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«Hon. Prof. M. S. Bokarius Forensic Science Institute»

Yaroslav Mudryi National Law University

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The thirty-ninth collection issue presents content on criminalistics, theory and methodology of forensic science, as well as information about scientific-practical conferences and educational projects and participation of the NSC staff in them.

Our authors are representatives of forensic science institutions, higher education institutions, law enforcement agencies from Ukraine and foreign countries.

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

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Authors are responsible for the accuracy of the provided terms, facts, quotations, figures and surnames.

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Contents

EDITOR-IN-CHIEF'S NOTE

Ella Simakova-Yefremian. <i>The Theory and Practice of Forensic Science and Criminalistics</i> Collection: Honoring the Past, Working Today, Stepping Into the Future.	5
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RESEARCH PAPERS

Valerii Shepitko. Role of M. M. Bokarius in development and establishment of criminalistics and forensic science in Ukraine.	13
Vlada Husieva, Yevhen Sup. Typical Characteristics of Person who Commits Criminal Offenses against Justice.	29
Nataliia Filipenko, Aleksandar Ivanović. Role of the Ministry of Justice of Ukraine in the formation of a system of forensic science support for justice (<i>Review Article</i>).	44
Kateryna Latysh, Danylo Zhydkov. Peculiarities of Using DNA Research Results From Mobile Laboratories in Criminal Proceedings	58
Olena Usenko. Determining the Market Value of Completely Destroyed Property Through the Russian Federation's Armed Aggression	74
Petro Baranov, Olena Slyvna, Liudmyla Chernysh. Pricing Aspects of Amber: Consumer Characteristics and How They Determine the Value of Raw Materials	91

CASE NOTES

Volodymyr Popov. Types and Specifics of Investigation of Traces of Unlawful Interference in the Activities of Public Authorities	104
Mykola Kolomoitsev. Guarantees of professional activity of defense attorney in criminal proceedings	118
Inna Bosak. Peculiarities of Forensic Examination During Pre-Trial Investigation of High Treason Cases	133
Oleksandr Tarkan. Activity Nature of Counteracting Investigation of Criminal Offenses	148
Yurii Kovalov. Art Forensics in Investigating and Proving Smuggling of Cultural Property	162
Vitalii Usatii. Proving Property Damage in Economic Criminal Offenses	175
Vadym Babakin, Jozef Zatko. Corruption in environment field: problems and ways to their solving	189
Nataliia Matsak. Legal and Regulatory Framework for Thermal Modernization in Construction	202

SCIENTIFIC NEWS

All-Ukrainian Scientific and Practical Conference: <i>Methodological Principles of Criminalistics — Traditions and Innovations</i> dedicated to the memory of Academician V. O. Konovalova (<i>Konovalova Forensic Readings</i>)	217
International Scientific and Practical Conference on Topical Issues of Forensic Science and Criminalistics	219
Annual ENFSI Meeting and EAFS Conference	222
V All-Ukrainian Forum of Forensic Experts: New Horizons and Strategic Challenges	225
Round Table: Standards of Professional Conduct for Advocates and Forensic Experts — Problematic Issues and Ways to Resolve Them.	227
Tribute to the Jubilarian!	230

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Editorial Board address: National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute»,
8a, Zolochivska St., Kharkiv, Ukraine, 61177

Phone: +38 (057) 372-12-20, e-mail: zbirnyk_nscfsi@hniise.gov.ua

The Theory and Practice of Forensic Science and Criminalistics Collection: Honoring the Past, Working Today, Stepping Into the Future

Ella Simakova-Yefremian *

* Doctor of Law, Professor, NSC "Hon. Prof. M. S. Bokarius FSI", Kharkiv, Ukraine,
ORCID: <https://orcid.org/0000-0002-8246-7688>, e-mail: simakova@hniise.gov.ua

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The article explores the evolution of the professional journal Theory and Practice of Forensic Science and Criminalistics and the broader mission of forensic expertise in today's world. Amid the war, the author stresses, forensic findings carry not only evidential but also historical weight — they record the truth about war crimes and preserve evidence of Russia's aggression against Ukraine. The text reflects on the resilience and integrity of experts who continue their work despite constant danger and destruction. It also notes the growing international standing of Ukrainian forensic science, its deepening collaboration with European partners, and the steady integration of digital tools and innovative research methods. Ultimately, the author presents the journal as more than an academic platform — it is a living chronicle of a professional community that honors its heritage while shaping the future of forensic science.

