraine: On Fauna¹⁵⁸ apply to. In addition, in Art. 3 of this Law details the definition of wild animals: “Chordates, including vertebrates (mammals, birds, reptiles, amphibians, fish, and others) and invertebrates (arthropods, mollusks, echinoderms, and others) in all their species and population diversity and on at all stages of development (embryos, eggs, pupae, etc.), which are in a state of natural will, kept in semi-free conditions or in captivity”¹⁵⁹.

Responsibility for animal cruelty, in particular with homeless (“homeless

animals are pets that have been left without human care or have formed semi-free groups capable of reproducing outside human control” — paragraph 6 of Art. 1 of the Law “On Protection of Animals...”¹⁶⁰), is provided for in Art. 89 of the Code of Ukraine on Administrative Offenses¹⁶¹ and Art. 299 of the Criminal Code of Ukraine¹⁶².

In paragraph 7 of Art. 1 of the Law “On the Protection of Animals...”, another category is distinguished — an experimental animal (“animal used for conducting researches, experiments”)¹⁶³.

Society humanization of led to development and adoption of standards for the humane treatment of animals, in particular, in the Civil Code: Art. 12 (refusal of ownership of an animal); Art. 180 (animals as a special object of civil rights); Art. 340—342 (regulation of legal relations in relation to a neglected pet); Art. 1187 (wild animals, service dogs and dogs of fighting breeds as sources of increased danger)¹⁶⁴. The basic principles of animal protection from ATG are set out in Article 4 of the Law “On the Protection

155 Європейська конвенція про захист домашніх тварин : ратифік. Законом України від 18.09.2013 р. № 578-VII. URL: <https://zakon.rada.gov.ua/laws/show/578-18#Text> (date accessed: 01.06.2023).

156 Про захист тварин від жорсткого поводження URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

157 Ibid.

158 Про тваринний світ : Закон України від 13.12.2001 р. № 2894-III (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2894-14#Text> (date accessed: 01.06.2023).

159 Про тваринний світ : Закон України від 13.12.2001 р. № 2894-III (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2894-14#Text> (date accessed: 01.06.2023).

160 Про захист тварин від жорсткого поводження URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

161 Кодекс України про адміністративні правопорушення від 07.12.1984 р. № 8073-X (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/80731-10#Text> (date accessed: 01.06.2023).

162 Кримінальний кодекс України від 05.04.2001 р. № 2341-III (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 01.06.2023).

163 Про захист тварин від жорсткого поводження URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

164 Цивільний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/435-15#Text> (date accessed: 01.06.2023).

of Animals...”¹⁶⁵. At the same time, the issues of humane treatment of animals and prevention of causing unjustified suffering or harm to animals for any purpose other than self-defense or survival are extremely relevant up to now¹⁶⁶.

The issue of the legal understanding of wild life as a sustainable value¹⁶⁷ raised by Ukrainian researchers is gradually being implemented by the legislator in normative and legal acts, because the European vector of Ukraine development requires consolidation of European values (in particular, the conceptual doctrine of animal welfare) at legislative level, and legal status¹⁶⁸ of animals eventually became one of prominent places in the national discourse. Unfortunately, these scientific experiments are not enough to solve the problems of humane treatment of animals and Ukrainian legislation in this sense needs significant changes¹⁶⁹.

In Art. 1 of the Law “On the Protection of Animals...” provides the main definitions

of actions in treatment of animals (humane and cruel treatment, euthanasia, bodily injury, keeping at home, etc.)¹⁷⁰. The opposite of humane is cruelty: “abuse of animals, including homeless ones, which caused them to suffer, caused them physical pain, suffering, including causing bodily harm, mutilation or death, harassment of animals to each other and to other animals, committed with hooligan or selfish motives, leaving animals to their own devices, as well as other violations of the rules of keeping, handling and transporting animals” and cruel killing of animals: “killing animals without the use of painkillers that prevent animals from feeling pain and fear” (paragraphs 14 and 9 of Art. 1 of the Law “On the Protection of Animals...” respectively)¹⁷¹.

It is worth noting that in legislative acts of Ukraine, the definition of *animal cruelty (AC)*” has already been changed several times. In 2020, we offered our own interpretation: *animal cruelty (AC)*

165 Про захист тварин від жорсткого поводження URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

166 Зубченко Н. И. К вопросу о соотношении понятий «благополучие животных» и «защита животных от жестокого обращения» в международном праве. *Актуальні проблеми політики*. 2014. Вип. 52. С. 135—145. URL: http://nbuv.gov.ua/UJRN/appol_2014_52_17 (date accessed: 01.06.2023).

167 Zapara S. I., Fotina H. A., Klochko A. M., Fotina T. I., Yatsenko I. V. Revisiting Legal Understanding of Wild Life as a Sustainable Value. The Case of Ukraine. *Journal of Environmental Management and Tourism*. 2019. Vol. 10. Is. 1 (33). Pp. 14—21. DOI: 10.14505/jemt.v10.1(33).02 (date accessed: 01.06.2023).

168 Yatsenko I. V., Zapara S. I., Zon G. A., Ivanovskaya L. B., Klochko A. M. Animal Rights and Protection against Cruelty in Ukraine. *Ibid*. 2020. Vol. 11. Is. 1 (41). Pp. 91—103. DOI: 10.14505/jemt.11.1(41).11 (date accessed: 01.06.2023) ; Яценко І. В., Ключев О. М., Угровецький О. П., Сімакова-Єфремян Е. Б., Дереча Л. М., Смирнов Г. В., Недосеков В. В., Парилівський О. І. Забезпечення благополуччя тварин, що використовуються для наукових цілей, та їх захист від жорсткого поводження в правовому полі Європейського Союзу і України. *German International Journal of Modern Science*. 2021. № 6 (2). С. 57—66. DOI: 10.24412/2701-8369-2021-6-2-57-66 (date accessed: 01.06.2023).

169 Yatsenko I. V., Zapara S. I., Zon G. A., Ivanovskaya L. B., Klochko A. M. Op. cit. DOI: 10.14505/jemt.11.1(41).11 (date accessed: 01.06.2023).

170 Про захист тварин від жорсткого поводження URL: <https://zakon.rada.gov.ua/laws/show/3447-15#Text> (date accessed: 01.06.2023).

171 Ibid.

is “socially dangerous, illegal, culpable, punishable, intentional act of the subject of the crime, provided for by criminal law, which consists in intentionally encroaching on the established order of keeping and handling animals by mercilessly abusing by an animal using cruel methods or with hooligan motives or bullying animals against each other, committed with hooligan or selfish motives caused injury or other severe health disorder, mutilation or death of animal”¹⁷². We believe that the definition proposed by us will contribute to development and introduction into forensic practice of methods for determining the severity of damage caused to animal, determining animal mutilation, forensic veterinary examination of animal corpses, which is what we are focusing our current efforts.

Since specifics of legal regulation of public relations regarding animals affect many moral aspects, they should be taken into account in the practice of jurisprudence, because animals are living

beings, have feelings, will, physiological needs, etc.¹⁷³

Unfortunately, AC as an antisocial phenomenon is possible in any sphere of human activity related to animals. For example, O. Turska divides typical forms of human activities according to the fields of human activity: family-domestic, agricultural, research, hunting, entertainment-viewing, communal ones, etc.¹⁷⁴

Domestic legislator criminalized animal cruelty in 1988¹⁷⁵ when he added to the then Criminal Code of the Ukrainian SSR Art. 207-1¹⁷⁶, outlining the forms of detection of animal cruelty¹⁷⁷.

Up to date, the concept of animal cruelty remains debatable. Thus, S. Denysov and V. Makarov¹⁷⁸ consider it a crime against morality, and O. Shumilo calls it criminal cruelty, a type of “aggressive behavior that causes great harm to the victim and is carried out without experiencing feelings of sympathy and pity on the part of the subject of such behavior”¹⁷⁹.

- 172 Яценко І., Бобрицька О., Парилівський О., Криворотько Р., Ключев О., Сімакова-Єфремян Е., Дереча Л., Запара С. Благополуччя домашніх непродуктивних тварин та їх захист від жорстокого поводження в правовому полі України. *Біобезпека, захист та благополуччя тварин* : зб. тез Міжнар. наук.-практ. конф. (Київ, 27.05.2021). Київ, 2021. С. 133.
- 173 Коробко І. Міжнародно-правові стандарти захисту домашніх тварин від жорстокого поводження. *Український часопис міжнародного права*. 2013. Спецвипуск: *Міжнародно-правові стандарти поводження з тваринами та їх захисту і практика України*. С. 70–74.
- 174 Турська В. О. Поняття «тварини» в українському законодавстві. *Правові та інституційні механізми забезпечення сталого розвитку України* : мат-ли Міжнар. наук.-практ. конф. (Одеса, 15–16.06.2015) : у 2 т. Т. 2. Одеса, 2015. С. 64–66.
- 175 Головка І. А. Кримінальна відповідальність за жорстоке поводження з тваринами : автореф. дис. ... канд. юрид. наук. Київ, 2010. 20 с.
- 176 Про кримінальну відповідальність за жорстоке поводження з тваринами : Указ Президента ВР УРСР від 29.04.1988 р. № 5822-XI (утрат. чин.). URL: <https://zakon.rada.gov.ua/laws/show/5822-11/ed19880429#Text> (date accessed: 01.06.2023) ; Кримінальний кодекс Української Радянської Соціалістичної Республіки від 28.12.1960 р. (утрат. чин.). URL: <https://zakon.rada.gov.ua/laws/show/2002-05/ed19960712#Text> (date accessed: 01.06.2023).
- 177 Александренко В. В. Поняття та способи жорстокого поводження з тваринами. *Юридична наука*. 2015. № 6. С. 116–120. URL: http://nbuv.gov.ua/UJRN/jnn_2015_6_16 (date accessed: 01.06.2023).
- 178 Денисов С. Ф., Макаров В. О. Кримінально-правові санкції та їх застосування за злочини проти моральності : монографія. Чернігів, 2017. 328 с.
- 179 Шуміло О. О. Кримінологічна характеристика та запобігання жорстокому поводженню з тваринами : дис. ... канд. юрид. наук. Харків, 2016. 206 с. URL: https://dspace.nlu.edu.ua/bitstream/123456789/13754/1/Shymilo_diss_2016.pdf (date accessed: 01.06.2023).

Worthy of attention is the definition of T. Synoverska, according to which animal cruelty is “*deliberate, merciless act, or a complex of them directed against an animal and is characterized by such methods of influence on the body, as a result of which harm is caused to the life and health of the animal and which is committed with hooligan or selfish motives*”¹⁸⁰.

Administrative responsibility is provided for animal cruelty that caused physical pain and/or suffering to animals, “*but did not result in bodily harm, mutilation or death, leaving animals to fend for themselves, as well as other violations of the rules of keeping and handling animals*” (Article 89 of the Code of Administrative Offenses)¹⁸¹. If the animal husbandry caused bodily harm, mutilation or even death of the animal, criminal liability arises¹⁸² (Article 299 of the Criminal Code)¹⁸³. Since bodily injuries of different nature cause different harm to the health and life of the animal, we distinguished three degrees of severity of such damage (severe, medium and

light one)¹⁸⁴ and consider it appropriate to determine them according to *Methods of forensic veterinary examination of animal corpses*¹⁸⁵, developed with participation of the author of this research paper.

Criminal liability for animal cruelty is possible in the presence of one of two signs: the use of cruel methods¹⁸⁶ or a hooligan motive¹⁸⁷.

In *Scientific and Practical Commentary of the Criminal Code of Ukraine*¹⁸⁸ it is explained that animal cruelty consists in the application of particularly painful torture and torture to animals, in particular: burning alive; dousing with acid or alkali; intentional poisoning; dying of hunger and/or thirst; breaking limbs; stifling; bullying of animals against each other, etc., as a result of which the animal(s) experience significant suffering.

1.2. Animal corpses under forensic examination

Carcass is the dead body of an animal. Not every animal carcass is subject to forensic

180 Синоверська Т. І. Міжнародне та національне законодавство у сфері захисту тварин від жорстокого поводження. *Часопис Київського університету права*. 2019. № 1. С. 260. URL: http://nbuv.gov.ua/UJRN/Chkup_2019_1_56 (date accessed: 01.02.2023).

181 Кодекс України про адміністративні правопорушення URL: <https://zakon.rada.gov.ua/laws/show/80731-10#Text> (date accessed: 01.06.2023).

182 Турська В. О. Прогалини у регулюванні адміністративної відповідальності за жорстоке поводження з тваринами. *Правове життя сучасної України* : мат-ли Міжнар. наук. конф. проф.-викл. та аспірант. складу (Одеса, 16—17.05.2014). У 2 т. Т. 1. Одеса, 2014. С. 68—71.

183 Кримінальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 01.06.2023).

184 Яценко І. В., Парилівський О. І. Правила судово-ветеринарного визначення

185 Яценко І. В., Казанцев Р. Г. Методика судово-ветеринарної експертизи трупів тварин. Харків, 2022. 336 с.

186 Яценко І. В., Парилівський О. І., Коломоець Д. К. Обґрунтування питань, що ставляться в ухвалі суду та постанові слідчого при призначенні судово-ветеринарної експертизи трупа тварини з ознаками насильницької смерті від жорстокого поводження. *Ветеринарія, технології тваринництва та природокористування*. 2019. № 4. С. 194. DOI: 10.31890/vtp.2019.04.34 (date accessed: 01.06.2023).

187 Калмиков Д. О., Данилевський А. О. Кримінальна та адміністративна відповідальність за жорстоке поводження з тваринами : монографія. Луганськ, 2012. 616 с. ; Александренко В. В. Оп. cit. URL: http://nbuv.gov.ua/UJRN/jnn_2015_6_16 (date accessed: 01.06.2023).

188 Ануфрієв М. І., Дубенко О. І., Золотарьова М. К. та ін. Науково-практичний коментар Кримінального кодексу України / за заг. ред. І. М. Копотуна. Київ, 2023. С. 576—577.

veterinary examination. The object of forensic veterinary examination is the corpses of animals that died violently (in particular, due to animal cruelty or accidental poisoning) or sudden death, under unclear circumstances, as well as the corpses of animals of unknown ownership, parts of animal corpses, exhumed corpses, fish corpses and corpses of bees for their plague¹⁸⁹. Using forensic veterinary examination of animal corpses (that should be carried out in section hall of a specialized forensic science institution in accordance with *Methods of forensic veterinary examination of animal corpses*¹⁹⁰), cause of death, age of its occurrence, cause-effect relation between the detected bodily injuries and death are determined animals etc.¹⁹¹.

1.3. Feed and feed additives

According to Part 1 of Art. 1 of the Law of Ukraine: *On Safety and Hygiene of Feeds* (hereinafter referred to as Law on Feeds), feed is “any substance or product, including feed additives, processed, partially processed or unprocessed, intended for feeding animals” (clause 25)¹⁹² and feed additives are “substances, microorganisms or mixtures, other than feed material or premixes, which are specially added to feed or water for the purpose of performing one or more of the following functions: meeting the nutritional needs of animals, ensuring a favorable effect on the

characteristics of feed, products of animal origin, ecological consequences of animal husbandry, productivity and well-being of animals, in particular by influencing the gastrointestinal flora and the digestibility of feed or the color of decorative fish and birds, the implementation of coccidiostatic or histomonostatic action” (para. 29)¹⁹³. In Art. 16 of this Law, feed additives are divided according to their functional purpose and characteristics (technological; sensory; nutritional; zootechnics; coccidiostats and histomonostats) and separated into functional groups¹⁹⁴.

Feeds and feed additives become objects of forensic (forensic veterinary and/or forensic chemistry, forensic commodity ones) research if necessary:

- find out their dangerousness (in case of violation of manufacturing technology, storage, circulation, sale, marking rules) that can cause health disorders of animals and/or people who consume livestock products. Safety criteria are the presence or absence of: microorganisms (bacteria, viruses, microscopic pathogenic fungi) and their toxins, radionuclides, pesticides, nitrates and nitrites, heavy metals, genetically modified objects, parasites, etc.¹⁹⁵;
- detect their falsification (deliberate replacement of high-value and

189 Яценко І. В., Казанцев Р. Г. Порядок проведення судово-ветеринарної експертизи DOI: [10.31890/vtpp.2021.07.28](https://doi.org/10.31890/vtpp.2021.07.28) (date accessed: 01.06.2023).

190 Яценко І. В., Казанцев Р. Г. Методика судово-ветеринарної експертизи трупів тварин. Харків, 2022. 336 с.

191 Яценко І. В. Проблеми укладання уповноваженою особою постанови про призначення судово-ветеринарної експертизи та шляхи їх вирішення. *Форум Права*. 2022. Вип. 73. № 2. С. 11–12. DOI: [10.5281/zenodo.6471059](https://doi.org/10.5281/zenodo.6471059) (date accessed: 01.06.2023).

192 Про безпечність та гігієну кормів : Закон України від 21.12.2017 р. № 2264-VIII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2264-19#Text> (date accessed: 01.06.2023).

193 Ibid.

194 Ibid.

195 Яценко І. В. Проблеми укладання С. 14–15. DOI: [10.5281/zenodo.6471059](https://doi.org/10.5281/zenodo.6471059) (date accessed: 01.06.2023).

highly nutritious feed ingredients with less valuable and low-nutrition ones, or violation of labeling requirements (for example, replacement (in dry or wet feed for non-productive animals) of pork (beef) with poultry meat or meat with soy protein (*quality falsification*), failure to indicate in labeling available third-party components (*information falsification*), etc.)¹⁹⁶;

- determine their composition to clarify compliance / non-compliance with regulatory documents (recipe)¹⁹⁷.

1.4. Biological material of animal origin

Biological objects of animal origin most often become objects of multidisciplinary forensic examinations (for example, forensic veterinary and forensic biological; forensic veterinary, forensic biological and forensic ballistic; forensic veterinary and forensic genetic molecular; forensic veterinary, forensic biological and forensic trace evidence analysis¹⁹⁸), during which experts examine internal

organs, bones of skeleton, traces of blood, semen, secretions, vomit mass, embryos, dismembered parts of an animal carcass or corpse, skeletonized corpses, ash remains of an animal, derivatives of animal skin origin (hair¹⁹⁹, feathers, scales, etc.) of live examinee animals, as well as examinee animal corpses.