Keywords: forensic science; criminalistics; academic journal; war crimes; international collaboration; pre-trial investigation; methodology.

At a time when our country remains steadfast in its opposition to Russia's persistent aggression, expert research is gaining significance. Each expert's conclusion, along with every source of evidence obtained during the research process, becomes not

only an element of justice but also a part of the historical truth about this war.

Conducting forensic examinations under martial law is a highly challenging undertaking that requires not only high professionalism from forensic experts but also incredible

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 Daryna Dukhnenko). The author acknowledges translation as corresponding to the original.

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devotion and courage. The constant threat of shelling, fractured infrastructure, complicated or at all impossible access to the places of committing or concealing crimes, and mined areas: all this poses unprecedented challenges. However, despite all the difficulties, Ukrainian forensic experts continue to carry out their duties diligently, performing impartial and objective investigations into facts, which are critical for restoring justice and investigating crimes.

The 39th edition of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection is devoted to both topical issues of expert and forensic activities and renowned figures who have made significant contributions to the theory and practice of jurisprudence, forensic science in general, and forensic medicine in Ukraine in particular.

Thus, **Vasyl Olkhovskyi**, Doctor of Medicine, Professor, Professor at the Department of Forensic Medicine, Medical law named after prof. M. S. Bocarius, Kharkiv National Medical University, has celebrated his 70th birthday and 45th year of scientific and pedagogical activity this year, on April 30th.

Vasyl Olkhovskyi is a graduate of Kharkiv Anatomical and Forensic Medical School. This school has laid a solid foundation for the development of forensic medicine within Ukraine. The researcher's scientific and teaching activities have stood as a timeless model for many generations of specialists. Not only has he passed on knowledge and skills, but he has also shaped worldviews and instilled principles of academic integrity and uncompromising objectivity: fundamental to the work of a forensic expert. Vasyl Olkhovskyi's contribution to forensic medicine cannot be overstated. The scientist's scientific papers and research have become a reliable basis for practical activities and subsequent scientific development of the entire industry.

We should also mention **Violetta Omelianivna Konovalova**, an outstanding re-

searcher and lecturer, Doctor of Law, Academician of the National Academy of Legal Sciences of Ukraine, Professor, Honored Professor of Yaroslav Mudryi National Law University (hereinafter referred to as *Yaroslav Mudryi NLU*) and National Scientific Center "Hon. Prof. M. S. Bokarius Forensic Science Institute" (hereinafter referred to as *NSC "Hon. Prof. M. S. Bokarius FSI"*), Honored Worker of Science and Technology of Ukraine, who greatly contributed to the development of legal science, forensic tactics, legal psychology, and legal education. Violetta Omelianivna's primary research areas are the principles of the general theory of forensics, forensic tactics, and legal psychology. It was she who introduced a new approach to the application of the achievements of logic and psychology in forensic tactics, which paved the way for investigative and judicial practice. Without exaggeration, she can be called the founder of the psychological and legal school in Ukraine. Violetta Omelianivna was a true leader whose input to the formation and development of forensics in Ukraine is unconditional. The staff of National Scientific Center "Hon. Prof. M. S. Bokarius Forensic Science Institute" is proud to acknowledge that Violetta Omelianivna's articles were published in many issues of the *Theory and Practice of Forensic Science and Criminalistics* Professional Research Paper Collection. She was a member of the editorial board of this collection for more than 20 years, which is co-edited by National Scientific Center "Hon. Prof. M. S. Bokarius Forensic Science Institute" of the Ministry of Justice of Ukraine and Yaroslav Mudryi National Law University of the Ministry of Education and Science of Ukraine. Violetta Omelianivna's articles were published in this collection.