Extraction and delivery of forensic veterinary examination objects for laboratory research are carried out in accordance with *Procedure for extracting objects of forensic veterinary examination from the carcass of an animal and sending them for laboratory research*²⁰⁰ (clause 2.4.1 of *Rules of forensic veterinary examination of animal corpses*²⁰¹).

Biological material of animal origin becomes the object of multidisciplinary forensic examination if it is necessary to establish its belonging to a specific animal or animals of a certain zoological species or class²⁰², female or male, separate fragments of a whole, as well as blood of an animal of a certain species and to determine the age of the animal (for example, according to the condition of the teeth or bones of the skeleton),²⁰³ etc.

196 Яценко І. В. Проблеми укладання С. 14—15. DOI: 10.5281/zenodo.6471059 (date accessed: 01.06.2023).

197 Ibid.

198 Грошева О. Ю. Op. cit.

199 Ahmed Ya. A., Ali S., Ghallab A. Hair histology as a tool for forensic identification of some domestic animal species. *EXCLI Journal*. 2018. Vol. 17. Pp. 663—670. DOI: 10.17179/excli2018-1478 (date accessed: 01.02.2023).

200 Яценко І. В., Казанцев Р. Г. Порядок вилучення об'єктів судово-ветеринарної експертизи з трупа тварини і надсилання їх для лабораторних досліджень : метод. рек. Харків, 2021. 55 с.

201 Ibidem. Правила судово-ветеринарної експертизи

202 Яценко І. В., Головко Н. П., Кириченко В. М., Балинян Т. Є., Богатко Н. М., Букалова Н. В., Сердюков Я. К. Експертний випадок дослідження фрагментів тіла лося європейського (*Alces alces* L.) за матеріалами досудового розслідування кримінального провадження щодо браконьєрства. *Проблеми зооінженерії та ветеринарної медицини*. 2017. Вип. 35. Т. 1. Ч. 2. С. 115—126. URL: http://nbuv.gov.ua/UJRN/pzvm_2017_35%282.1%29__28 (date accessed: 01.02.2023).

203 Абузнайд Карем Р. С. Судово-ветеринарні критерії визначення віку і статі великої рогатої худоби молочного напрямку продуктивності за морфологічними особливостями носомозкового відділу черепа : автореф. дис. ... канд. вет. наук. Харків, 2016. 24 с.

Please note that in accordance with “*Rules of Forensic Veterinary Examination of Animal Corpses*”, biological material removed during a forensic veterinary autopsy can be sent by a forensic veterinarian to an accredited laboratory for microbiological, toxicological, histological, chemical, etc. researches together with an accompanying document²⁰⁴.

1.5. Elements of physical scene environment

Elements of the physical scene environment are the corpse of an animal (its parts) or a live injured animal; traces of blood, saliva, wool, hair, brain matter and other traces of biological origin; skin; bone remains; separate internal organs; instruments of injury, etc. To inspect the elements of the physical environment of the scene of the incident and/or the carcass of an animal to assist the person conducting the pre-trial investigation (for the purpose of a consistent, correct and scientifically based inspection of the scene and inspection, removal, packaging and marking of objects, for the oral expression of a preliminary opinion about nature and antiquity of formation of the identified injuries, assumptions about the instruments of injury, as well as other questions of a veterinary nature that arise for the authorized person conducting investigation, as well as for assistance in correctly recording the results of this examination in the protocol), involve a specialist in veterinary medicine (forensic veterinarian)²⁰⁵.

Results of such research on of the physical environment elements of

the scene related to an animal allow the person conducting a pre-trial investigation to more thoroughly clarify the offense mechanism, create an idea of the instrument of injury and the method of committing the crime, to take other necessary investigative actions, and later will contribute to offender identification.

2. Materialized objects of forensic veterinary examination

Separate group of forensic veterinary research objects are materialized objects containing information recorded in case files and other information carriers.

2.1. Case files

Case files are the main materialized object of a forensic veterinary examination in the case of its conducting based on the case materials and additional object in case of a forensic veterinary examination of tangible objects (examinee live animal, examinee animal carcass, fodder and feed additives for animals, veterinary medicines, etc.).

2.2. Case files obtained during investigative and/or investigative activities

Case files include the materials obtained during operative and/or investigative activities (reports of inspection of the scene and interrogation of witnesses and victims; diagrams, photo and video documents, video and audio recordings; conclusions of primary forensic examinations). Forensic veterinarian examines either original documents contained in case files or duly certified

204 Яценко І. В., Казанцев Р. Г. Правила судово-ветеринарної експертизи

205 Яценко І. В. Проблеми використання спеціальних ветеринарних знань під час огляду трупа тварини на місці події та шляхи їх вирішення. *Юридичний науковий електронний журнал*. 2023. № 1. С. 485—505. DOI: [10.32782/2524-0374/2023-1/114](https://doi.org/10.32782/2524-0374/2023-1/114) (date accessed: 01.02.2023).

copies of these documents, if they were provided to forensic expert separately without the case (proceedings). Such documents (copies of documents) should be stitched and numbered.

Research on case files, in particular, veterinary documents, will enable forensic veterinarian to correctly assess the items of material evidence during the inspection of the scene or the place where the animal corpse was found; determine mechanism and formation antiquity of bodily injuries, the occurrence of mutilation, occurrence of animal death; make a forensic veterinary diagnosis; answer the question of whether the animal could have suffered specific injuries under conditions and at the time specified in the procedural document on appointment of forensic veterinary examination.

2.3. *Veterinary documents*

Veterinary documents are extremely important for conducting forensic veterinary examination, as they contain basic and/or additional information for reasonable and objective establishment of factual data and circumstances relevant to the case (proceedings), in which connection we singled them out as a special group of research objects. Veterinary documents include the protocols of the pathological autopsy of animal corpses; acts of epizootic farm examination ; logs of registration and treatment of sick animals; medical animal history; extract from outpatient card of a sick animal; results of laboratory research on body fluids (blood, urine, bile, feces, gastric juice, etc.); results of laboratory bacteriological, virology, mycology research of biological material and clinical diagnostic studies (for example, conclusion of ultrasound

and protocols of electrocardiography, anatomical pathology, X-ray (tomographic), histological researches, etc.); journal of issuance of veterinary documents; operating permit, etc.

Veterinary documents are materialized objects of a forensic veterinary examination as the main material (in the case of forensic examination based on case files) and an additional research object (in the case of forensic veterinary examination of tangible objects: a live animal under examination, animal corpse under examination) . They help forensic veterinarian correctly and dynamically assess the completeness and timeliness of conducting diagnostic researches, providing veterinary care to sick animals, correctness of organizing health and preventive measures for epizootics (for example, African swine fever, rinderpest, bird flu, etc.).

Forensic veterinarian reaches a conclusion about examination objects based on his inner conviction, based on a comprehensive, complete, objective and direct study of such objects based on a set of research results: clinical (anatomical pathology) and laboratory (biological material: blood, urine, feces, semen, gastric juice, bile, etc.), evaluating each object separately, as well as collectively and in relation (if several objects are submitted for forensic examination). For example, in case of animal death by poisoning, forensic examination objects will be animal corpse, feed and water consumed by examinee animal.

Conclusions

The *forensic examination object* concept is one of fundamental forensic science elements that has the closest connection

with the expert research topic, outlines possibilities of forensic science and affects the choice of methods, methods and means of expert knowledge and the method of drawing up a forensic expert's conclusion. We proposed the author's definition formulation of *forensic examination object* for forensic veterinary research.

Forensic veterinary research objects are tangible and materialized sources of information about offense, recorded in criminal proceedings or case files, that forensic expert comprehensively, completely, objectively and directly examines while forensic veterinary examination on the basis of specific expertise within the topic scope of forensic research, using an interconnected set of methods, methods and means for solving diagnostic and situational expert tasks set in the procedural document on appointment of forensic veterinary examination (forensic expert recruitment).

System unity of the of forensic veterinary examination object makes possible to study the system of its characteristics thanks to determined set of specifics. For determining mechanism of objective solution of expert tasks in a categorical form with maximum preservation of forensic veterinary examination objects, it is important to correctly organize the algorithm of carrying out a specific forensic examination on the basis of proven methods for forensic veterinary research on various groups of its objects: tangible and materialized ones.

Tangible objects of forensic veterinary examination are live animals under examination; examinee animal corpses;

fodder and feed additives; biological material of animal origin (internal organs, skeleton bones, traces of blood, semen, secretions, vomit masses, embryos, dismembered parts of an animal carcass or corpse, skeletonized corpses, animal ash remains, animal skin derivatives (hair, feathers, scales etc.), pieces of fur and skins, etc.); elements of physical scene environment. Materialized objects of forensic veterinary examination include case files; materials obtained during investigative and/or investigative activities (protocols, diagrams, photo and video documents, video and audio recordings); veterinary documents (protocols of autopsy of animal corpses, acts of epizootic inspection, logs of registration and treatment of sick animals, issuance log of veterinary documents, operating permit, etc.).

All objects of forensic veterinary examination are information source, whereby forensic expert finds out the facts and circumstances that make up forensic examination topic. Forensic veterinary examination object makes possible to single out terminology, methodology, informational content in a broad subject area and ensures systemic unity and thanks to specific expertise, conclude a forensic expert's conclusion with answers to those questions which solution was not even attempted before experienced professionals.

We plan to make specifics of application of special veterinary knowledge during investigation of offenses and integration of special veterinary knowledge into multidisciplinary forensic researches the subject of our next scientific investigations and publications based on their results.

Правовий статус і гносеологічна характеристика об'єктів судово-ветеринарної експертизи

Іван Яценко

Метою праці є розкрити правовий статус і навести гносеологічну характеристику об'єктів судово-ветеринарної експертизи. Для досягнення поставленої мети застосовано загальнонаукові та спеціальні наукові методи. Уперше сформульовано дефініцію «об'єкти судово-ветеринарного дослідження» як матеріальних і матеріалізованих джерел інформації про подію правопорушення, які судовий експерт усебічно, повно, об'єктивно й безпосередньо досліджує під час проведення судово-ветеринарної експертизи на основі спеціальних знань, застосовуючи взаємопов'язаний комплекс методів, способів і засобів для розв'язання діагностичних та ситуаційних експертних завдань, поставлених у процесуальному документі про призначення судово-ветеринарної експертизи (залучення судового експерта). Аргументовано, що матеріальними об'єктами судово-ветеринарної експертизи є живі підекспертні тварини й підекспертні трупи тварин, корми й кормові добавки, біологічний матеріал тваринного походження й елементи речової обстановки місця події, а матеріалізованими — матеріали справи (провадження) і матеріали, отримані під час оперативно-розшукової і/або слідчої діяльності (протокол огляду місця події, схеми, фото- і відеодокументи тощо), ветеринарні документи (протоколи патологоанатомічного розтину трупів тварин, акти епізоотичного обстеження господарства, журнали реєстрації та лікування хворих тварин і видачі ветеринарних документів, історія хвороби та витяг з амбулаторної картки тварини,

результати лабораторних досліджень біологічних рідин організму (крові, сечі, жовчі, калу, шлункового соку тощо) і бактеріологічного, вірусологічного, мікологічного досліджень біологічного матеріалу, клінічних діагностичних досліджень, експлуатаційний дозвіл та ін.).

Ключові слова: судово-експертна діяльність; дефініція «об'єкти судово-ветеринарного дослідження»; теорія, правовий статус, гносеологічна характеристика об'єктів судово-ветеринарної експертизи; матеріальні та матеріалізовані об'єкти судово-ветеринарного дослідження.

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Declaration of Competing Interest

The author declares no conflict of interest.

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Semantic Reality in Forensic Psychology Analysis Context (Review article)

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This article purpose is to highlight methodological issues of modern forensic psychology analysis, to draw attention to multifaceted reality meaning acquiring different forms and manifesting itself in different psychological effects. Independent invariant statements of meaning definition in various psychological concepts are outlined, and its ontological, phenomenological and functional aspects in these concepts are considered. Using general theoretical methods of scientific knowledge, the main differences between cognitive and discursive psychology from theoretical basis point of view of psychological phenomena are distinguished. A number of methodological issues related to the solution of urgent expert tasks of modern forensic psychology analysis are highlighted (taking into account comments of expert practitioners regarding peculiarities of conducting multidisciplinary psychological and linguistic examinations). Referring to expert practice, object and topic of psychological research according to traditional and modern types of forensic psychological evaluations, as well as tasks solved by forensic expert psychologist during interview with polygraph use are defined. A complex of empirical methods used by expert psychologists to highlight specific aspects of semantic reality during expert research is given. Six varieties of dynamic semantic system of an

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individual are distinguished (personal sense, semantic attitude, motive, semantic disposition, semantic construct and personal value), which expert psychologist should take into account when analyzing phenomena and regularities of semantic regulation of human activity and consciousness in legally significant situations.

Keywords: *semantic reality; invariant statements of meaning definition; psychological researches; legally significant situation; forensic psychology analysis.*

Research Problem Formulation

Understanding meaning involves understanding reality in problematic situations, in particular legally significant ones. Within forensic science framework, focused on the maximum use of science and technology achievements, forensic psychology analysis is designed to provide justice with a conclusion with a thorough and comprehensive analysis of psychological aspects of a legally significant situation, namely: establish such specifics of mental person activity (and such their behavior manifestations), *“that have legal significance and cause certain legal consequences”* (paragraph 6.3 of section VI: *Forensic Psychology Analysis of Research guidelines on preparation and appointment of forensic examinations and forensic researches*)¹.

By its essence, forensic psychology analysis, like any other forensic science, is *“research based on specific expertise in the field of science, technology, art, craft, etc., of objects, phenomena and processes with the aim of providing a conclusion on issues that are or*

will be hearing topic” (Article 1 of Law of Ukraine: *On Judicial Examination*)². Given urgent needs of pre-trial investigation bodies and the fact that application of psychological knowledge (while conducting as homogeneous researches as forensic multidisciplinary examinations) involves the specific expertise adaptation to legal proceedings, it is advisable to consider theoretical statements of general psychology, as well as best practices of expert practitioners regarding the outlined issues for understanding methodological issues related to solution of expert tasks appearing to forensic psychology analysis.

Analysis of Essential Researches and Publications

Issue of *searching for meaning* has long been studied in theology, philosophy, and art from the point of view of perceiving and understanding hidden senses (categories of the sacred, after a while in a broader context) and determining what the worthiest human meaning of being consists of. From the beginning of the

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- 1 Науково-методичні рекомендації з питань підготовки та призначення судових експертів та експертних досліджень : затв. наказом Мініюсту України від 08.10.1998 р. № 53/5 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 31.05.2023).
 - 2 Про судову експертизу : Закон України від 25.02.1994 р. № 4038-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 31.05.2023).

XX century, semantic problems were in the center of attention as philosophers (R. Barthes³, L. Wittgenstein⁴, M. Heidegger⁵, E. Husserl⁶, H.-G. Gadamer⁷, J. Derrida⁸, G. Deleuze⁹, M. Mamardashvili¹⁰, J.-P. Sartre¹¹, G. Frege¹², C. Jung¹³, K. Jaspers¹⁴ et al.), and psychiatrists (L. Binswanger¹⁵, V. E. Frankl¹⁶, I. D. Yalom¹⁷ et al.). During the 20th century, the meaning concept evolved from linguistic understanding of

sense of a word = meaning of a word to concept application of *sense* in psychological analysis of categories *activity*, *consciousness* and *personality*, concepts of meaningful individual organization. At the same time, if foreign psychologists considered meaning as a phenomenon of objective reality in the context of meaningful life problems (A. Adler¹⁸, J. Bugental¹⁹, A. Maslow²⁰, R. P. May²¹, V. E. Frankl²²), then most Soviet researchers studied meaning as subjective

- 3 Barthes R. Elements of Semiology. N. Y., 1968. 112 p. URL: https://monoskop.org/images/2/2c/Barthes_Roland_Elements_of_Semiology_1977.pdf (date accessed: 31.05.2023).
- 4 Вітгенштайн Л. Tractatus Logico-Philosophicus; Філософські дослідження / пер. з нім. Є. Поповича. Київ, 1995. 311 с. URL: https://web.archive.org/web/20161020042846/http://shron.chtyvo.org.ua/Wittgenstein_Ludwig/Filosofski_doslidzhennia.pdf (date accessed: 31.05.2023).
- 5 Гайдеггер М. Буття в околі речей / Возняк Т. Тексти та переклади. Харків, 1998. С. 332—345. URL: <https://www.ji.lviv.ua/ji-library/Vozniak/text-i-perekl/kn3-heid2.htm> (date accessed: 31.05.2023).
- 6 Гуссерль Е. Ідеї чистої феноменології і феноменологічної філософії. Книга перша. Загальний вступ до чистої феноменології / пер. з нім. і комент. В. Кебуладзе. Харків, 2020. 348 с.
- 7 Гадамер Г.-Г. Істина і метод. Т. 1 : Герменевтика I: Основи філософської герменевтики / пер. з нім. О. Мокровольського. Київ, 2000. 464 с. URL: https://shron3.chtyvo.org.ua/Gadamer_Hans-Georg/Istyna_i_metod_t1.pdf (date accessed: 31.05.2023).
- 8 Derrida J. La Dissémination. Paris, 1972. 411 с.
- 9 Deleuze G. The Logic of Sense. Columbia University Press ed., 1990. 393 p.
- 10 Мамардашвили М. К. Формы и содержание мышления : автореф. дис. ... д-ра филос. наук. Тбилиси, 1970. 48 с.
- 11 Сартр Ж.-П. Буття і ніщо (фрагменти) / пер. В. Ляха // Сучасна зарубіжна філософія. Течії і напрями : хрестоматія. Київ, 1996. С. 112—182. URL: https://www.academia.edu/37046100/%D0%96%D0%B0%D0%BD_%D0%9F%D0%BE%D0%BB%D1%8C_%D0%A1%D0%B0%D1%80%D1%82%D1%80_%D0%91%D1%83%D1%82%D1%82%D1%8F_%D1%96_%D0%BD%D1%96%D1%89%D0%BE_%D1%84%D1%80%D0%B0%D0%B3%D0%BC%D0%B5%D0%BD%D1%82%D0%B8_%D0%BF%D0%B5%D1%80_%D0%92%D1%96%D1%82%D0%B0%D0%B%D1%96%D0%B9_%D0%9B%D1%8F%D1%85_ (date accessed: 31.05.2023).
- 12 Frege G. Schriften zur Logik und Sprachphilosophie: Aus dem Nachlass. Hamburg, 2001. 217 s.
- 13 Юнг К. Г. Архетипи і колективне несвідоме / пер. з нім. К. Котюк ; наук. ред. О. Фешовець. Львів, 2018. 608 с.
- 14 Ясперс К. Про сенс історії (фрагменти) / пер. А. Гордієнка // Сучасна зарубіжна філософія С. 183—210.
- 15 Binswanger L. Grundformen und Erkenntnis Menschlichen Daseins. Zürich, 1942. 342 s.
- 16 Франкл В. Е. Людина в пошуках справжнього сенсу. Психолог у концтаборі / пер. О. Замойської. Харків, 2016. 160 с.
- 17 Yalom I. D. Existential Psychotherapy. Basic Books, 1980. 544 p.
- 18 Adler A. The Science of Living. Hardcover, 1930. 264 p.
- 19 Bugental J. F. T. Intimate Journeys: Stories from Life-Changing Therapy. Jossey-Bass, 1990. 335 p.
- 20 Maslow A. H. Motivation and Personality (First ed.). N. Y., 1954. 411 p.
- 21 May R. The Discovery of Being. W. W. Norton & Company, 2015. 224 p.
- 22 Франкл В. Е. Op. cit.

personal characteristics reflecting process of human interaction with reality (L. Vygotsky²³, D. Leontiev²⁴, A. Leontiev²⁵, S. Rubinstein²⁶). New ideas from the outlined issues were produced by G. Kelly²⁷ (psychology of personal constructs), H. R. Harré²⁸ (ethnogenic approach within the framework of discursive psychology), Yu. T. Dzhenclin²⁹ (phenomenological psychotherapy), J. R. Nuttin³⁰ (theories of behavioral dynamics), Dzh. Shotter and K. J. Gergen³¹ (social ecology) and others. Since meaning is a special psychological reality, ignoring or limiting it (e.g., emotions), it is impossible to understand the peculiarities of the mental activity of an individual (its cognitive schemes, patterns of significance, matrix of beliefs, etc.) and their influence on consciousness and behavior of a person in a legally significant situation, we consider it expedient to consider in detail best practices of scientists and expert practitioners on outlined issues.