The Editorial Board of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection honors the founders who have shaped Ukraine's forensic industry. Despite the challenges of mar-

tial law, the Board is confidently stepping into the European future alongside the rest of the country. Currently, the Edition is indexed in *Google Scholar* and international online databases: *Index Copernicus International* (ICV 2021: 100), *Bielefeld Academic Search Engine* (BASE), *Crossref*, *Central and Eastern European online library* (CEEOL), *ERIH PLUS*, *Europub*, *RefSeek*, *ResearchBib*, *WorldCat*, as well as in the Register of Scientific Publications of Ukraine and DOI Foundation. The Research Paper Collection's electronic versions are posted on the Internet on sites such as the V. I. Vernadsky National Library of Ukraine, libraries of forensic institutions under the Ministry of Justice of Ukraine, institutions of higher education under the Ministry of Internal Affairs of Ukraine, etc.

The research papers in this edition are traditionally divided into two groups: *Research Papers* and *Case Notes*.

The *Research Papers* Section is introduced by the *Role of M. M. Bokarius in Development and Establishment of Criminalistics and Forensic Science in Ukraine* research paper authored by **Valerii Shepitko** (Ukraine), Doctor of Law, Professor, Academician of the National Academy of Legal Sciences of Ukraine. The purpose of this article is twofold: to determine the role of Professor M. M. Bokarius in the development of forensic science and criminalistics in Ukraine and to popularize forensic knowledge and its practical applications. The researcher analyzes the medical, pedagogical, scientific, and expert activity of M. M. Bokarius during 1920–1960. Attention is drawn to his performance of forensic medical activities in difficult political and economic conditions, in particular during the Holodomor in Ukraine in 1932–1933, World War II, and mass famine of 1946–1947. Teaching activities of M. M. Bokarius for law students (forensic medicine, crime investigation techniques (criminalistics), and other related disciplines) are considered. He was an organizer of the educational process and the

head of higher educational institutions and forensic institutions. The professor's scientific legacy is considered; his main works are analyzed; The subject of scientific research is systematized (forensic and forensic methods: forensic traumatology and thanatology, cadaver phenomena and the statute of limitations of death, corpse examination at the crime scene, mechanical asphyxiation, traces of firearms and gunshot wounds, material evidence). The role of M. M. Bokarius in application of forensic methods for the investigation of crimes, the establishment of the forensic direction in forensic medicine and the formation of medical forensics is argued. The peculiarities of emergence and existence in our time of the Bokarius Scientific and Pedagogical Forensic School are substantiated.

Vlada Husieva, Doctor of Law, and **Yevhen Sup**, PhD in Law, both from Ukraine, are the authors of the following paper: *Typical Characteristics of Person who Commits Criminal Offenses against Justice*. The paper aims to clarify the meaning of the forensic characterization of criminal offenses committed by professional participants in the judicial process, to determine the substantive elements of its structure. A number of theoretical and applied provisions were formed that allow expanding the understanding of forensic characterization of criminal offenses against justice, in particular those committed by professional participants in the judicial process. The researchers analyze scientific approaches to structuring knowledge about identity of the offender within the framework of forensics. Feasibility of a comprehensive analysis of the socio-demographic, moral, and psychological characteristics of the offender was confirmed, the results of which make it possible to more accurately predict the behavior of the offender, substantiate investigative versions, and plan tactical actions. It was substantiated that the motive and purpose of criminal behavior are of fundamental

importance for establishing the subjective side of the composition of the crime, in particular for distinguishing intentional abuse of authority from official error. It has been established that criminal offenses against justice committed by officials are often latent in nature, hidden behind formal compliance with procedural norms, and require special investigative tactics aimed at identifying hidden mechanisms of abuse. It has been generalized that effectiveness of the investigation of such criminal offenses directly depends on the level of awareness of the investigator with the peculiarities of the law enforcement activities of professional participants in the judicial process, which requires in-depth training and systematic analysis of the offender's personality. It has been stated that a comprehensive forensic characterization of criminal offenses against justice, adapted to the professional specifics of the subjects of such crimes, is an important condition for creating an effective methodology for their investigation, as well as for developing mechanisms for preventing offenses.