Article Purpose

Consider theoretical and practical aspects of psychological analysis of semantic reality in legally significant situation

to comprehend methodological issues associated with solving forensic issues facing forensic psychology analysis.

Research methods

In order to achieve this goal, general theoretical methods of scientific cognition were used: empirical (observation, comparison, measurement, experiment), theoretical (ascension from the abstract to the concrete, idealization, formalization, axiomatic method), as well as theoretical and empirical research (abstraction, analysis and synthesis, induction and deduction, modeling, etc.).

Main Content Presentation

According to current legislation of Ukraine, forensic psychology analysis is appointed in the case when specific expertise in the field of psychology is required to resolve certain issues that are essential for criminal proceedings (civil, economic, administrative cases). The list of questions posed to forensic psychologist is quite wide. Taking into account the type of forensic psychology analysis, psychologist conducts research on:

- 23 Выготский Л. С. Психология развития человека. Москва, 2005. 1136 с. (Библиотека всемирной психологии).
- 24 Леонтьев Д. А. Психология смысла: природа, строение и динамика смысловой реальности. 2-е изд., испр. Москва, 2003. 487 с.
- 25 Леонтьев А. Н. Потребности, мотивы и сознание. *Мотивы и сознание в поведении человека*: тез. сообщ. XVIII Междунар. конгр. психол. Симп. 13. Москва, 1966. С. 5—20.
- 26 Рубинштейн С. Л. Бытие и сознание. Москва, 1957. 328 с.
- 27 Kelly G. A. A Theory of Personality. *The Psychology of Personal Constructs*. W. W. Norton & Company, 1963. 202 p.
- 28 Harré H. Rom. Social Being: A Theory for Social Psychology. Oxford, 1979. 438 p. ; Harré R., Clarke D. D., de Carlo N. Motives and Mechanisms: An Introduction to the Psychology of Action. London, 1985. 174 p.
- 29 Gendlin E. T. Experiencing and the Creation of Meaning: A Philosophical and Psychological Approach to the Subjective. Northwestern University Press, 1997. 302 p.
- 30 Nuttin J. Psychoanalysis and Personality. A Dynamic Theory of Normal Personality: Transl. N. Y., 1953. 310 p.
- 31 Shotter J., Gergen K. J. Social Construction: Knowledge, Self, Others, and Continuing the Conversation. *Annals of the International Communication Association*. 1994. Vol. 17. Is. 1 : Communication Yearbook 17. Pp. 3—33. DOI: [10.1080/23808985.1994.11678873](https://doi.org/10.1080/23808985.1994.11678873) (date accessed: 31.05.2023).

- individual psychological characteristics and leading qualities of the individual;
 - ability of witness or victim to correctly perceive circumstances that are relevant to the case and provide correct (adequate) evidence about;
 - ability measures of accused to understand nature of actions committed and their consequences; existence or absence of an emotional state in examinee at the time of the illegal actions, which significantly affected his consciousness and behavior;
 - ability of juvenile suspect (accused) to fully understand the meaning of his actions and manage them;
 - ability assessment of mentally healthy victim to understand the nature and significance of the actions of accused (assessment of ability to resist him (in rape cases);
 - establishing mental state of person who committed suicide (posthumous forensic psychology analysis);
 - social and psychological characteristics of criminal group members;
 - determination of peculiarities of a person's perception of the actual side of events and situation real content considered in the case (examination on the issues of causing psychological influence);
 - judicial protection of civil rights and interests of a person (in cases of compensation for moral damage);
 - establishing degree of understanding by a person of the content of agreements concluded by him/her, his/her ability to make informed decisions; detection of non-pathological mental anomalies in a capable person interfering with adequate reality reflection (in cases of invalidation of an agreement concluded by a capable person);
 - establishing child's psychological compatibility with each of the parents, guardians, adoptive parents; determining capabilities of specific persons to provide the most favorable upbringing for the child's development (in cases of eliminating obstacles to communication with the child and establishing the procedure for participation in its upbringing);
 - specifics of communicative activity of the person recorded in the video;
 - psychological specifics of information content and its orientation (during multidisciplinary psychological and linguistic research);
 - survey using a special technical means: polygraph (to obtain approximate information on significant events and certain actions)³², etc.
- The research object of forensic psychologist according to traditional subject types of forensic psychology analyses is a person as a person (examinee) and a set of information sources reflecting information about mental activity of this person in legally significant circumstances ³³. Given definition of personality as a phenomenon

32 Науково-методичні рекомендації URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 31.05.2023).

33 Єгорова Т. М., Єгоров В. В. Дискусійні питання щодо об'єкта та предмета судової психологічної експертизи. *Актуальні питання судової експертизи і криміналістики* : зб. мат-лів Міжнар. наук.-практ. конф., присвяч. 150-річ. з дня народж. Засл. проф. М. С. Бокаріуса (Харків, 18—19.04.2019). Харків, 2019. С. 428—430.

of social development, a concrete living person with consciousness and self-awareness ³⁴ (subject of *“conscious productive activity and social behavior of an individual with a socially conditioned system of higher mental properties that is formed and manifests itself in self-changing activity, communication, mediates, regulates the interaction of a person with environment”* ³⁵), expertology analysis of cases involving living persons, as well as post-mortem examinations, involves highlighting the content of value-meaning field of the individual as a complex psychological phenomenon that is a connecting link between consciousness and activity.

Within the framework of multidisciplinary psychological and linguistic examinations, object of psychological research is information content (and not mental examinee activity) and sources of information about specifics of communicative situation which they are attached to ³⁶. According to this species of forensic science, psychological specifics of information content as a communicative unit are subject to expert evaluation that always has its own sense and orientation. It is competence of forensic psychologist to determine the psychological components of information content sense and its semantic orientation.

Consequently, expert analysis of all research objects without exception

within the framework of forensic psychology analyses involves highlighting psychological aspects of semantic reality in a legally significant situation.

In psychology, the concept of *meaning* belongs to the most significant analytical concepts, besides, range of theoretical approaches to it is extremely wide. According to the exact definition of O. M. Leontiev, *“problem of meaning... is the last analytical concept that crowns the general doctrine of the psyche, just as the concept of personality crowns the entire system of psychology”* ³⁷.

At the current stage of psychology development, idea of meaning is determined by a significant number of concepts, constructs, functional systems, processes and fields of experience and scientists consider semantic reality (as a special kind of reality) from standpoint of parts, process and the whole. For example, M. B. Karlsen characterizes meaning as *“process and ideal, structure and sequence, possibility and limitation, achievement and intention, noun and verb, which are formed and transformed during all stages of an adult’s life”* ³⁸. In general, this concept contains almost everything: *“Meaning as a noun contains elements of constructions, word systems, cognitive schemes, belief matrices, orienting mechanisms, patterns of significance. <...> Predicative qualities of meaning — process, movement, growth,*

34 Шапар В. Б. Сучасний тлумачний психологічний словник. Харків, 2005. С. 305. URL: https://library.udpu.edu.ua/library_files/427530.pdf (date accessed: 31.05.2023).

35 Словник психологічних термінів / НФаУ : офіц. сайт. URL: <https://nuph.edu.ua/slovník-psihologichnih-terminiv/> (date accessed: 31.05.2023).

36 Секераж Т. Н. Новые направления психологических исследований в судебной психологической экспертизе. Актуальні питання судової експертизи і криміналістики : зб. мат-лів міжнар. наук.-практ. конф.-полілогу (Харків, 15–16.04.2021). Харків, 2021. С. 251–252. URL: https://www.hniise.gov.ua/uploads/files/public-folder/2021_tezy_konferencija%20in%20print5.pdf (date accessed: 31.05.2023).

37 Леонтьев А. Н. Op. cit.

38 Carlsen M. B. Meaning-Making: Therapeutic Processes in Adult Development. N. Y. : Norton, 1988. 264 p.

*intention, evolution of personal synergies, growth and development “from – to”. <...> Therefore, “sense” is simultaneously meaning and understanding, intention and intending, being and existence”*³⁹. The main sense characteristic is the source indication.

It is traditional for forensic psychological examination (both in relation to living persons and postmortem examinations) to research on case files and documents attached to (medical documentation, expert conclusions, interrogation protocols, creative products of an examinee person, etc.) as a set of sources of information about peculiarities of mental activity subject in a legally significant situation. Forensic psychological examination is prescribed for a mentally healthy person: human being who is able to be aware of and regulate their own actions, as well as in case of detection of a decrease in a mentally healthy person's ability to be aware of and regulate their own behavior in a legally significant situation (if such detection is of temporary or situational nature, due to influence of external and/or internal factors): then forensic psychologist should find out actual ability of the subject to conscious self-regulation of activity (reflecting measure of potential ability to consciously regulate one's own activity in specific circumstances depending on the dynamic (emotional) state, correspondence of intellectual and personal resources for situation (task) requirements.

Personal understanding of his own actions is a reflection of both objective (external to him) and subjective (own) characteristics. Since forensic psychology analysis should find out whether a person

understands dependence of his actions on the goal and the reasons (motives) that make him commit these actions, as well as consequences that his actions can lead to, we set the task to determine whether a person understands the sense of his actions (according to O. M. Leontiev)⁴⁰.

Analyzing and systematizing interpretations of the *sense* concept of in historical context makes possible to state that in philosophy and the linguistic sciences (where the concept of *meaning* was not used as a synonym for *meaning*), it had two most common invariant characteristics:

- 1) contextuality (sense of something is determined by correlation with a wider context);
- 2) intentionality (sense of something indicates the purpose, target orientation or direction of movement).

Based on these two main characteristics, sense of something is defined as the place and role (purpose) in a more general structure⁴¹.

Psychologists distinguish invariant provisions of the sense definition repeated in different psychological concepts independently of each other:

- Sense link with significance (meaning) for the subject of certain objects, phenomena, actions and events, as well as its individual uniqueness;
- sense conditionality of the object or the action of its (its) place in a wider context;
- relationship between the subject and the world as a sense determinant;
- needs, motives and intentions of the subject as a sense source;

³⁹ Carlsen M. B. Op. cit.

⁴⁰ Леонтьев А. Н. Указ. соч.

⁴¹ Ibid.

- dependence of sense on cognitive processes of information processing and image building;
- conditionality of senses by unique experience and biography of the subject (with an emphasis on affective experiences of early childhood);
- special role of the subject's activity in generating meanings;
- sociocultural determination of meanings, when the decisive role in generation of senses is given to learning and self-learning;
- influence of other people on generation of senses (valences) in the form of an order, prohibition or example.

Opinions of different authors about nature of sense influence on consciousness and activity differ less: some believe that behavior is determined by the senses of situations, objects and phenomena, others that no activity is possible without meaning at all (lack of meaning causes disease), still others note influence of sense on the course of cognitive processes, and still others associate personal ability to self-determination with senses.

Among the views of various authors on internal structure and dynamics of senses, it is difficult to single out general provisions, with exception of situational variability idea of sense and its dependence on current subject state, as well as emphasizing that sense cannot

always be conceptually represented, it is not always conscious and not always clearly expressed by available means ⁴².

In view of the conceptual provisions of the theory of *felt meaning* of Yu. T. Dzhenclin, American philosopher, psychologist and psychotherapist, sense cannot be calculated and recounted: it should be encountered, discovered, felt, listened to and enabled to appear ⁴³. Noting that meaning always contains some implicit aspects that are not symbolized at the moment, the researcher traces functioning of non-verbalized meanings that are directly felt in speech, thinking, observation, action, in the work of memory and understanding and comes to the conclusion that relations are decisive between the verbally symbolized *meaning* and *felt sense*, from which meaning is born ⁴⁴. American scientist characterizes experience, which is both opposed to symbolization and related to it, as a pre-conceptual meaning that is directly felt and that can be called incomplete without embodiment in symbolic forms.

Forms where sense can exist are diverse. Western researchers name a number of systems (kinesthetic, visual, auditory, tactile and olfactory sensory systems, symbolic systems) in which meaning can be expressed in the process of interpersonal interaction ⁴⁵. The emphasis placed on each of these forms within the holistic meaning system will vary, but each form will play a role in the individual construction process ⁴⁶.

42 Леонтьев Д. А. Op. cit.

43 Gendlin E. T. Focusing-Oriented Psychotherapy: A Manual of the Experiential Method. N. Y. : Guilford Press, 1998. 317 p.

44 Ibidem. Experiencing

45 Thomas L. Nothing more theoretical than good practice: teaching for self-organized learning // Issues and Approaches in Personal Construct Theory / D. Bannister (Ed.). London etc. : Academic press, 1985. Pp. 233–251.

46 Harré H. Rom. Discursive Psychology and the Boundaries of Sense. *Organization Studies*. 2004. Vol. 25. Is. 8. Pp. 1435–1453. DOI: [10.1177/0170840604046351](https://doi.org/10.1177/0170840604046351) (date accessed: 31.05.2023).

It is known from scientific literature that traditional (cognitive) psychology distinguishes three ontological types of reality: personality (identity), consciousness (intrapsychic field) and actual reality (world external to personality and consciousness). The first two types are a branch of psychological knowledge, the third is a kind of independent criterion for understanding mental phenomena and verifying their interpretations. At the same time, it is assumed that versions of external world in consciousness of individuals: perception, representation, reproduction (description), message arise by themselves, naturally and simply. Discursive psychology questions the legitimacy of such an assumption ⁴⁷. According to some British psychologists, the errors of cognitivists begin with neglecting the very *intelligible* process by which reality is constructed. From discursive positions, context validity of actions, that is, the actual version of what is happening, “*considered as something constructed by the participants in the process of their social practice, therefore the psychologist has no right to legalize any version of reality without studying this practice*” ⁴⁸. Thus, the focus of contemporary psychological issues is the *discourse on the actual*, as well as the ways in which reproduction (description), representations, reports, or versions acquire apparent independence from their subject. This approach can reasonably be applied to study of the first two (properly psychological) reality fields alike personality and consciousness. People

create versions of their personal inner lives as well as factual descriptions of external, public realities. Therefore, taking the side of social constructivism, it is impossible to adhere to traditional differentiated ontology. In addition, this position makes possible to trace the relationship and mutual influence of external and internal realities, since people constantly create such versions of past events that justify their motives or motivate real actions ⁴⁹. Thus, if the cognitive interpretation of the mental is based on perceptual processes and their transformation, then supporters of the discursive approach emphasize the process of representation and investigate the discursive (social-symbolic) basis of psychological phenomena.

H. R. Harré, theorist of discursive psychology notes that actions acquire social content due to their *inclusion* in a wider social context; the sense of individual elements of behavioral chain is determined by their place in this chain. The researcher cites five hierarchical levels of meanings present in social interactions:

- 1) first, lower level is set by the most deliberate action;
- 2) second: implementation of deliberate (with a certain intention) act;
- 3) third: its indirect effect;
- 4) fourth: intentional future act consequences;
- 5) fifth, *hermeneutic* level is associated with going beyond practical effects of the action and acquires meaning only in the plane of analysis of expressive action aspect.

47 Harré H. Rom. Discursive Psychology DOI: 10.1177/0170840604046351 (date accessed: 31.05.2023).

48 Potter J., Edwards D., Wetherell M. A Model of Discourse in Action. *American Behavioral Scientist*. 1993. Vol. 36. No. 3. Pp. 383–401.

49 Harré H. Rom. Discursive Psychology DOI: 10.1177/0170840604046351 (date accessed: 31.05.2023).

It is expressive aspect, and not the practical determining hidden action significance, its no longer social, but personal sense, although the latter cannot exist otherwise than in relation to the system of social meanings⁵⁰. It is personal senses derived from social ones that largely determine uniqueness of the psyche of each individual⁵¹: they are actually metaphorically reworked social semiotic systems. The main determinant of personal meanings is expressive aspect of life path of the individual indicated by the concept of *psychological biography* (according to the definition of H. R. Harré: *moral career*)⁵².

D. O. Leontiev in the *Sense Psychology. Nature, structure and dynamics of semantic reality* fundamental research paper describes three planes of semantic reality and, accordingly, three aspects of sense: ontological, phenomenological, and functional ones. Being in unity with each other, they correspond to three fundamental general psychological categories: personality, consciousness, activity. The researcher understands the sense as a relationship between subject and object (phenomenon), determined by the object place (phenomenon) in the subject life, distinguished by this object (phenomenon) in the image of the world and embodied in personal structures that regulate the subject's behavior in relation to this object (phenomenon). Given the conceptual positions of the author, experimental research can be directed to two of the three facets of sense to their phenomenological or

substrate (regulatory) aspect. In the first case, the research subject is semantic connections in the image, worldview, subjective semantics, images in the broad sense of the word. In the second, regulatory influence of certain individual features of the semantic field or semantic attitudes induced in the experimental situation on processes of practical and cognitive activity, on solution of specific and more general tasks, up to the impact on the subject life path in general. At the same time, similar researches become researches on semantic reality if during consideration of independent and mediated variables, their ontological aspect is taken into account, in other words, their place in the structure of life relationships⁵³.

Modern practice of conducting forensic psychology analyses indicates that in order to cover specific aspects of semantic reality (in accordance with the tasks set), a set of complementary empirical methods should be used: bibliographic, conversation, observation, experiment, surveys, tests (including psychometric, projective and semi-projective, etc.), analysis of the documents provided, study of activity products, as well as psychosemantic, phenomenological, expert evaluation, etc.

Thus, forensic psychology analysis by traditional subject types covers a huge range of tasks, which solution allows pre-trial investigation bodies of and the court to take into account peculiarities of mental individual activity (and their impact on consciousness and behavior of the person)

50 Harré H. Rom. Personal Meanings: Semantic Relations of the Fourth Kind // Personal meanings : the first Guy's Hospital symposium on the individual frame of reference / E. Shepherd, J. Watson (Eds.). Chichester etc. : Wiley, 1982. Pp. 9–22.

51 Ibidem. Personal Being: A Theory for Individual Psychology. Oxford : Blackwell, 1983. P. 281.

52 Ibidem. Social Being Pp. 33–34.

53 Леонтьев Д. А. Op. cit.

in a legally significant situation. Regarding coverage of various aspects of semantic reality during the forensic psychology analysis by the latest subject types (as part of a multidisciplinary forensic psychological and linguistic examination, survey using polygraph), we should note the following.

The analysis of expert practice indicates that psychological research on informational content within the framework of multidisciplinary forensic psychology analyses and linguistic examinations has a specific topic and research methods that differ from traditional ones. Considering the fact that informational content is a communicative unit that always has its own sense and direction, messages contained in are subject to expert analysis and not psychological qualities and states of the author. *Topic of forensic psychology analysis on information content* is establishment by forensic expert using specific expertise and practical skills in the field of psychology of factual data regarding psychological specifics of information content (in particular, its orientation) that

has legal significance and certain legal consequences⁵⁴. It is worth noting that in the Register of methods of conducting forensic examinations⁵⁵, which procedure is approved by the order of the Ministry of Justice of Ukraine⁵⁶, currently, there is no proven method of conducting such a specific type of forensic psychology analysis and there is no single methodical approach to solving expert tasks in this direction. According to T. M. Yehorova, the topic of a multidisciplinary forensic psychology analysis should be “*set of factual data established by integrating scientific knowledge in linguistics and psychology regarding the specifics, functions of an information message as a communicative act and the potential of its impact on recipients*”⁵⁷. At the same time, in research papers of some foreign forensic researchers⁵⁸, whose object of study is informational content, it is stated that competence of forensic psychologists in this subject type does not include establishment of real or potential influence on addressee, since speculative assumptions about whether he is capable (incapable) of the text to influence addressee and how exactly are

54 Секераж Т. Н. Психологическое исследование информационных материалов: становление нового вида судебной психологической экспертизы и новой экспертной специальности. *Теория и практика судебной экспертизы*. 2019. Т. 14. № 1. С. 35—43. DOI: 10.30764/1819-2785-2019-14-1-35-43 (дата звернення 22.07.2022).

55 Реєстр методик проведення судових експертиз / Офіц. сайт Мін'юсту України. URL: <https://rmpse.minjust.gov.ua> (date accessed: 30.05.2023).

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57 Сгорова Т. Актуальні питання експертного психологічного дослідження у кримінальних провадженнях щодо злочинів проти інформаційної безпеки України. *Актуальні питання судової експертизи та криміналістики* : зб. мат-лів міжнар. наук.-практ. конф. із нагоди ювілеїв видат. учен.: 95-річ. від дня народж. Л. Ю. Ароцкера («Ароцкерівські читання») і 105-річ. від дня народж. М. В. Салтевського (Харків, 19.05.2023). Харків, 2023. С. 123. URL: [https://www.hniise.gov.ua/uploads/files/public-folder/2023_tezy_konference28_compressed_compressed_compressed%20\(1\)-1-180.pdf](https://www.hniise.gov.ua/uploads/files/public-folder/2023_tezy_konference28_compressed_compressed_compressed%20(1)-1-180.pdf) (date accessed: 30.05.2023).

58 Кукушкина О. В., Сафонова Ю. А., Секераж Т. Н. Теоретические и методические основы судебной психолого-лингвистической экспертизы текстов по делам, связанным с противодействием экстремизму. Москва, 2011. 326 с.

incorrect. Competence of experts does not include the legal (legal) qualification of the act, establishment of guilt and its forms (intention or carelessness, type of intention), offense motives. While multidisciplinary forensic psychology analyses linguistic examinations, experts do not establish circumstances that are not reflected in researched content (texts, video recordings, etc.) and the communicative situation of its use. Studying informational content, forensic linguist establishes what is specifically said, which meaning component is expressed and by which means of speech, determines expression form, and forensic psychologist, taking into account the description what was said (shown), verified by forensic linguist, establishes psychological specifics of informational content from standpoint of his aimed at forming a social attitude (attitude) to certain events, persons, processes and phenomena in the addressee. The answer to the question: *"Can these attitudes really be formed in the addressee and with what degree of probability?"* does not belong to the research topic. Accordingly, it is inadmissible to conduct any social-psychological experiments with the aim of establishing real influence of certain content on addressee or recommendations for conducting similar experiments⁵⁹.

Among the newest tasks of forensic psychological research is a survey using a special technical means, *polygraph*. In order to obtain indicative information, expert psychologists may conduct surveys using a polygraph on:

- 1) probability degree of information reported by interviewee;
- 2) completeness of information provided by interviewee;
- 3) sources of information received by interviewee;
- 4) representations of interviewee about a certain event;
- 5) other indicative information necessary for construction of versions of investigation of certain events.

Survey using polygraph is carried out only with the written consent of the person who will take the survey⁶⁰.

Tasks solved by forensic psychologist while interview using polygraph are primarily related to determining personal significance of stimuli for the interviewed person (certain word, question, symbol, photo, object, etc.) presented several times in a row special method⁶¹. If the stimulus persistently (non-randomly, i.e., for each of repeated presentations) causes more pronounced physiological reactions (compared to other elements of stimulus series), it is recognized as significant⁶². Since significance of

59 Кукушкина О. В., Сафонова Ю. А., Секераж Т. Н. Оп. cit.

60 Про внесення змін до наказу Міністерства юстиції України від 08 жовтня 1998 року № 53/5 : наказ Мін'юсту України від 27.07.2015 р. № 1350/5. URL: <https://zakon.rada.gov.ua/laws/show/z0915-15#n2> (date accessed: 31.05.2023).

61 Харіна Т. Г. Особистісна значимість стимулу як один з ключових показників при формуванні висновку експертного дослідження із застосуванням комп'ютерного поліграфа. *Актуальні питання судової експертології, криміналістики та кримінального процесу* : зб. мат-лів II Міжнар. наук.-практ. конф. (Київ, 19.11.2020). Київ, 2020. С. 618–622. URL: <https://m3rkxutm8pk3eqapl5ynjvb3gjps8uao.cdn-freehost.com.ua/wp-content/uploads/2021/06/5f-d09ad02772c.pdf> (date accessed: 31.05.2023).

62 Довідник поліграфолога (валідні формати тестів та системи бального оцінювання) : довідник / уклад.: В. Шаповалов, Д. Зубовський, Д. Алексеєва-Процюк, О. Гончарова. Київ, 2018. 20 с.

stimuli is calculated comparatively, in the future, forensic expert, using specific expertise and practical skills in the field of psychology, finds out reasons for personal significance of a particular stimulus under examination in relation to a specific event and its components. In particular, comprehensive forensic evaluation of data obtained as a result of research using a polygraph takes place in this way: forensic expert analyzes provided information sources and information obtained during the pre-test interview with the subject; in accordance with special methods formulates questions about specific events and certain actions; interviews a person using a polygraph; conducts a post-test interview with the subject; evaluates meaningful parts of answers and non-verbal expressions; calculates, analyzes and evaluates registered polygraph charts, formulates conclusions.

In American Polygraph Association terminological reference book, *salience* is explained as an increase in the intensity of excitation in the process of psychophysiological research using a polygraph “in accordance with stimuli, since they are related to the subject goals, standards and attitudes”⁶³.

In psychological dictionaries, *significance of signal* as one of the most important psychological characteristics is determined by the ratio of the information contained in it to the meaning of the task solved by the subject⁶⁴. Significance has several levels and is determining factor

in classification of information model elements; besides, personal meanings are always part of a wider system.

O. Yu. Artemieva, founder of psychology of subjective semantics, characterizing the meanings, notes that topic sense for a subject is a trace of activity background of the relationship between them, which is recorded in the attitude to the object, in its *for-subject-being*⁶⁵ The scientist proposed a paradigmatic model of “*movement of meaning through subjective experience layers*” including:

- 1) perceptual world (formed by a system of modal images, ordered objects relative to each other);
- 2) worldview (structured set of attitudes towards objects that are perceived as relevant);
- 3) *world image* in the narrow sense (which is the deepest layer of amodal structures formed while semantic layer processing)⁶⁶.

Elements of subjective experience semantic layer, which is the main research object in psychology of subjective semantics, she understands as “*traces of activities, fixed as an attitude to objects, objects of manipulation and conditions of these activities*”⁶⁷. The scientist distinguishes between “*preconceptions: figurative traces fixed in modal characteristics (layer of perceptual world), senses: traces within the semantic layer and personal senses: components of the image of the world, elements of the nuclear structures of subjective experience*”⁶⁸. The researcher

63 Крапол Д., Хендлер М. і Штурм Ш. Термінологічний довідник для наукової психофізіологічної детекції неправдивості (ПФД) / пер. О. Назарова, А. Лисенка. 2012. 3-тє вид. 133 с.

64 Словник психологічних термінів URL: <https://nuph.edu.ua/slovnik-psiologichnih-terminiv/> (date accessed: 31.05.2023).

65 Артемьева Е. Ю. Основы психологии субъективной семантики / под ред. И. Б. Ханиной. Москва, 1999. 350 с.

66 Ibid.

67 Ibid.

68 Ibid.

notes the inaccuracy of the sense concept proposed by her to concept of personal meaning according to O. M. Leontiev: *“Additional link of the processed trace of the system is necessary for our “sense” to turn into “personal sense”*⁶⁹.

Summarizing theoretical positions of modern psychological concepts, it can be stated: modern researchers on phenomena and regularities of semantic regulation of human life activities distinguish at least six varieties in the dynamic semantic system of personality: personal sense, semantic attitude, motive, semantic disposition, semantic construct and personal value, noting that phenomenology of semantic regulation of activity and consciousness is exhausted by phenomenological manifestations of personal sense and semantic attitude. At the same time, behind each of these findings in a specific legally significant situation there may be semantic structures of a higher rank: motives of actual activity, semantic dispositions, and semantic constructs (to which forensic psychologist should pay attention while highlighting specifics of structuring of a person's subjective experience).

Conclusions

Based on generalization of best practices of scientists and practitioners, theoretical and practical aspects of highlighting the semantic reality during forensic psychology analysis are determined. The concepts of *sense*, *semantic reality* and their generalized criteria in various psychological concepts are considered. A number of methodological issues related to the solution of urgent expert tasks of forensic psychology analysis are highlighted (taking into account

comments of expert practitioners regarding the peculiarities of conducting multidisciplinary psychological and linguistic examinations). Referring to expert practice, topic and subject of psychological research according to traditional and modern subject types of forensic psychology analyses are defined, tasks solved by forensic psychologist during an interview using polygraph are outlined. Complex of empirical methods that forensic psychologists use to highlight specific aspects of semantic reality during forensic research is given. Six varieties of dynamic semantic system of an individual are distinguished (personal sense, semantic attitude, motive, semantic disposition, semantic construct, and personal value), that forensic psychologist should take into account when analyzing phenomena and patterns of semantic regulation of human activity consciousness in legally significant situations. Considering the complexity and versatility of semantic reality taking on different forms and manifests itself in different psychological effects, the solution of urgent expert tasks of forensic psychological examination requires further in-depth analysis of theories of modern psychology for the effective solution of methodological and practical tasks of expertology.

Смислова реальність у контексті судово-психологічної експертизи (оглядова стаття)

Тетяна Харіна, Оксана Русанова

Мета статті — висвітлити методологічні проблеми сучасної судово-психологічної експертизи, привернути увагу до багатогранності смислової реальності, яка набуває різних форм і виявляється в різних психологічних ефектах. Викладено незалежні одне від

69 Артемьева Е. Ю. *Op. cit.*

одного інваріативні положення визначення смислу в різних психологічних концепціях, розглянуто його онтологічні, феноменологічні й діяльнісні аспекти в цих концепціях. За допомогою загально-теоретичних методів наукового пізнання виокремлено основні відмінності когнітивної та дискурсивної психології з погляду теоретичного підґрунтя психологічних феноменів. Висвітлено низку методологічних проблем, пов'язаних із розв'язанням нагальних експертних завдань сучасної судово-психологічної експертизи (із урахуванням зауважень експертів-практиків щодо особливостей проведення комплексних психолого-лінгвістичних експертиз). Посилаючись на експертну практику, визначено об'єкт і предмет психологічного дослідження за традиційними й новітніми видами судово-психологічних експертиз, а також завдання, розв'язувані експертом-психологом під час опитування із застосуванням комп'ютерного поліграфа. Наведено комплекс емпіричних методів, застосовуваних експертами-психологами для висвітлення конкретних аспектів смислової реальності під час проведення експертних досліджень. Виокремлено шість різновидів динамічної смислової системи особистості (особистісний смисл, смислову установку, мотив, смислову диспозицію, смисловий конструкт та особистісну цінність), на які експерт-психолог має зважати, аналізуючи феномени й закономірності смислової регуляції діяльності та свідомості людини в юридично значущих ситуаціях.

Ключові слова: смислова реальність; інваріативні положення визначення смислу; психологічні дослідження; юридично значуща ситуація; судово-психологічна експертиза.

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The authors declare that they have no conflict of interest.

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Crime Investigation: The Scientific Method of Alfredo Niceforo

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The research purpose is a scientific analysis of the role of crime investigation method developed by A. Niceforo in of forensic science formation about the methods of investigating criminal offenses and forensic methods as a component of modern criminalistics. For achieving the goal, the methods of scientific knowledge are applied: observation, comparison, abstraction, analysis, synthesis, modeling, etc. The construction of A. Niceforo's method involves general scientific methods and techniques (proposing hypotheses, graph method, analysis, synthesis, deduction, induction, analogy), comprehensive approach, systematicity, phasing, knowledge of psychology. The professional and psychological qualities of a person (investigator), which are required for implementation of the analyzed method, are noted: intelligence, observation, the ability to apply logical techniques and operations in practice (induction, deduction, analysis, hypothesizing, etc.), intellectual development, and experience. A. Niceforo's method of putting forward hypotheses successfully borrowed from the fundamental sciences is a prototype of the modern versioning method (method of putting forward and checking versions). A. Niceforo rejected techniques that could cause any kind of suffering to the subject: sleep deprivation, use of psychotropic drugs and/or moral abuse, interrogation under hypnosis. It is substantiated that the method of investigating crimes according to A. Niceforo became an important step for forensic science formation about the methods of investigating criminal offenses and the theoretical foundations of modern criminalistic methods.

This article is translation of the original Ukrainian content, which source is available at the link: <https://khrife-journal.org/index.php/journal> (translated by Andriy Bublikov). The authors acknowledge translation as corresponding to the original.

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Keywords: cognition method in criminalistics; investigation method, scientific investigation method; investigation of criminal offenses; history of criminalistics; forensic methodology; method of investigation of crimes; hypnosis in criminalistics; versioning method; Alfredo Niceforo.

Research Problem Formulation

The most successful and deepest are scientific researches, formation and development which studied topic of is analyzed taking into account the general historical and cultural contexts ¹.

Actively apply scientific methods to investigation of crimes began in the second half of the XIX century: before that, the issue of such cases was solved mainly by abstract logical reflections or formal technical descriptions within the framework of investigative record keeping.

During this period, development of capitalist social relations, sometimes quite intense, led to an increase in crime in general and professional in particular, which led to corresponding need for new ways to its counteraction.

In leading European countries in the last two decades of the XIX century, this negative trend led to the need to rationalize investigative activities, use in investigation of new achievements of the sciences, in particular natural sciences. Scientists and practitioners developed new methods of registration and identification of criminals. Along with forensic medical examination which has traditionally been used to investigate crimes, other types of research have become widespread, in particular chemical and photographic (for example, forensic handwriting analysis and questioned document examination) ².

Thus, in order to commit crime scene situation and study material objects, photography was increasingly used. New opportunities in research on traces of criminal activity appeared with the use of ultraviolet and later infrared rays ³.