The section continues with the *Role of the Ministry of Justice of Ukraine in the Formation of a System of Forensic Science Support for Justice* review article by **Nataliia Filipenko** (Ukraine), Doctor of Law, Professor, and **Aleksandar Ivanović** (Montenegro), Doctor of Law, Professor. The scholars analyzed the leading role of the Ministry of Justice of Ukraine in forensic science management, with emphasis on the features of coordination, subordination, planning and information mechanisms, as well as ability to respond to pressing issues and challenges of the present time. The researchers have determined that this activity has a scientific and practical orientation and depends on the departmental affiliation of forensic expertise institutions of Ukraine. A wide range of functional capabilities of the Ministry of Justice of Ukraine, which vary in form and content, is outlined, in particu-

lar, it is noted that expert support of justice is one of its main legislatively enshrined tasks. The main challenges and prospects for improving forensic support of justice in the context of reforming the judicial system and ensuring compliance with international standards in this area are outlined. The main areas of activity of the Ministry of Justice of Ukraine as a management and coordination body in the field of criminal activity of forensic institutions were identified, in particular: development and implementation of effective state policy in the field of management of forensic activities; optimization of management methods of state forensic institutions and non-state expert organizations; increasing the requirements for judicial activity and its organization; increasing efficiency of activities of judicial institutions of Ukraine, etc.

In the *Peculiarities of Using DNA Research Results From Mobile Laboratories in Criminal Proceedings* article, **Kateryna Latysh**, PhD in Law, Docent, and **Danylo Zhydkov**, both from Ukraine, analyze the procedural status of rapid DNA test results obtained in mobile and stationary DNA laboratories. The paper identifies the benefits and restrictions of such studies. Emphasis is placed on the relevance of utilizing mobile technologies under martial law in Ukraine and the need to improve the legal regulation of their use. The authors explore the procedural status of rapid DNA test results obtained in both mobile and stationary DNA laboratories. The article discusses the differences between mobile and stationary laboratories, identifies peculiarities in the collection and processing of biosamples, and outlines problematic aspects of admitting such results as evidence. Emphasis is placed on the relevance of utilizing mobile technologies under martial law in Ukraine and the need to improve the legal regulation of their use. The latest legislative changes and case law regarding the evaluation of rapid studies are also carefully analyzed.

The *Determining the Market Value of Completely Destroyed Property through the Russian Federation's Armed Aggression* article authored by **Olena Usenko** (Ukraine), PhD in Law, examines the methodology and practical aspects of assessing the market value of assets that have been completely destroyed, and identifies the legal and methodological principles that govern this process. Existing methodologies for determining the market value of destroyed real and movable property, including damaged land parcels, have been analyzed. Special attention is paid to the legal and regulatory environment in Ukraine, which fails to meet the requirements arising from large-scale destruction during armed conflicts. It is argued that merely compensating direct losses is insufficient; it is equally essential to ensure the full restoration of enterprise operations and infrastructure, and to account for potential economic losses arising from destroyed assets. In addition to evaluating current methodologies and legal provisions, specific recommendations for improving legislation and practical valuation procedures in an armed-conflict context are offered.

The *Pricing Aspects of Amber: Consumer Characteristics and How They Determine the Value of Raw Materials* research paper by **Petro Baranov**, Doctor of Geology, Professor, **Olena Slyvna**, PhD in Geology, and **Liudmyla Chernysh**, all from Ukraine, aims to conduct an integrated analysis of the amber market and determine the aesthetic and economic relationship between the characteristics of raw amber, such as shape, color, clarity, impurities, cracks, and inclusions, as well as the characteristics of amber products as perceived by consumers. The topic is relevant since expert studies on determining the cost of raw amber have failed to consider its pricing consumer characteristics. This poses a risk of not complying with the basic principles of forensic examination: objectivity and completeness of research. The authors consider the mechanism for

assessing the quality of raw amber and its cost, taking into account the active price lists of Ukraine, and also identify consumer characteristics affecting the cost of amber products. The authors emphasize that the characteristics of amber establish an aesthetic and economic connection with each type of product, enhancing the perceived value of each individual item. The qualitative characteristics of amber determine its cost in the market and become the main factors influencing pricing.