- 1 Старушкевич А. В. Історична періодизація (історико-хронологічний аспект) «методів розслідування» кримінальних правопорушень. *Криміналістика і судова експертиза*. 2021. Вип. 66. С. 313. DOI: [10.33994/kndise.2021.66.30](https://doi.org/10.33994/kndise.2021.66.30) (date accessed: 05.01.2023).
- 2 Комаха В. А., Комаха В. В. Предпосылки создания первых отечественных криминалистических учреждений. *Вопросы криминологии, криминалистики и судебной экспертизы*. 2007. № 2 (22). С. 83–88.
- 3 Bertillon A. La Photographie Judiciaire. Paris, 1890. 115 p. ; Idem. La Photographie Judiciaire de la prefecture de Police. *La Nature*. 1913. An. 41. N 2086. Pp. 393–397 ; Idem. Sur le fonctionnement du service d'identification par les signalements anthropometriques donnée le 22 novembre 1885. *Actes du Congres pénitentiaire international de Rom*. Novembre 1885. Rome, 1887. Vol. 1. Pp. 687–705 ; Paul F. Handbuch der kriminalistischen Photographie für Beamte der Gerichte, der Staatsanwaltschaften und der Sicherheitsbehörden. Berlin, 1900. 128 s. ; Reiss R. A. Die Entwicklung der Photographischen Bromsilbertrockenplatte und die Entwickler. (Encyklopädie der Photographie, Heft 39). Halle, 1902. 156 s. et al.

The procedure of investigating crimes was rationalized, structure of the bodies that carrying out such an investigation was optimized: it became more centralized and specialized.

From the end of the 19th century, criminology as a science began to take shape at an extremely fast pace. In 1912, O. H. Freinat editor of the *Police Herald* publishing house wrote in the preface to one of the guides on the investigation of crimes: *Crime detection, that many still tend to look at as a craft that requires only certain experience and the ability to draw up protocols, and others - as an art that depends on the abilities of individuals, in fact it is an independent science that requires serious training, a lot of theoretical and practical knowledge, an accurate methodical study of facts*⁴ In the preface to this edition, its author A. Weingart noted: *“Investigation of every crime, especially in important cases, should be conducted using a certain method, systematically and according to the project”*⁵.

It was these prerequisites that developed in the leading countries of Western Europe at the turn of the 19th and 20th centuries that contributed to the creation by Alfredo Niceforo (1876–1960) of scientific method of crime investigating⁶, that became a significant step in development of theoretical method foundations of investigating criminal offenses as the final section of modern criminalistics.

Analysis of Essential Researches and Publications

Immediately after publication of research papers recommending the use of A. Niceforo's scientific approaches to crime investigation at the beginning of the last century in Russian Empire, a number of publications were published where these recommendations, in particular the scientific investigation method itself, received highest scientific evaluation. Thus, in one of the manuals of 1909, the well-known leader and reformer of the imperial investigation according to the Western model, V. I. Lebediev, wrote: *“Application beginning of scientific methods in judicial and police practice was laid already a whole century ago, but only at the end of 19th century, thanks to research papers of outstanding forensic scientists (Ha. Gross, A. Lacassagne, A. Bertillon, R. A. Reiss, A. Niceforo, etc.) those science based methods of judicial and police investigation that currently constitute an auxiliary part of criminal law science, were widely used, named by Professor Ha. Gross forensic science, and by professors R. A. Rice and A. Niceforo: scientific police. The task of this new science — scientific police, as defined by Professors Rice and Niceforo — consists in application of scientific knowledge to criminal investigation and inquiry”*⁷.

Subsequently, on former Soviet Union territory of the scientific method of investigation according to A. Niceforo was most actively discussed in the 1920s and

4 Вейнгартъ А. Уголовная тактика. Руководство къ разслѣдованію преступленій / пер. съ нѣм. Санктъ-Петербургъ, 1912. С. III.

5 Ibid. С. V.

6 Шепітько М. В. Нічефоро Альфредо / Велика українська юридична енциклопедія : у 20 т. Т. 20: Криміналістика, судова експертиза, юридична психологія / редкол.: В. Ю. Шепітько (голова) та ін. Харків, 2018. С. 509–510.

7 Лебедевъ В. И. Искусство раскрытія преступленій. I. Дактилоскопія (Пальцепечатаніе). Регистрація и установка личности преступниковъ при помощи оттисковъ кожныхъ линій пальцевъ рукъ. Дактилоскопическій методъ въ разслѣдованіи преступленій. Санктъ-Петербургъ, 1909. С. XIII.

1930s. Thus, in 1929, critically evaluating this method, I. M. Yakymov wrote: “Niceforo method, to the detriment of purely material investigation methods puts forward the psychology of the investigative process, giving excessive importance to the study of the motive and purpose of the crime (logic of the process) and the identity of the criminal (psychology process)”⁸, at the same time the critic himself noted the significant scientific achievements of this method developer of, in particular noting that A. Niceforo had every right to call his book (where the method is described for the first time) *Scientific investigation*⁹.

In one of the first collective Soviet textbooks on criminalistics (1935), a brief review of the “Niceforo scheme” completed with the conclusion that it is “completely unacceptable for Soviet criminalistics”¹⁰.

In the 1938 Soviet textbook on criminalistics, critics of the scientific method of investigation according to A. Niceforo complained: “He tried to build an investigation scheme, based mostly on the principles of the anthropological school of criminal law, shifted the center of gravity to medical and psychological studies of the criminal, to observing his behavior in various environment”¹¹. Further criticism of A. Niceforo’s method in this edition is politically colored, with characteristic Bolshevik rhetoric: “All these schemes belong to the development period of bourgeois forensics, when the aggravation of class contradictions in bourgeois society forced the

bourgeoisie to look for new, more effective means to fight its class enemies. Therefore, a characteristic feature of all these schemes is along with their apparent apoliticism, a deeply reactionary essence. None of the <...> authors directly talks about dependence of investigation tactics and methods on the political significance of the case. However, they all build their schemes in such a way as to ensure a real increase in repression”¹². We will remind: this, in our opinion, completely biased criticism was made during the years of total repression in the Soviet Union.

Over time, the rhetoric in textbooks on criminalistics (1939) regarding the reactionary schemes of investigation proposed by “Western bourgeois criminologists”, in particular A. Niceforo only intensified: “Deriving “regularities” of revealing the mystery of a crime, bourgeois scientists replace effective methods of investigating crimes with “natural laws”, or “laws” of formal logic, using which it is possible to solve any crime. The desire of bourgeois criminologists to generalize consists in an attempt to find a universal key that could be used to open the secret of any crime. In this regard, the works of the most reactionary forensic scientists: Ferri, Ottolenghi, Niceforo, Anushat, Helwig, and Schneikert are characteristic ones”¹³. In subsequent Soviet educational, practical and scientific publications on criminalistics, the investigation method according to A. Niceforo was not analyzed or even mentioned.

8 Якимов И. Н. Криминалистика. Уголовная тактика. Москва, 1929. С. 161.

9 Ibid. С. 157.

10 Бобров Н. А., Винберг А. И., Голунский С. А., Громов В. И., Зицер Е. У. и др. Криминалистика. Книга 1. Техника и тактика расследования преступлений : учебник / под ред. А. Я. Вышинского. Москва, 1935. С. 131–132.

11 Голунский С. А. Планирование расследования / Бобров Н. А., Винберг А. И., Голунский С. А., Громов В. И., Зицер Е. У. и др. Криминалистика. Техника и тактика расследования преступлений / под ред. А. Я. Вышинского. Москва, 1938. С. 333.

12 Ibid.

13 Голунский С. А., Шавер Б. М. Криминалистика. Методика расследования отдельных видов преступлений / под ред. А. Я. Вышинского. Москва, 1939. С. 5.

In modern criminalistics, A. Niceforo's method¹⁴, has not been subjected to a detailed analysis up to now: scientists only state that I. M. Yakymov developed his investigation method by analogy with the method of A. Niceforo and the non-constructive criticism of general investigation method of A. Niceforo at the time is explained by “*well-known political the regime in the country, which actually caused the negative attitude of Soviet criminologists to any position of Western criminologists*”¹⁵.

Article Purpose

Carry out a scientific analysis of the method role of investigating crimes, developed by A. Niceforo at the beginning of the 20th century, while formation of forensic doctrine on the methods of investigating criminal offenses and in general forensic methods as a component of modern criminalistics.

Research methods

Scientific knowledge: observation, comparison, abstraction, analysis, synthesis, modeling, etc.

Main Content Presentation

Starting the scientific analysis of the method of investigation of crimes according to A. Niceforo, we note: it is most thoroughly described in the French-language, qualitatively illustrated with photo documents (from the judicial identification services of Paris, Berlin, Dresden and Lausanne), published by the

author: *La Police et l'Enquête Judiciaire Scientifiques*¹⁶, published in print 1907. The *scientific* definition in the title, in our opinion, indicated that basis of the research paper was general scientific method of proposing hypotheses, logical techniques common in science at that time (analysis, synthesis, induction and deduction), as well as graph method (definition and notation relationships between individual facts with straight lines, brackets, arrows, etc.). Introduction of these general scientific methods and techniques into the theory and practice of crime investigation is due to the fact that A. Niceforo himself, in addition to jurisprudence, was quite well versed in statistics, sociology and psychology, which he taught at the universities of Lausanne (Switzerland), Naples and Rome (Italy).

Essence of A. Niceforo's investigation method was significantly influenced by his scientific beliefs in psychology. He was a supporter of psychoanalysis: he believed that every person has a “deep *ego*” that produces asocial, subconscious impulses that push a person to commit a crime. Contrary to this, the “higher *ego*” formed by a person's social interaction keeps him from committing a crime. However, sometimes the impulses of the “deep *ego*” break through, causing a person to commit criminal acts.

Contrary to Cesare Lombroso's concept of the of a “criminal type” existence characterized by specific physical characteristics, A. Niceforo believed that crime can be understood by jointly examining biological, psychological and sociological aspects of an ordinary person.

14 Аверьянова Т. В., Белкин Р. С., Корухов Ю. Г., Россинская Е. Р. Криминалистика : учебник / под ред. Р. С. Белкина. Москва, 2006. С. 685 ; Белкин Р. С. Курс криминалистики : учеб. пособ. Москва, 2001. С. 18, 200 ; Шмонин А. В. Методология криминалистической методики : монография. Москва, 2010. С. 30—31.

15 Ibid. С. 41.

16 Niceforo A. *La Police et l'Enquête Judiciaire Scientifiques*. Paris, 1907. 445 p.

Using individual sociological techniques as the fundamental principles of the scientific investigation method, A. Niceforo became one of the first empirical sociologists in Italy, since he applied statistics to solve the issues of finding regularities in social behavior ¹⁷.

Essence of A. Niceforo's scientific investigation method described in a separate section: *Method of legal investigation* of the aforementioned publication ¹⁸. The author described the method itself as a certain logical process, which stages coincide with the periods of crime investigation. According to the idea of A. Niceforo, for crime investigation, it is advisable to perform certain actions within three consecutive stages: 1) data (facts) collection, 2) data study and us, 3) alleged culprit examination.

At the first stage data collection (facts), investigator should:

- 1) investigate: a) crime scene, b) corpse, c) objects (physical evidence). A. Niceforo noted that, depicting the behavior of investigator at the scene, *"we need to describe in more detail logical process that investigator should use to collect and study facts, classify them, determine their value, establish connections that connect them to each other with one to consistently move to the search for causes and, as a result, <...> to the final solution of the problem"* ¹⁹;
- 2) interrogate: a) witnesses, eyewitnesses of the crime, b) preparation witnesses for the crime, c) witnesses who knew the crime victim, and generally all persons involved in the crime.

The second stage of studying and using data involves their classification by investigation: 1) enumeration, 2) distribution into main and secondary. While this procedure, it is worth using such logical techniques as analysis, synthesis, induction and deduction. According to A. Niceforo, *"analysis and synthesis, induction and deduction are used for the purpose of complete reconstruction of a criminal act"*.

Along with the integration and disintegration of collected facts (sometimes immediately after these procedures), method of general hypotheses is used (characteristic of purely experimental sciences: mineralogy, sociology, biology) covering all facts in general (in addition, the use of the method of general hypotheses involves experimentation or research).

According to A. Niceforo, while crime investigation, *"logical and natural order of scientific operations"* similar to scientific knowledge is used, so the investigator should possess such qualities as *cleverness of mind, intelligence, experience*, as well as skill operation of observation, induction, deduction, analysis and synthesis, ability to build hypotheses, thinking experience and control ²⁰.

Therefore, the task of the second stage of crime investigation is *"creating and testing hypotheses"*, carried out by: a) association of ideas; b) analogies with other crimes.

In order to analyze the facts regarding a certain hypothesis, A. Niceforo suggests using a graphic method (that he calls *Principium Divisionis*, translated from

17 Alfredo Niceforo. Encyclopaedia Britannica. URL: <https://www.britannica.com/biography/Alfredo-Niceforo> (date accessed: 05.12.2022).

18 Niceforo A. La Police P. 397—410.

19 Ibid. P. 397.

20 Ibid. P. 403—404.

the Latin: *division principle*), when researcher depicts the facts on a sheet of paper, connecting them with lines, arrows or curly brackets that indicate relationships, existing or should exist between them. Such an analysis is carried out before the arrest (interrogation) of the allegedly guilty person (suspect of crime committing)²¹.

A. Niceforo believed that hypotheses should be revised while consistent process. Each such hypothesis is formed as a certain center which numerous facts are placed around. For each change in the hypothesis, groups of facts change positions and it is these successive changes (movement) of facts around hypothesis contributing to the discovery of new facts. A similar process occurs in the sciences, for example, in statistics²².

Every mental operation with hypothesis should be checked using precautions: a) avoidance of biased opinions, b) skepticism.

The second stage is completed with a check carried out by: a) experiments, b) observation of facts, c) review of collected data.

A. Niceforo constantly emphasizes: in order to arrive at the truth during an investigation, it is advisable for the investigator to follow the same research logical procedure as a biologist, chemist or statistician for their scientific discoveries²³.

The *third examination stage of the alleged culprit* involves implementation of the following investigative, operational and organizational actions (similar to modern ones):

- 1) *research* (aims to establish the subject identity; find out whether he has a criminal record);
- 2) *examination* (presupposes an inspection of the subject's home and the subject himself);
- 3) *study of physical, spiritual and social planes of the person* (presupposes clarification of subject's physical and physiological characteristics, his sensuality, mental development, living conditions, pathological and hereditary traits);
- 4) *interrogation regarding committed crime* (check the subject testimony explaining his physical and mental condition, committed crime motives, collected data. During the suspect interrogation, A. Niceforo advised to apply knowledge of psychology, offered to allow the guilty to tell “*the facts and their circumstances*”, their “*origin and development*” revealing contradictions in his testimony. He recommended not to ask specific questions involving the answers “yes” or “no”, on the contrary: to give the interrogated “*more freedom in reasoning*”, in other words, to use a free story. Thanks to this, the latter can “*pretend to be contradictions and inconsistencies*”, but the investigator can pretend indifference to individual facts, returning to them for a profitable moment²⁴);
- 5) *test* (involves face-to-face confrontation with a victim of crime, face-to-face confrontation with witnesses). In such a test, A. Niceforo categorically denied the use of cruel and unworthy methods, in particular anesthesia, hypnosis, moral torture);

21 Niceforo A. La Police P. 406.

22 Ibid. P. 405.

23 Ibid. P. 398.

24 Ibid. P. 407.

6) *subject observation* (on the outside, in prison, in hospital, during rest. For guilty examination, A. Niceforo allowed sphygmograph use (literally translated from Greek: *I write the pulse*), diagnostic device for non-invasive measurement blood pressure and its graphic record: he noted that this device is “sensitive to all emotions”; as well as special tests (although this method, according to his own statement, was not without reason criticized), which “provoking association of ideas” with words referring to “the very topic at the crime scene”²⁵).

Italian scientist considered intuition a useful quality for an investigator. Thus, reflecting on hypothesis and its place in investigation, A. Niceforo came to the conclusion that there is no spontaneity in the intellectual world: the hypothesis arises from *the depth of the game of association of ideas more or less consciously, or from the conscious application of the method of analogies (in our case, knowledge of judicial processes and crimes similar to those under investigation)*²⁶. Therefore, researcher notes that it is useful for the investigator to know a significant number of criminal cases in all details. In his opinion, guesswork and intuition only in some cases contribute to the search for truth, so investigator needs an ideal independent mind that forms hypotheses without turning them into preconceived ideas. A hypothesis needs constant doubt and further clarification both in science and in forensic research, because hypothesis “can arise from subconscious work of intellectual reactions, but it is never spontaneous”²⁷.

As mentioned above, early Soviet criminalistics subjected A. Niceforo's

method to uncompromising criticism. Thus, in the first collective textbook on criminalistics (1935) edited by A. Ya. Vyshynskiy we read:

“The scheme proposed by Niceforo <...> divides the entire investigation into three stages <...>. This scheme <...> to some extent reflects investigation dynamics, but these dynamics are mechanically divided into independent stages, without reflecting importance that one of them has for the other, without clarifying the impact on investigation of contradictions between individual data of the case and the result of elimination these contradictions. Niceforo's scheme, in fact, does not reflect actual investigation course. So, for example, items 1 and 2 are artificially demarcated: you cannot collect data about a crime without having a certain hypothesis, and the hypothesis, for its part, follows from some existing data.

Each of three stages is divided into smaller subdivisions in Niceforo. Some of them are clearly marked by the influence of the anthropological school of criminal law. For example, in the third stage of the investigation (examination of the probable perpetrator of the crime), Niceforo pays the main attention not to objective data research characterizing the certain person actions but to research on subjective biological properties of his personality: physical and physiological specifics, pathological and hereditary features, etc. For this, Niceforo recommends observing the behavior of this subject on the outside, in prison, in hospital, in sanatorium, check the suspect answers about the crime not only by checking their compliance with actual case circumstances, but <...> by using sub objective data — psychological analysis of crime motives, study of the physical and mental subject state, etc.”²⁸.

25 Niceforo A. La Police

26 Ibid. P. 404.

27 Ibid.

28 Бобров Н. А., Винберг А. И., Голунский С. А., Громов В. И., Зицер Е. У. и др. *Ор. cit.*

Regarding the injustice of certain criticisms, we should note: A. Niceforo proposed his method around 1905, and Soviet forensic scientist criticized it already in 1935; during these 30 years, in Western Europe countries, in particular Italy and France, both jurisprudence and forensic means and methods made significant steps forward. However, one of the Soviet critics of A. Niceforo's method in the 1930s, I. M. Yakymov, in his first textbook on criminalistics (1929), wrote quite another thing:

“Development of scientific methods used in criminal procedure while crime investigation has advanced so much in the last decade that Niceforo had every right to title his book devoted to this issue: Scientific Investigation.

In order to understand what scientific investigation nature consists of and how this new investigation method differs from previous methods of its conducting, it is necessary to familiarize yourself with separate methods of its construction proposed by science. For this purpose, we will take, as the most developed, scientific investigation methods, proposed by Weingart, Niceforo and Anushat²⁹.

Indeed, critics noted that method of A. Niceforo contains stages, but it does not simply indicate each investigation stage but describes in detail what investigator should do to obtain factual data, where to collect it, how to analyze it, what tools to use for this: that is, quite practical recommendations are given regarding investigator actions. Critics of

the structure of A. Niceforo's method at various times did not advance far in their methods: in their textbooks, they proposed similar *typical investigation schemes* of murders, official and economic crimes, supplementing them with an additional stage of *typical investigation scheme after bringing the accused*”³⁰.

As for the critical comments about “*eliminating contradictions*”; it is impossible to describe and eliminate them in abstract scheme: usually in practice contradictions are eliminated already in concrete, completely individual cases.

Criticism that “*one cannot collect data about a crime without having some hypothesis*” is partially valid: the investigator should always begin examining the scene or questioning any person with prior information about the event. If there are no eyewitnesses at the scene, but there is just a corpse, then there will be no more than two obvious hypotheses: “*natural death occurred*” either “*murder or suicide occurred*”.

As for the anthropological school of criminal law, as one of leading schools of its time, it had a significant impact on most jurists in Western countries. It was representatives of this school who proposed to study criminal as a person and developed appropriate investigative actions (examination, forensic psychology and mental state examination, etc.), operative measures (identity study and criminal suspect connections, clarification of “*criminal-victim*” connection, etc.)³¹.

29 Якимов И. Н. О. цит. С. 157.

30 Бобров Н. А., Винберг А. И., Голунский С. А., Громов В. И., Зицер Е. У. и др. О. цит. С. 140–155.

31 Гернет М. Общественные причины преступности. Социалистическое направление в науке уголовного права. Москва, 1906. С. 3–6 ; Иншаков С. М. Антропологическое направление в криминологии / Российская криминологическая энциклопедия // под общ. ред. А. И. Долговой. Москва, 2000. С. 31–36 ; Шепітько В. Ю. Антропологія кримінальна / Велика українська юридична ... Т. 20 ... Харків, 2018. С. 28.

Accusing A. Niceforo of excessive fascination with the “*subjective biological properties*” of alleged culprit, his “*physical and physiological features, pathological and hereditary traits*”, “*psychological analysis of the motives of the crime*”, Soviet critics considered these problems too “revolutionary”: these questions of the Bolshevik criminalistics began to consider only 40 years later. Let us recall at least the basics of the forensic doctrine about skills (H. O. Samoilov, 1968) ³², the study of accused identity and the tactics of investigative actions (F. V. Hlazyrin, 1973) ³³, subjective side investigation of murders by the investigator (V. V. Yarovenko, 1979) ³⁴, determination of the motive and purpose of the crime (B. Ya. Petelin, 1979) ³⁵, clarification by the investigator of psychological nature circumstances (D. P. Kotov, 1987) ³⁶, conscious and unconscious in criminal behavior (A. F. Zelinskyi, 1986) ³⁷, motivation as an element of forensic crime characteristics (V. V. Trukhachev, 1990) ³⁸ et al.

We focus on positive scientific method of crime investigation according to A. Niceforo. For the first time, general scientific methods and techniques (proposing hypotheses, graph method, analysis, synthesis, deduction, induction, analogy) were laid in the foundations of forensics, which at that time were only

beginning to be used in fundamental and applied sciences. In the method of A. Niceforo, techniques of behavioral sciences: psychology and sociology were vividly reflected: research, examination, testing, observation, inspection, study of the physical and social essence of a person, which were later transformed into modern tactical means (techniques, combinations, etc.), investigators and others procedural and organizational actions: inspection of the scene and physical evidence, interrogated person observation, his examination, etc. In addition, A. Niceforo advised to carry out such actions and measures in a complex manner: combining them into groups makes it possible to achieve the goal of a pre-trial investigation through consistent performance of assigned tactical tasks (in the modern sense). A. Niceforo's method involves a number of analytical techniques carried out by the investigator to find out the truth, at the same time, any reflections of the investigator (even using perfect analytical tools) can lead to false conclusions, so the author has provided precautions that warn against bias. In addition, it is suggested to supplement the office reflections of the investigator with field experiments, observations, review of collected facts, etc.

A. Niceforo's promising idea of using graph method to analyze the facts, which

32 Самойлов Г. А. Основы криминалистического учения о навыках : учеб. пособ. / под ред. Р. С. Белкина Москва, 1968. 119 с.

33 Глазырин Ф. В. Изучение личности обвиняемого и тактика следственных действий : учеб. пособ. Свердловск, 1973. 156 с.

34 Яровенко В. В. Доказывание следователем субъективной стороны убийств : автореф. дис. ... канд. юрид. наук. Свердловск, 1979. 15 с.

35 Петелин Б. Я. Установление мотива и цели преступления / под ред. А. Р. Ратинова. Москва, 1979. 128 с.

36 Котов Д. П. Установление следователем обстоятельств, имеющих психологическую природу. Воронеж, 1987. 214 с.

37 Зелинский А. Ф. Осознаваемое и неосознаваемое в преступном поведении. Харьков, 1986. 167 с.

38 Трухачев В. В. Мотивация как элемент криминалистической характеристики преступления : автореф. дис. ... канд. юрид. наук. Саратов, 1990. 22 с.

would show the relationship between the facts. Up to now, investigators use such methods both in written form (for example, method of criminal analysis of events, actions, phone calls) and in specialized software, for example: *IBM I2 iBase Geographic Information System (GIS)*.

Another advantage is that from the beginning of the investigation, A. Niceforo recommends that investigator not only inspect the scene itself, corpse or objects present there, but carry out certain logical operations (logical process) that consist in collecting, studying, classifying, determining value of facts, establishing connections and sequences between them (cause-effect) in order to find out what exactly happened at the scene, in other words, actually find out the event image.

It is extremely positive that A. Niceforo defined the professional and psychological qualities of person who should implement his method, investigator, including sharpness, keenness, ability to use logical techniques and operations (induction, deduction, analysis, hypothesizing, etc.), intellectual development, availability experience (probably both life and professional ones).

The method of proposing hypotheses, borrowed by A. Niceforo from fundamental sciences is a prototype of the modern versioning method (proposing and checking versions). The researcher rightly noted that such versions can “*arise in the head of the investigator*” as a result of “*conscious analytical activity*” while using logic techniques, and “*subconscious activity*” as a result of the spontaneous generation of hypotheses, in other words, intuitive process.

In the method of A. Niceforo, we see the seeds of using achievements of psychology during interrogation. In fact,

he suggests using while interrogation what is called a tactical technique in modern criminalistics. During method implementation; it is recommended to set the interrogated to a free narrative; use contradictions in testimony of the interrogated; deliberately not to draw excessive attention to the circumstances that are important for investigation, etc.

A. Niceforo categorically denies the use of his method of techniques while implementation that could cause any suffering to the person subjected to the “test”: deprivation of probably guilty sleep, use of psychotropic drugs and/or moral abuse, interrogation under hypnosis. Italian researcher is wary of the use of devices that capture information about physical and emotional persons’ parameters, as well as psychological testing.

As we have already noted, it is easy to notice shortcomings of the method developed at the beginning of the last century, when there was no organized criminalistics and developed forensic theory. However, we note that the method of A. Niceforo does not differentiate the beginning crime investigation, therefore, possible investigation situations are not highlighted, so it is not surprising that method implementation began with traditional research (examination) by the investigator of crime scene, corpse and objects (material evidence).

In our opinion, A. Niceforo’s method generally looks incomplete: it seems that it is intended only for the initial stage of crime investigation (more correctly, not even *investigation*, but *disclosure*). The method analysis indicates that its purpose is to clarify initial information about event by the investigator and to establish possible involvement of a certain person in this event.

Although the method unfolds logically, sequentially and in stages, its details have not yet been finalized. Thus, connection of A. Niceforo's method with the forensic methods and tools of A. Bertillon, A. Lacassagne, R. A. Reiss (which, by the way, the author describes in detail in the edition analyzed by us), in particular dactyloscopy, verbal portrait, signal photography, bertillionage, shoeprint research, etc.

Conclusions

Consequently, intensive development of capitalist social relations at the end of the 19th century led to a significant increase in professional, organized and transnational crime which led to the need to rationalize investigative activities using the latest scientific achievements. These factors intensified scientific development of crime investigation methods in Western Europe countries.

Advantages of A. Niceforo's method are its construction as a certain logical process, divided into stages that coincide with the periods of crime investigation, with a detailed description of actions at each stage of such an investigation.

In this method, collection, study and classification of facts, determination of their value for crime investigation combined with their division into main and secondary, using logical methods (analysis, synthesis, induction, deduction) making possible criminal event reconstruction in general.

According to A. Niceforo, method application of general hypotheses, borrowed from the basic sciences and transformed in criminalistics into versioning, while crime investigation should be combined with such important

qualities of the investigator as the speed of logical actions, intelligence, professional and life experience and intuition. While putting forward versions, it is suggested to use such general scientific methods as the association of ideas, analogies with other crimes, graph method.

A. Niceforo considers crime investigation as a certain research logical process during which the truth is found out. Therefore, versions (general hypotheses) are rightly recommended to be carefully checked for bias and to be accepted with skepticism. At the same time, it is suggested to supplement office reflections with field experiments, observations, review of collected facts, etc.

A. Niceforo advises during interrogation to use the achievements of psychology, organizational rules and tactical techniques, does not allow the use of cruelty and abuse to the interrogated, considers it appropriate to use prototypes of modern polygraphs (lie detector test) and testing for the purpose of idea association.

The proposal to use a complex approach while crime investigation is extremely rational: combining actions and measures of the investigator in a group makes possible to achieve the goal of the pre-trial investigation by consistently performing assigned tactical tasks.

A. Niceforo stood at the origins of forensic thinking, because he recommended that investigator at the scene not just inspect the place itself, the corpse or the objects present there, but mentally perform certain logical operations (logical process) that consist in collecting, studying, classifying, determining the value of facts, establishing connections and sequences between them in order to clarify the event image.

It is positive that A. Niceforo defined professional and psychological qualities of a person who should implement his method, including sharpness, keenness, ability to use logical techniques and operations, intellectual development and experience availability.

All of the above indicates that Alfredo Niceforo's holistically developed scientific method of crime investigation was the first important step in formation of forensic doctrine about crime investigation methods and theoretical foundations of modern forensic methods.

Розслідування злочинів: науковий метод Альфредо Нічефоро Анатолій Старушкевич

Метою дослідження є науковий аналіз ролі методу розслідування злочинів, розробленого А. Нічефоро, у становленні криміналістичного вчення про методи розслідування кримінальних правопорушень і криміналістичної методики як складової сучасної криміналістики. Для досягнення мети застосовано методи наукового пізнання: спостереження, порівняння, абстрагування, аналіз, синтез, моделювання тощо. У побудові методу А. Нічефоро задіяно загальнонаукові методи та прийоми (висування гіпотез, метод графів, аналіз, синтез, дедуція, індукція, аналогія), комплексний підхід, системність, етапність, знання психології. Зауважено професійні та психологічні якості особи (слідчого), яких потребує реалізація аналізованого методу: кмітливість, спостережливість, вміння на практиці застосовувати логічні прийоми й операції (індукцію, дедуцію, аналіз, висування гіпотез тощо), інтелектуальна розвиненість, наявність досвіду. Вдало запозичений А. Нічефоро із фундаментальних наук прийом висування гіпотез — це прообраз сучасного методу

версерування (метод висування й перевірки версій). А. Нічефоро відкидав прийоми, які могли б завдати випробуваній особі будь-яких страждань: позбавлення сну, застосування психотропних препаратів і/або моральних знущань, допит під гіпнозом. Обґрунтовано, що метод розслідування злочинів за А. Нічефоро став важливим кроком для становлення криміналістичного вчення про методи розслідування кримінальних правопорушень і теоретичних засад сучасної криміналістичної методики.

Ключові слова: метод пізнання у криміналістиці; метод розслідування; науковий метод розслідування; розслідування кримінальних правопорушень; історія криміналістики; криміналістична методика; методика розслідування злочинів; гіпноз у криміналістиці; метод версерування; Альфредо Нічефоро.

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Declaration of Competing Interest

Author declare no conflict of interest.

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Legislative Regulation Issues of Forensic Examinations Appointed While Domestic Violence Investigation

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Certain aspects of regulating forensic examination appointment while pre-trial investigation of criminal offenses related to domestic violence have been studied. On the basis of general scientific and special methods which are built on the theory of cognition of socio-legal phenomena, a thorough analysis of criminal procedural legislation and legal regulations of Ukraine and foreign countries, as well as of opinions of leading domestic researchers on this issue, has been performed. In criminal proceedings involving domestic violence, the issue of timely appointment and conducting of forensic examinations to clarify facts of physical, sexual, psychological or economic violence is quite relevant. The indicated factors are mostly established by conducting criminalistics, forensic medical and forensic psychiatric examinations, conducted exclusively by state specialized forensic science institutions. Sometimes, this hinders a thorough and objective investigation and prevents participants in a criminal proceeding from selecting the most qualified forensic expert. It is recommended to end the monopoly of state forensic institutions in conducting such forensic examinations, which will help victims exercise their right to fair justice. Attention is drawn to the issues of procedural legal capacity of a victim, whose testimony is one of the most important sources of evidence. Since suspects are often subjects of forensic psychiatric examinations, appropriate amendments and additions to the Criminal Procedure Code and to certain legal regulations of Ukraine regarding appointment of forensic psychiatric examinations for victims have been proposed.

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Keywords: *criminal procedure; pre-trial investigation; domestic violence; specific expertise; forensic expert; forensic examination appointment; regulation; proving.*

Research Problem Formulation

Ukraine has been one of the first countries in Eastern Europe to recognize domestic violence as a pressing social issue and has been actively participating in standardizing procedures that directly affect the perpetrators' ability to hide behind the smokescreen of non-interference in private life. Thus, in June 2022, Ukraine ratified the Council of Europe Convention on Preventing and Combating Violence Against Women and Domestic Violence (Istanbul Convention) ¹, which is a fundamental international legal act that directly obliges governments of countries to take specific measures to combat all types of violence against women.

A further important step in this direction was the adoption by Ukraine of a number of legislative acts which provisions introduced a new approach to combating domestic violence.

After discovering the fact of domestic violence and during pre-trial investigation, the investigator must use all means and methods at his/her disposal to collect enough evidence that would confirm involvement of a relevant person in a committed criminal offense. An important place in this is occupied by the system of normative prescriptions and forensic recommendations regarding the appointment of forensic examinations.

Analysis of Essential Researches and Publications

The use of specific expertise during pre-trial investigation of domestic violence crimes has been studied by the following domestic researchers: H. K. Avdieieva ², O. O. Babkina with co-authors ³, I. V. Hloviuk with co-authors ⁴,

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- 1 Конвенція Ради Європи про запобігання насильству стосовно жінок і домашньому насильству та боротьбу із цими явищами (Стамбульська конвенція) від 11.05.2011 р.; ратифік. Законом України від 20.06.2022 р. № 2319-IX. URL: https://zakon.rada.gov.ua/laws/show/994_001-11#Text (date accessed: 03.03.2023).
 - 2 Авдєєва Г. К. Недержавна судова експертиза і рецензування висновків експерта як засоби забезпечення принципу змагальності сторін у кримінальному судочинстві України. *Місце недержавної судової експертизи у забезпеченні судочинства України* : мат-ли Всеукр. наук.-практ. конф.-дискус. (Київ, 19.10.2020). Київ, 2020. С. 41–44.
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 - 4 Романцова С., Устрицька Н., Гловюк І. та ін. Кваліфікація та основи методики розслідування домашнього насильства : навч. посіб. / за ред. І. Гловюк, Н. Лащук, С. Романцової. Львів, 2022. 404 с. URL: <https://dspace.lvduvs.edu.ua/handle/1234567890/4807> (date accessed: 03.03.2023).

T. V. Ishchenko ⁵, I. V. Zahorodnii ⁶, R. V. Kyfliuk ⁷, M. L. Mikheieva ⁸, O. I. Motliakh with co-authors ⁹, I. O. Savchenko with co-authors ¹⁰, K. A. Shapoval ¹¹ and many others. However, certain procedural aspects related to the procedure for appointing forensic examinations requiring further regulation in the current Ukrainian legislation have not received sufficient attention from the scientific community.

Article Purpose

To thoroughly study peculiarities of legal regulation concerning appointment of forensic examinations both in general and while pre-trial investigation of crimes involving domestic violence. In accordance with the research purpose, research tasks are as follows: to formulate theoretical conclusions and scientifically grounded

proposals for improving current criminal procedural legislation and certain legal regulations governing procedural order of appointing forensic examinations in the specified area.