The *Case Notes Section* begins with the *Types and Specifics of Investigation of Traces of Unlawful Interference in the Activities of Public Authorities* research paper authored by **Volodymyr Popov** (Ukraine), PhD in Law, seeks to identify typical traces of criminal and illegal activities related to interference in the activities of representatives of state authorities, to outline their features and methods of research. The researcher identifies typical sources (carriers) of trace information in criminal offenses related to interference in the activities of representatives of state authorities: 1) documents, in particular electronic ones (summons, protocols of procedural actions, photographs, sound and video recordings of the event of a criminal offense or related to it); 2) digital traces displayed (stored) in messengers, information systems, e-mail servers and other information systems, video recordings, etc.; 3) other things of the material world that were discovered at the crime scene (at the scene of incident) and that retained traces of criminal illegal activity; 4) tools and/or means used by the perpetrators to carry out the criminal act; 5) participants in relevant social relations who, by chance or in connection with their official activities, became participants in the event of a criminal offense related to interference in the activities of representatives of state authorities. Prospects for further research within the framework of researched issues are outlined.

The *Guarantees of Professional Activity of Defense Attorney in Criminal Proceedings* research paper by **Mykola Kolomoitsev** (Ukraine), PhD in Law, determines legal status content of the defense attorney of the suspect (accused) in criminal proceedings, to characterize the guarantees of his professional activity. It was investigated that the guarantees of the professional activity of the lawyer (defense attorney) in criminal proceedings are represented by a set of international legal and national provisions that determine his rights and obligations in the event of his defense of the suspect (accused / defendant / convicted). The sources of the aforementioned guarantees are the Constitution, the Criminal Procedure Code, the Law of Ukraine: *On the Bar and Legal Practice*, and subordinate regulatory legal acts of Ukraine. The researcher argues that the outlined legal guarantees determine the powers of the defense attorney in ensuring the right to defense and fair justice, they are used when obtaining evidence, to substantiate the legal position, to appeal procedural decisions, etc.

The *Peculiarities of Forensic Examination During Pre-Trial Investigation of High Treason Cases* article by **Inna Bosak** (Ukraine), Post-graduate student, comprehensively examines the specific peculiarities of appointing and conducting forensic examinations as one of the procedural forms of applying specific expertise in the investigation of criminal offenses that may be qualified as high treason. It further analyzes and substantiates the appropriateness of appointing forensic examinations that are essential in revealing the truth in criminal proceedings concerning high treason. In particular, the article outlines the most relevant and commonly applied types of forensic examinations, such as computer, video and sound recording analysis, linguistic (semantic-textual), forensic examinations related to state secrets, and forensic portrait examinations, which are typically appointed and conduc-

ted at the stage of pre-trial investigation of criminal offenses classified as high treason. The author emphasizes that this list of the most in-demand forensic examinations conducted during investigations of criminal offenses, outlined in Art. 111 of the Criminal Code of Ukraine, is not exhaustive.

The *Activity Nature of Counteracting Investigation of Criminal Offenses* research paper by **Oleksandr Tarkan** (Ukraine), PhD in Law, determines components of activity that consists in counteracting the investigation of criminal offenses. It was determined that counteracting investigation is a complex, dynamic and multifaceted phenomenon that is formed in the conditions of a criminal conflict and manifests itself through the purposeful behavior of persons interested in concealing the actual circumstances of a criminal offense. It was substantiated that the structural components of forensic characteristic of counteraction are: 1) subjects of counteraction, their motives and objects of influence; 2) typical forms and methods, their impact on sources of evidence; 3) signs of use of specific methods that are manifested both in objective environment and in the behavior of subjects. The need to study the external manifestations of counteraction (material, digital, ideal traces) as a key source for modeling mechanisms of criminal counteraction and creating effective tactical solutions is proven. It was found that counteracting investigation has a conflicting nature, in which opposing goals of the parties to the criminal proceedings collide. This is not only a conflict between the investigator and the suspect, but also interaction with other participants in the process: prosecutor, witnesses, witnesses, experts, etc. It is substantiated that the forensic characteristic of opposition to investigation should be integrated as a separate component into the structure of investigation methodology for those criminal offenses that are characterized by active opposition.