Research Methods

In order to achieve the set purpose and taking into account specific nature of the research, general scientific and special methods have been applied on the basis of the cognition theory of socio and legal phenomena, in particular: *comparative legal analysis* for comparing the norms of criminal procedural legislation in Ukraine and foreign countries, and *systems analysis* for formulating amendments to provisions of the Criminal Procedure Code of Ukraine and to other national legislation regarding determination

- 5 Іщенко Т. В. Розслідування домашнього насильства : дис. ... д-ра філос. Київ, 2021. 324 с. URL: http://elar.naiu.kiev.ua/jspui/bitstream/123456789/20120/1/dysert_ishchenko.pdf (date accessed: 03.03.2023).
- 6 Загородній І. В. Розслідування злочинів, пов'язаних із нанесенням тілесних ушкоджень : дис. ... канд. юрид. наук. Одеса, 2018. 242 с. URL: <http://dspace.onua.edu.ua/bitstream/handle/11300/9316/%d0%97%d0%b0%d0%b3%d0%be%d1%80%d0%be%d0%b4%d0%bd%d1%96%d0%b9%20%d0%86.%d0%92..pdf?sequence=6&isAllowed=y> (date accessed: 03.03.2023).
- 7 Кифлюк Р. В. Особливості розслідування та судового розгляду кримінальних проваджень, пов'язаних з насильством в сім'ї : дис. ... канд. юрид. наук. Ірпінь, 2020. 233 с.
- 8 Міхеева М. Л. Теоретико-методологічні та кримінально-процесуальні підстави судової психологічної експертизи осіб, постраждалих внаслідок домашнього насильства. *Теорія і практика сучасної психології*. 2020. № 1. Т. 3. С. 127—131. DOI: [10.32840/2663-6026.2020.1-3.22](https://doi.org/10.32840/2663-6026.2020.1-3.22) (date accessed: 03.03.2023).
- 9 Мотлях О. І., Іщенко Т. В. Специфіка призначення судово-психіатричних експертиз у розслідуванні домашнього насильства. *Порівняльно-аналітичне право*. 2020. № 2. С. 212—215. URL: <https://dspace.uzhnu.edu.ua/jspui/bitstream/lib/35563/1/%D0%A1%D0%9F%D0%95%D0%A6%D0%98%D0%A4%D0%86%D0%9A%D0%90%20%D0%9F%D0%A0%D0%98%D0%97%D0%9D%D0%90%D0%A7%D0%95%D0%9D%D0%9D%D0%AF.pdf> (date accessed: 03.03.2023).
- 10 Савченко І. О., Бабич С. Л., Ускіла Р. Деякі питання судової психологічної експертизи потерпілих від домашнього насильства (*оглядова стаття*). *Теорія та практика судової експертизи і криміналістики*. 2020. Вип. 22. С. 538—554. DOI: [10.32353/khrife.2.2020.43](https://doi.org/10.32353/khrife.2.2020.43) (date accessed: 03.03.2023).
- 11 Шаповал К. А. До питання призначення комплексної психолого-психіатричної експертизи під час розслідування вбивств, скоєних унаслідок застосування домашнього насильства. *Актуальні питання судової експертизи і криміналістики* : зб. мат-лів міжнар. наук.-практ. конф.-полілогу (Харків, 15—16.04.2021). Харків, 2021. С. 280—281.

of directions for improving specific expertise application.

Main Content Presentation

During investigation of domestic violence crimes, it is essential to apply specific expertise of a forensic expert whose conclusion (according to Part 2 of Article 84 of the Criminal Procedure Code of Ukraine¹²) is one of the sources of evidence. A thorough analysis of the Criminal Code of Ukraine provisions indicates that the investigator or the public prosecutor has the right to appoint any forensic examination that (in their opinion) is appropriate to appoint under specific circumstances. For criminal proceedings involving domestic violence, the issue of timely appointment and conduct of forensic examinations to establish facts of physical, sexual, psychological, or economic violence is quite urgent.

In the context of discussing this issue, it should be stressed that forensic expert activities related to criminalistics, forensic medical and forensic psychiatric examinations are carried out exclusively by state specialized institutions (Part 3,

Article 7 of the Law of Ukraine *On Judicial Examination*¹³) in Ukraine. Therefore, the majority of forensic examinations in the studied category of criminal proceedings are performed by state forensic science institutions. In light of the above-mentioned, the issue of the inherent inequality between state and private forensic experts is a topic of debate and research among legal scholars. Most of them propose ending the monopoly of conducting such forensic examinations in state forensic expert institutions. Specifically, H. K. Avdieieva suggests legalizing conduct of forensic examinations in criminal procedure. As mentioned by the scientist, *“these changes should help to ensure the right to fair justice, especially for Ukrainian women who have suffered domestic violence <...>, to enable the development of evidence base of the highest quality and in the shortest possible time when investigating crimes of this kind by applying specific expertise within an adversarial criminal procedure”*¹⁴.

It is worth mentioning that the practice of parallel functioning of state and non-state forensic science institutions (forensic experts) exists in the legislation of post-Soviet countries (see e.g. Article 97 of

12 Кримінальний процесуальний кодекс України від 13.04.2012 р. № 4651-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 03.03.2023).

13 Про судову експертизу: Закон України від 25.04.1994 р. № 4038-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 03.03.2023).

14 Авдєєва Г. К. Використання спеціальних знань у розслідуванні домашнього насильства в умовах змалюального кримінального процесу. *Організаційно-правові засади запобігання домашньому насильству: реалії та перспективи*: мат-ли кругл. столу. (Запоріжжя, 31.05.2019). Запоріжжя: КІПУ, 2019. С. 12—13. URL: <https://dspace.uzhnu.edu.ua/jspui/bitstream/lib/24652/1/%D0%90%D0%BD%D0%B4%D1%80%D1%83%D1%88%D0%BA%D0%BE%20%D0%90.%D0%92.%20%D0%9D%D0%B5%D0%B7%D0%B0%D0%BA%D0%BE%D0%BD%D0%BD%D0%B5%20%D0%BF%D0%BE%D0%B7%D0%B1%D0%B0%D0%B2%D0%BB%D0%B5%D0%BD%D0%BD%D1%8F%20%D0%B2%D0%BE%D0%BB%D1%96%20%D1%8F%D0%BA%20%D0%B2%D0%B8%D0%B4%20%D0%B4%D0%BE%D0%BC%D0%B0%D1%88%D0%BD%D1%8C%D0%BE%D0%B3%D0%BE%20%D0%BD%D0%B0%D1%81%D0%B8%D0%BB%D1%8C%D1%81%D1%82%D0%B2%D0%B0%20%28%D0%BA%D1%80%D0%B8%D0%BC%D1%96%D0%BD%D0%BE%D0%BB%D0%BE%D0%B3%D1%96%D1%87%D0%BD%D0%B8%D0%B9%20%D0%B0%D1%81%D0%BF%D0%B5%D0%BA%D1%82%29%20-%20%D0%A1.%2018.PDF> (date accessed: 03.03.2023).

the Code of Criminal Procedure of the Azerbaijan Republic ¹⁵ and Art. 150 of the Criminal Procedure Code of the Republic of Moldova ¹⁶) and Western European countries. In particular, principal tasks of the forensic science service of the United Kingdom (an executive agency of the Home Office, which plays a crucial role in the work of the British police in crime detection, investigation, and prevention) include: *“providing professional assistance in the course of crime detection and investigation. However, the legislation <...> provides for the possibility of involving forensic experts from private forensic laboratories, who oftentimes offer their services in certain specific areas of forensic science (e.g., forensic document examination)”* ¹⁷.

While investigating the disputed issue, Yu. O. Tkachenko emphasizes that in the Czech Republic, *“the institution of forensic science is specific: a forensic expert <...> is entitled to provide services not only to courts but also to all state institutions. However, all forensic experts <...> must*

refrain from providing services to private organizations” ¹⁸.

Based on the above, we believe that the end of the monopoly in conducting forensic examinations in state forensic science institutions is quite acceptable. Furthermore, according to Yu. Yu. Yaroslav, the abolition of the monopoly position of state forensic examination will also contribute to *“gradual establishment of scientific adversariality in forensic science”* ¹⁹. Therefore, this issue requires appropriate regulation both in provisions of Article 243 of the Criminal Procedure Code of Ukraine ²⁰, and in Part 3 of Article 7 of the Law of Ukraine On Judicial Examination ²¹.

During investigation of domestic violence, forensic medical examination is most commonly appointed, which is conducted according to the rules stipulated in the Instruction on the Conduct of Forensic Medical Examination (approved by the Order of the Ministry of Health of Ukraine No. 6 On the Development and Improvement of the Forensic Medical Service

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- 15 Уголовно-процессуальный кодекс Азербайджанской Республики от 14.07.2000 г. № 907-IQ (с изм. и доп.). URL: http://continent-online.com/Document/?doc_id=30420280 (date accessed: 03.03.2023).
 - 16 Уголовно-процессуальный кодекс Республики Молдова от 14.03.2003 г. № 122-XV (с изм. и доп.). URL: https://continent-online.com/Document/?doc_id=30397729 (date accessed: 03.03.2023).
 - 17 Гузела М., Канцір В. Зарубіжний досвід організації судово-експертної діяльності в процесі здійснення кримінального переслідування. *Вісник Національного університету «Львівська політехніка»*. Серія: Юридичні науки. 2018. № 906 (20). С. 129—135. URL: http://nbuv.gov.ua/UJRN/vnulpurn_2018_20_21 (date accessed: 03.03.2023).
 - 18 Ткаченко Ю. О. Зарубіжний досвід проведення судово-бухгалтерських експертиз. *Управління розвитком соціально-економічних систем* : мат-ли IV Міжнар. наук.-практ. інтернет-конф. (Харків, 08.10.2020). Харків, 2020. С. 419—421. URL: <https://repo.btu.kharkov.ua/handle/123456789/24081> (date accessed: 03.03.2023).
 - 19 Ярослав Ю. Ю. Саморегулювання — найважливіша умова розвитку недержавної (приватної) судової експертизи. *Місце недержавної судової експертизи у забезпеченні судочинства України* : мат-ли Всеукр. наук.-практ. конф.-дискус. (Київ, 19.10.2020). Київ, 2020. С. 26—30. URL: <http://nndes.org.ua/images/18112020.pdf> (date accessed: 03.03.2023).
 - 20 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 03.03.2023).
 - 21 Про судову експертизу URL: <https://zakon.rada.gov.ua/laws/show/4038-12#Text> (date accessed: 03.03.2023).

of Ukraine dated January 17, 1995 ²²⁾ ²³⁾. As stated by T. V. Ishchenko, “subsequent criminal-legal qualification of a criminal offense depends to a large extent on results of this forensic examination: not only according to Art. 126–1 of the Criminal Code ²⁴⁾ of Ukraine, but also under other specific articles of this Code, in particular, Art. 115, 121, 122, 125, 126 <...>. And taking into account the fact that one of the forms of domestic violence is physical violence <...>, in particular, the following actions: slapping, kicking, pushing, pinching, spanking, beating, facial assault, inflicting bodily injuries of various degrees of severity, causing death <...>, they should be given special attention” ²⁵⁾. However, conducting forensic examination in respect of establishing causes of death, gravity and nature of bodily injuries (clauses 1 and 2, Part 2, Article 242 of the Criminal Procedure Code of Ukraine) ²⁶⁾ is obligatory.

In addition to the above, authors of the *Handbook for an Investigator Scientific-Practical Manual* rightly put an emphasis on the fact that the purpose of forensic medical examination: “it is not only to determine the severity of bodily injuries but also to establish the time and mechanism of their infliction, to identify information about the possible origin of the weapon or tool used (firearm, blunt, sharp, sharp cutting, etc.),

which is particularly important during the initial stage of investigation” ²⁷⁾.

In fact, criminal offenses involving domestic violence are oftentimes committed using various tools. Considering this, V. P. Revin states that during acts of violence, weapons (firearms, cold weapons) as well as household sharp-cutting and other objects are used. However, the use of weapons as instruments of violence in a home environment is still atypical. In any case, a weapon is used only if it is available in a family and is not specially purchased. Therefore, during domestic violence commission, the most typical is the use of available household items that happen to be at hand, such as knives, scissors, and other household objects ²⁸⁾. In view of this, there are grounds for appointing the following forensic examinations (in addition to forensic medical examination): examination of weapons and evidence and circumstances of their use, trace evidence analysis, fingerprint analysis, etc.

It should be noted that provisions of the Criminal Procedure Code of Ukraine do not specify conditions for the appointment of forensic medical examination, but this should not be overlooked. First of all, this is connected with the following factors: a) untimely appointment of forensic medical

22 Про розвиток та вдосконалення судово-медичної служби України : наказ МОЗ України від 17.01.95 р. № 6. URL: <https://zakon.rada.gov.ua/laws/show/z0248-95#Text> (date accessed: 03.03.2023).

23 Інструкція про проведення судово-медичної експертизи : затв. наказом МОЗ України від 17.01.95 р. № 6. URL: <https://zakon.rada.gov.ua/laws/show/z0254-95#Text> (date accessed: 03.03.2023).

24 Кримінальний кодекс України від 05.04.2001 р. № 2341-III (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 03.03.2023).— Прим. В. Гонтаренка.

25 Іщенко Т. В. Оп. cit. С. 157.

26 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 03.03.2023).

27 Панов М. І., Шепітько В. Ю., Коновалова В. О. та ін. Настільна книга слідчого : наук.-практ. вид. для слідч. і дізнавач. 2-ге вид., перероб. і допов. Київ, 2007. С. 240. URL: https://dspace.nlu.edu.ua/bitstream/123456789/13703/1/Bululukov_232-241.pdf (date accessed: 19.01.2023).

28 Ревин В. П. Насильственные преступления в сфере семейно-бытовых отношений и проблемы их профилактики : метод. рек. Москва, 1993. 56 с.

examination may result in disappearance of bodily injuries; b) conducting forensic medical examination takes a considerable amount of time, which may cause delays in pre-trial investigation and other issues.

Within the scope of considering this issue, it is important to note that in the practical aspect of investigating crimes involving domestic violence, forensic medical examination is appointed directly against a victim. However, as rightly pointed out by I. V. Hloviuk and colleagues, *“forensic medical examination should be directed not only towards the victim but also towards the suspect when there are signs of bodily injuries or when the suspect claims that harm has been caused to his/her health as a result of a committed crime”*²⁹.

The issues associated with appointment of forensic psychiatric examination necessitate separate consideration within the studied category of criminal proceedings. According to clause 10 of the Procedure for Conducting Forensic Psychiatric Examination approved by the Order of the Ministry of Health of Ukraine No. 865 dated May 8, 2018: *“The subject of forensic psychiatric examination is the mental state of an individual during specific legally significant time intervals”*³⁰. There are different positions in scientific literature as to formal grounds for directing an individual to such forensic examination, including: *“a) information about past mental disorders found in a person; b) receiving treatment at a psychiatric hospital; c) exemption from compulsory military service due*

*to mental illness; d) being registered at a psychoneurological clinic; e) the presence of mental disorders in close relatives of an individual; f) inappropriate behavior and intellectual incapacity; e) suicide attempts, strange, meaningless behavior of the detainee in a detention center; g) inability to properly comprehend the issue, inconsistency, irrationality of answers and reflections; g) inability to focus and understand the essence of events, fears, inadequate affective reactions; h) manifestations of mental disorders, understanding a painful condition that require application of specific medical expertise”*³¹. For our part, let's note that the above list is not exhaustive, since a person may have other signs of mental disorders.

It should be emphasized that an important stage prior to appointing this forensic examination is preparation of materials for its conduct. Firstly, the investigator should obtain relevant medical documentation regarding a person's mental health from healthcare institutions. Additionally, sources of information on the presence of a mental disorder in a suspect can include: a) testimonies of relatives, acquaintances, neighbors; b) references from the place of residence, work, or education; c) a conclusion of a military medical commission, etc. However, as N. M. Senchenko states, *“relatives' testimony about mental health of a person under investigation is not always objective and can have a dual nature <...>. Thus, relatives might falsely assert that a person has a mental illness that he/she does not actually*

29 Романцова С., Устрицька Н., Гловюк І. та ін. *Ор. cit.* С. 232. URL: <https://dspace.lvduvs.edu.ua/handle/1234567890/4807> (date accessed: 03.03.2023).

30 Порядок проведення судово-психіатричної експертизи : затв. наказом МОЗ України від 08.05.2018 р. № 865. URL: <https://zakon.rada.gov.ua/laws/show/z0719-18> (date accessed: 03.03.2023).

31 Григус І. М., Самороков В. О., Цимбалюк В. І., Цимбалюк В. О., Сахнюк В. В. Судова психіатрія та судово-психіатрична експертиза : навч. посіб. / під ред. І. М. Григуса. Львів, 2020. 119 с.

have, or claim that the suspect suffers from a more serious mental illness than she/he does”³². Therefore, the investigator should thoughtfully perceive such information and duly verify it through implementation of appropriate procedural actions stipulated by the Criminal Procedure Code of Ukraine.

Investigative and judicial practice shows that forensic psychiatric examination is most often appointed against suspects in criminal proceedings involving domestic violence. However, one of the sources of evidence set forth in Part 2 of Article 84 of the Criminal Procedure Code of Ukraine³³ is a victim's testimony. Since evaluation of his/her testimony is highly important for fulfillment of criminal proceeding tasks, the issue of her/his capacity to sue or be sued is gaining relevance.

It is worth mentioning that the scientific community first paid attention to the aspects of studying the mental state of crime victims at the International Congress of Psychiatrists in Bucharest in 1947³⁴. However, to date, the current legislation of Ukraine does not contain detailed regulations on appointment of forensic psychiatric examination against a victim. The possibility of conducting forensic psychiatric examination against victims and other certain participants is discussed in the Regulation of the Plenum of the Supreme Court of Ukraine No. 8 of 30 May 1997. According to this

regulation: “If there are doubts about the ability of a victim, a witness, a civil plaintiff or an accused in criminal cases <...> to perceive events correctly, to react to them appropriately and to reproduce them accurately in their testimonies, the court may appoint a psychiatric expert to participate in interrogation of these persons. The appointment of forensic psychiatric examination against such persons with placement in a medical institution is permitted only with their consent”³⁵. Considering that the cited Regulation is not a law and is only advisory in nature, the measures provided in Article 509 of the Criminal Procedure Code of Ukraine require supplementation in the research section of this paper.

Generalization of criminal proceedings involving domestic violence indicates that 63% of them were committed by individuals under the influence of alcohol or drugs, of which 47% were directly registered with narcologists. In view of the above, representatives of the scientific community and practitioners are concerned about the specific scope of expertise required to address this issue. Given the outlined aspect, O. A. Revenok, O. P. Oliynyk, A. V. Kanishchev, O. V. Radzevilova stress that “in accordance with the Law of Ukraine ‘On Psychiatric Aid’ and the current International Classification of Diseases (ICD-10), mental disorders resulting from the use of psychoactive substances (PAS) are disorders of the psyche and behavior which

32 Сенченко Н. М. Щодо окремих питань призначення та проведення судово-психіатричної експертизи у кримінальному провадженні. *Право і суспільство*. 2017. № 5. Ч. 2. С. 251. URL: http://pravoususpilstvo.org.ua/archive/2017/5_2017/part_2/55.pdf (date accessed: 03.03.2023).