The section continues with the research paper: *The Art Forensics in Investigating and Proving Smuggling of Cultural Property* authored by **Yurii Kovalov** (Ukraine), PhD in Law. The work determines the specifics of appointment of art forensics during investigation of the smuggling of cultural values, to reveal the significance of the expert's conclusion for the process of proof. It was established that during the investigation, investigators quite often address the question of whether an object belongs to the category of cultural values to forensic expert, however, the solution of this issue is already the competence of lawyers. The competence of forensic expert consists in determining artistic level, historical significance, cultural value and condition of the work. In view of this, it is emphasized that before making a decision to appoint an art expert, it is advisable to consult with a specialist in the field of art history; this allows to properly formulate expert tasks, clarify the research topic of and ensure quality of subsequent conclusion and the collected evidence. It is justified that during investigation of the smuggling of cultural values, it is prudent to appoint an art historical examination, and not to resort to other forms of specific expertise application, because only the conduct of the examination will guarantee the receipt of evidence that meets the criteria of admissibility, relevance and reliability and therefore can be used as the basis for proof.

The *Proving Property Damage in Economic Criminal Offenses* research paper by **Vitalii Usatii** (Ukraine), PhD in Law, defines peculiarities of proving property damage in the course of pre-trial investigation into economic criminal offenses. The researcher proves that it is also vital to introduce a set of compensation (indemnification) measures both at the pre-trial stage and during the criminal trial. The author outlines some aspects of proving property damage in economic criminal offenses, for

most of which it is of decisive importance in the context of criminal law context. The subsequent research will focus on the legal, organizational, and tactical principles involved in collecting evidence of property damage during the pre-trial investigation of economic crimes.

The *Corruption in Environment Field: Problems and Ways to Their Solving* article by **Vadym Babakin** (Ukraine), Doctor of Law, Docent, and **Jozef Zatko** (Slovak Republic), Full Doctor in Law, Honorary Doctor, Honorary Professor, LL/MBA, aims to investigate corruption state in environmental field, analyze the main problems that arise as a result of such corruption, and propose ways to solve them. Particular attention is paid to finding effective ways to overcome corruption, improving legislation, strengthening control by officials and increasing transparency, openness and publicity in the decision-making procedure in this area. It is proved that close cooperation of the state with international organizations studying this problem should become the basis for improving national legislation and practice of its implementation. Ways of solving problems of minimizing the impact of corruption in environmental field are proposed (strengthening control over compliance with environmental legislation, increasing transparency of decision-making in the environmental field and ensuring inevitability of punishment for corruption offenses, raising environmental awareness of citizens and involving them in active participation in monitoring compliance by authorities with environmental legislation, etc.). Prospects for further research within the framework of raised issues are outlined.

The section ends with the *Legal and Regulatory Framework for Thermal Modernization in Construction* research paper by **Nataliia Matsak** (Ukraine). This article aims to present the key rules and requirements for building energy efficiency during thermal modernization works and to strengthen

regulations on upgrading thermal insulation of external envelopes and on replacing window, exterior-door and balcony assemblies. The author also addresses broader themes—energy conservation, energy-saving policy, building energy passports, efficient use of fuel and power resources, etc.

The final pages of the 39th issue include the *Scientific News* traditional section. This part introduces readers to scientific events in forensic science that took place over the past quarter.

The Editorial Board of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection would like to thank the authors who have contributed to this edition! Your insightful contributions have significantly enhanced the content of this edition and promote the sharing of valuable knowledge within the academic community. We greatly appreciate your work, dedication to science, and willingness to present your research findings.

We are pleased to invite scholars, researchers, and practitioners and welcome the opportunity for further cooperation. If you are interested in publishing your original research, review articles in the *Theory and Practice of Forensic Science and Criminalistics* Professional Research Paper Collection, we will gladly consider your materials for the next issues of our collection. We believe that, by working together, we can play a major role in developing various fields of science!

Together to the Victory!
Glory to Ukraine!

Збірник “Теорія та практика судової експертизи і криміналістики”:

**шануємо минуле,
працюємо сьогодні,
крокуємо в майбутнє**

Елла Сімакова-Єфремян

Стаття присвячена розвитку фахового наукового збірника «Теорія та практика судової експертизи і криміналістики» та ролі судово-експертної діяльності в умовах сьогодення. Наголошується, що під час війни результати експертних досліджень набувають не лише доказового, а й історичного значення, адже формують правду про воєнні злочини та документують наслідки російської агресії проти України. Підкреслено стійкість і професійну мужність експертів, які продовжують роботу попри небезпеку, обстріли та руйнування інфраструктури. Окрему увагу приділено зростанню міжнародного авторитету української судової експертизи, розширенню співпраці з європейськими інституціями, впровадженню цифрових технологій і нових наукових методів. На підставі аналізу статей видання підсумовано, що збірник є не лише науковою платформою, а й своєрідним літописом професійного поступу спільноти, що поєднує традиції минулого та інновації майбутнього.