33 Кримінальний процесуальний кодекс України URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 03.03.2023).

34 Левенець І. В. Судова психіатрія : навч. посіб. Тернопіль, 2005. 328 с.

35 Про судову експертизу в кримінальних і цивільних справах : Постанова Пленуму ВС України від 30.05.1997 р. № 8 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/v0008700-97#Text> (date accessed: 03.03.2023).

fall within the professional competence of psychiatrists and narcologists”³⁶. In addition, “alcoholism significantly affects volitional processes of a person. Therefore, the study of a person’s motivational sphere is subject to expert assessment, which can be carried out within the framework of multidisciplinary forensic psycho-psychiatric examinations (MFPPEs).

<...>

Determination of the potential impact of personal traits on an individual’s ability to fully comprehend the significance of her/his actions and exert control over them in a legally significant situation requires involvement of forensic psychologists. Within the algorithm of forensic examination of persons with alcohol dependence, apart from assessing the examinee’s mental state, it is essential to include the study and comparison of psychosocial functioning parameters throughout their lifetime and in the legally significant period”³⁷. Accordingly, forensic psychiatric or multidisciplinary forensic psycho-psychiatric examinations should be appointed against suspects who abuse alcoholic beverages or drugs.

It is also relevant to address the issue of establishing circumstances of psychological violence. As stated in clause 6.4 of the Scientific and Methodological Guidelines on the Preparation and Appointment of Forensic Examinations and Expert Research approved by the Order of the Ministry of Justice of Ukraine No. 53/5

dated October 8, 1998, the main objective of forensic psychological examination is to determine in an examinee:

“• individual psychological traits, character traits, leading personality traits; motivational factors of mental life and behavior;

• emotional reactions and states;

• regularities of mental processes, the level of their development and their individual properties”³⁸.

Certain difficulties arise directly when proving facts of psychological violence against a victim, especially when it was not accompanied by physical violence (thus, it has a somewhat hidden nature). The investigator can obtain such information through interrogation of a victim, suspect, and witnesses. However, documenting the use of psychological violence in the interview record is often a formality in many cases. Moreover, investigators are not always capable of properly assessing the psychological state of an interrogated person and the impact of psychological violence on their vital functions. Therefore, interrogation of such persons should be conducted with a mandatory participation of a psychologist, and the interview record should be used in the course of forensic examination.

With regard to the aforementioned, in criminal investigations involving domestic violence, there is a need to appoint forensic psychological examination. According to

36 Ревенок О. А., Олійник О. П., Канищев А. В., Радзевілова О. В. Аналіз практики проведення судово-наркологічної експертизи в кримінальному провадженні. *Web of Scholar*. 2018. Vol. 1. № 11. Pp. 22–27. URL: <http://www.psychiatry.ua/articles/paper472.htm> (date accessed: 03.03.2023).

37 Олійник О. П., Радзевілова О. В. Комплексна судова психолого-психіатрична оцінка станів залежності від алкоголю в цивільному та кримінальному процесі. *Український медичний часопис*. 2018. 1 (2) (123) — I/II. DOI 10.32471/umj.1680-3051.123.122293 (date accessed: 03.03.2023).

38 Науково-методичні рекомендації з питань підготовки та призначення судових експертиз та експертних досліджень : затв. наказом Мін’юсту України від 08.10.1998 р. № 53/5 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 03.03.2023).

I. O. Savchenko, S. L. Babych, R. Uskila, it should address the following questions:

“1. *‘Are there any changes in emotional state or individual psychological manifestations of a victim that impede her/his active social functioning as a person and have arisen as a result of a suspect’s (accused’s) actions?’*

2. *‘Is a situation under study psychologically traumatizing for a victim? If so, has the victim experienced moral and physical suffering?’*³⁹

Let’s emphasize that within the scope of our research, attention is drawn to only the most common types of forensic examinations that investigators appoint during investigation of domestic violence crimes, and to issues of their regulation.

Conclusions

The procedural order of appointing forensic examinations in a criminal proceeding both in general and during pre-trial investigation of criminal offenses involving domestic violence is stipulated in the Criminal Procedure Code of Ukraine and other legal regulations. However, it contains problematic aspects resulting in certain complications in its practical application.

Key debatable issues of the indicated procedure are associated with the fact that criminalistics, forensic medical, and forensic psychiatric examinations can only be performed by state specialized institutions in Ukraine. This impedes participants in a criminal proceeding from choosing the most qualified forensic expert in a particular field and violates the principle of adversariality. Ending the monopoly of state forensic science institutions in conducting such forensic examinations will help victims exercise

their right to fair justice. In addition, certain aspects concerning the ordering of forensic psychiatric examinations against victims and certain other participants in a criminal proceeding have been overlooked by legislators to this day. Obviously, the above-mentioned issues require further thorough research and regulation in Ukrainian legislation.

Проблеми законодавчого регламентування судових експертиз, призначених під час розслідування домашнього насильства

В’ячеслав Гонтаренко

Досліджено окремі аспекти регламентування призначення судових експертиз під час досудового розслідування кримінальних правопорушень, пов’язаних із домашнім насильством. На підставі загальнонаукових і спеціальних методів, що ґрунтуються на теорії пізнання соціально-правових явищ, здійснено докладний аналіз кримінального процесуального законодавства та нормативно-правових актів України й іноземних держав, а також думок провідних вітчизняних науковців із цього питання. У кримінальних провадженнях, пов’язаних із домашнім насильством, доволі актуальним є питання щодо своєчасного призначення та проведення експертиз для з’ясування фактів фізичного, сексуального, психологічного або економічного насильства. Названі чинники здебільшого встановлюють шляхом проведення криміналістичних, судово-медичних і судово-психіатричних експертиз, здійснюваних винятково державними спеціалізованими експертними установами. Інколи це перешкоджає повному й об’єктивному розслідуванню та заважає учасникам кримінального

39 Савченко І. О., Бабич С. Л., Ускіла Р. Оп. cit. С. 548. DOI: 10.32353/khrife.2.2020.43 (date accessed: 03.03.2023).

провадження обрати найбільш кваліфікованого експерта. Рекомендовано скасувати монополію державних експертних установ на проведення таких експертиз, що допоможе постраждалим реалізувати право на справедливе правосуддя. Увагу акцентовано на питаннях процесуальної правоздатності потерпілого, показання якого є одним з найважливіших джерел доказів. Оскільки найчастіше об'єктами судово-психіатричної експертизи стають підозрювані, запропоновано відповідні зміни й доповнення до Кримінального процесуального кодексу та деяких нормативно-правових актів України, які стосуються призначення судово-психіатричної експертизи потерпілих.

Ключові слова: кримінальний процес; досудове розслідування; домашнє насильство; спеціальні знання; експерт; призначення експертизи; регламентування; доказування.

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Declaration of Competing Interest

Author declare no conflict of interest.

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The International Scientific and Practical Conference Relevant Issues of Forensic Science and Criminalistics

On May 19, 2023, the International Scientific and Practical Conference *Relevant Issues of Forensic Science and Criminalistics* dedicated to anniversaries of outstanding scientists: the 95th anniversary of L. Yu. Arotsker's birth (Arotsker's Readings) and the 105th anniversary of M. V. Saltevskiy's birth was held at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute».

The international conference was held the in the online mode due to war-related restrictions. Representatives from Ukrainian forensic science sector (institutes, centers, forensic science bureaus, research institutions of the Ministry of Internal Affairs and the Ministry of Justice of Ukraine, private forensic experts), as well as representatives from forensic institutions of other countries, including our colleagues from Scotland, Poland, Spain, Lithuania, Latvia, Georgia, Turkey, Moldova, Armenia, Italy, Montenegro, Israel, along with leading researchers from Ukrainian and foreign research institutions and higher education institutions participated in the event.

Nataliia Tkachenko, Director of Forensic Science Support to Justice Department of the Ministry of Justice of Ukraine, PhD in Law, Honored Lawyer of Ukraine, along with other distinguished researchers from the Ukrainian legal community, delivered a welcoming speech to the participants. Specialists in forensic science actively took part in the conference, including **Gabrielė Juodkaitė-Granskienė**, Doctor of Law, Docent, Member of the Supreme Court of the Republic of Lithuania; **Olga Cataraga**, Director at National Centre of Judicial Expertise subordinated to the Ministry of Justice of the Republic of Moldova, PhD in Legal Science; Prof. **Dariusz Zuba**, Director at Institute of Forensic Research (IFR) of the Ministry of Justice of the Republic of Poland, Dr. habil. in Chemistry; **Giedrius Mozūraitis**, Director at Forensic Science Center of Lithuania (FSCL), Doctor of Law; **Māra Rēpele**, Head of the Department of Biological and Chemical Investigations of State Forensic Science Bureau (Latvia), and others.



Contributions of scientific schools of L. Y. Arotsker and M. V. Saltevskiy, normative and legal regulation of forensic activities, forensic issues related to counteraction to organized crime, as well as current issues in the theory and practice of forensic science (research under conditions of martial law and assessment of damage caused by the Russian aggressor to our state and its citizens) were discussed at the event.

Foreign participants unanimously supported forensic experts and lawyers of Ukraine at this difficult for our state time.

National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» has gathered a community of like-minded individuals who are concerned with the issues of forensic science and criminalistics not only in Ukraine but also in the whole civilized world.

*Information was prepared by **Tatiana Kipuseva**,
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The Annual Meeting of the European Network of Forensic Science Institutes (ENFSI)

On May 24–26, 2023, the Annual Meeting of the European Network of Forensic Science Institutes (ENFSI) was held in The Hague (the Kingdom of the Netherlands) in which nearly 40 countries took part in order to discuss current challenges in the field of criminalistics.

Ukraine was represented by National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» and Kyiv Scientific Research Institute of Forensic Expertise of the Ministry of Justice of Ukraine as well as Ukrainian Research Institute of Special Equipment and Forensic Science of the Security Service of Ukraine.

Whithin three days, seminars were held on the issues of digitization of forensic activities and the use of artificial intelligence to optimize and enhance efficiency of forensic science. Participants addressed problems related to topics of planned seminars, discussed ways to resolve them, and explored directions for future cooperation among ENFSI members.

In addition, during the reporting session, ENFSI Council members reported on the organization's activities in 2022, discussed, approved the ENFSI work plan for 2023–2026, adopted a financial report for 2022 and agreed on a budget for 2024. The last day was dedicated to organizing ENFSI 2024 Annual Meeting in Madrid (Spain).

At the ENFSI Annual Meeting, National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» was represented by: Prof. **Ella Simakova-Yefremian**, Deputy Director for Academic Affairs, Doctor of Law, Honored Worker of Science and Technology of Ukraine; **Anton Polianskyi**, Head of R&D and Publishing, International Cooperation Laboratory, Doctor of Law, Docent; **Oksana Reiter**, Head of Scientific & Methodical Work Dept at the Kyiv Branch of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute».

Representatives
of National Scientific



Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» presented a report titled *Forensic activity during the war* which was aimed to convey to the European community the importance of supporting Ukraine in its war against the Russian aggressor and received strong support from participants. Attendees were deeply touched by the video presentation and the speech: **Ella Simakova-Yefremian** was greeted with standing ovation and tears in eyes.

The delegation of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» held a number of working consultations with delegations from Latvia, Spain, Azerbaijan, Cyprus, the United Kingdom (Scotland), Armenia, Croatia, and other countries regarding further ways of cooperation.

Nataliia Nestor, Deputy Director of the Kyiv Scientific Research Institute of Forensic Expertise, proposed the creation of another expert working group for forensic military examination and the ENFSI leadership supported this initiative: action projects for such a working group are already being developed.

The ENFSI meeting in the Hague has demonstrated the significance of cooperation and information exchange among forensic laboratories from different countries to improve forensic examination quality. Collaborative work and joint efforts of ENFSI participants will consistently help combat crime and ensure justice with the help of an objective, independent and qualified forensic examination.

*Information was prepared by **Sofia Karpova**,
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Cooperation with the International Commission on Missing Persons

The International Commission on Missing Persons (ICMP) is the only organization addressing the issues of missing persons that result from armed conflicts, human rights violations, and natural disasters. The commission works to facilitate cooperation among governments and other authorities in identifying missing persons. The ICMP also contributes to the development of forensic technical examination for search and identification of missing individuals, supports the work of other organizations, encourages public participation in its activities, and contributes to perpetuating memory of the missing. What is more, the organization assists governments of different countries in fulfilling their human rights obligations concerning both victims and their surviving relatives.

Understanding challenges faced by Ukrainian forensic experts because of the war, the ICMP invited representatives from forensic science institutions of the Ministry of Justice and the Ministry of Health of Ukraine to visit its headquarters in The Hague.

During four days (from May 30 to June 2, 2023), experts from Lviv and Kharkiv had the opportunity to familiarize themselves with the working process of the ICMP DNA laboratory (the latest methodologies applied for conducting expert research to identify missing persons) and share their own experiences. All events took place in modern laboratories with cutting-edge equipment.

At the meeting, Ministry of Justice of Ukraine was represented by: **Nataliia Tkachenko**, Director of Forensic Science Support to Justice Department, PhD in Law, Honored Lawyer of Ukraine, National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» staff represented by **Ihor Sych**, Head of the



Laboratory of Physical, Chemical, Biological, and Molecular Genetic Examination, PhD in Pharmacy; as well as by **Oksana Bernadska** and **Marina Furs**, forensic experts.

DNA analysis is one of the most important areas of research in forensic science. The study and comparison of DNA samples is an integral part of identification process that is taking place in Ukraine and, unfortunately, will continue until there is a need to identify persons and the dead in temporarily occupied territories.

*Information was prepared by **Anatolii Tiapkin**,
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Requirements for content

According to the Edition subject matter, content regarding coverage of criminalistic current issues, relevant issues of performing various types of forensic examinations and specific expertise application in legal proceedings is published on the pages of the Scientific Edition.

Based on research, presentational, evaluative and communicative functions of the Scientific Edition, **research papers** (where an author outlines main work outcomes); **research and methodological papers** (where an author analyses methods, processes, tools helping to achieve certain scientific results); **research and theoretical papers** (texts where an author presents results of theoretical ways for problem solution); **research and practical** (articles where an author describes his personal practical experience and performed scientific experiments), **review research papers** (dedicated to evaluation, conclusions, overview, analysis of earlier published information). The Editorial Board is also interested in **debatable articles, research ideas or short reports**: results of an experiment, personal experience, etc. Scientific style of the content presentation (accuracy, logic, conciseness, clarity, connectivity, integrity, completeness) and its high scientific level.

Article structural elements should include:

- Article Title;
- Abstract and Keywords. Abstract (summary) text should be not less than 1,800 characters (separately in article language and English). Abstract should include the following: outline of research problem, *purpose*, main research results, conclusions, keywords (7–10 words, should match the content of the article and display the publication topic). Titles of annotation structural parts other except the purpose should not be indicated;
- Formulation of research problem, its connection with scientific and practical interests (it is necessary to reveal essence and state of the scientific problem, theoretical and practical significance of a research, connection with scientific

and practical tasks, substantiation of the research relevance);

- Article purpose (it is necessary to formulate the publication main thesis differing from previously considered research on the chosen topic in accordance with outlined problem and analysis of current researches);
- Research methods applied (are presented individually if they contain novelty and are notable, given the article subject matter);
- Analysis of essential researches and publications on the selected article topic, outlining the problematic field of the research that article is devoted; with obligatory reference to authors and their scientific papers;
- Main content presentation with obtained results (to reveal important theoretical positions and research results, analyze scientific facts, ideas, thoughts, regularities, concepts, as well as trends of further topic development, emphasizing personal contribution of the research author(s));
- Conclusions (main research results in a clear, consistent, logically presented form in compliance with set goal);
- References (the list of used sources transliterated according to the Roman alphabet, for example, on the site of Vernadsky National Library of Ukraine: <http://nbuv.gov.ua/node/929>);
- Abstract in English, indicating the author(s) surname, article title and keywords.

Requirements for scope

Total scope of a scientific article (information about the author, article title, abstract, keywords, article text, bibliographic references, extended resume) should be not less than 36,000 characters.

Requirements for design

Article is submitted for publication in Ukrainian or English.

Text of the article should be printed using the Microsoft Word processor; A4 paper size; page orientation. Text should not contain hyphens and macros.

Requirements for Research Papers

Article information should be presented according to the following sequence.

Information about the publication author (co-authors) The author's full name, academic degree, academic rank, place of employment, locality, country, Researcher ID, ORCID ID, official email address). One publication permits no more than three co-authors. If the article is prepared by a group of authors, it is important to stress participation of each according to the methodology: CRediT (Contributor Roles Taxonomy, for more details: <https://credit.niso.org/>).

Article title should be without acronyms and abbreviations.

If a research is executed within the framework of international projects (grants), then it should be mentioned.

Analyzing main researches on the article problematics, it is obligatory to consider the status of the issue in foreign and domestic sources (not less than 20 publications, at the same time the majority should be represented by international indexed editions). References to the author(s) personal scientific papers are allowed only if they do not exceed 10 % of all references.

The article text should adhere to requirements for content, general rules of citation and references to used sources. Each quotation should be accompanied by a reference to the source which bibliographic description should be completed depending on its type (primary or secondary source) according to the National Standard of Ukraine ДСТУ 8302: 2015: *Information and documentation. Bibliographic reference. General terms and conditions of compilation*.

In bibliographic references, it is necessary to use footnotes or endnotes involving separate reference to each source. While numbering references, authors should use continuous numbering (in Arabic numerals) throughout the article text.

Illustrations (tables, diagrams, graphics, schemes, formulas) can be submitted in the text article. Illustrations should be delivered in separate files. They should be provided in a format enabling to format (for translation

purposes). Formulas should be performed using the Math Type formula editor not using Cyrillic characters.

Requirements for submission

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