Ключові слова: судова експертиза; криміналістика; фахове видання; воєнні злочини; міжнародна співпраця, досудове розслідування, методика.

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Role of M. M. Bokarius in development and establishment of criminalistics and forensic science in Ukraine

Valerii Shepitko *

* Doctor of Law, Professor, Academician of National Academy of Legal Sciences of Ukraine, Yaroslav Mudryi National Law University, Kharkiv, Ukraine,
ORCID: <https://orcid.org/0000-0002-0719-2152>, e-mail: shepitko.valery@gmail.com

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This article purpose is to determine the role of Professor M. M. Bokarius in the development of forensic science and criminalistics in Ukraine, as well as to popularize forensic knowledge and possibilities of their practical application. For achieving this goal, methods of cognition and formal logic, historical and biographical methods, method of comparative research, as well as comparative-legal, historical-comparative, system-structural, system-functional methods were used. During the study, we used an interdisciplinary approach. The role of Professor M. M. Bokarius in formation of medical forensic science, forensic medical research and forensic expert activity in Ukraine in the 20th century was determined. His medical, pedagogical, scientific and expert activity during the 1920s-1960s was analyzed. Attention is drawn to his performance of forensic medical activities in difficult political and economic conditions, in particular during the Holodomor in Ukraine in 1932-1933, World War II, and mass famine of 1946-1947. Teaching activities of M. M. Bokarius for law students (forensic medicine, crime investigation techniques (criminalistics), and other related disciplines) are considered. He was an organizer of the educational process and the head of higher educational institutions and forensic institutions (he held the positions of head of the department, vice-rector for academic work, and director of an expert institution). The professor's scientific legacy is considered; his main works are analyzed; The subject of scientific research is systematized (forensic and forensic methods: forensic

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traumatology and thanatology, cadaver phenomena and the statute of limitations of death, corpse examination at the crime scene, mechanical asphyxiation, traces of firearms and gunshot wounds, material evidence). The role of M. M. Bokarius in application of forensic methods for the investigation of crimes, the establishment of the forensic direction in forensic medicine and the formation of medical forensics is argued. The peculiarities of emergence and existence in our time of the Bokarius Scientific and Pedagogical Forensic School are substantiated.

Keywords: criminalistics; medical criminalistics; forensic medicine; forensic science; history of criminalistics; history of medical criminalistics; forensic science activity; forensic science institutions; forensic medical institutions.

Research Problem Formulation

Important in development of forensic science is the forensic direction and the formation of a separate scientific field: medical criminalistics. M. M. Bokarius made a significant contribution to development of medical criminalistics in twentieth century¹.

Modern researchers rightly raise the issue of mutual enrichment of forensic and medical science, relationship of forensic science with other fields of knowledge, the borrowing of forensic data by medical sciences². Systematized publications also give separate views on the essence of *medical criminalistics*³ or *forensic medical criminalistics*⁴. At the same time, today there are virtually no works on the study of the history of the formation of medical foren-

sic science in Ukraine, the significance of the scientific heritage of M. M. Bokarius for the development of forensic science and criminalistics has not been sufficiently analyzed.

Article Purpose

Determine the role of Professor M. M. Bokarius in development of forensic science and criminalistics in Ukraine. Popularize forensic knowledge and the possibilities of its practical application.

Research Methods

Methods of cognition and formal logic (analysis and synthesis, induction and deduction, analogy, abstraction, etc.), historical and biographical methods, method

- 1 Бокаріус Микола Миколайович — видатний судовий медик і криміналіст. До 125-річчя від дня народження : життєопис і бібліогр. показ. / уклад.: В. М. Шевчук, О. В. Дунаєв, О. Л. Мусієнко, В. В. Брагінська. Харків, 2024. 160 с. URI: <https://dspace.nlu.edu.ua/jspui/handle/123456789/20359> (date accessed: 20.05.2025).
- 2 Яремчук В. О. Криміналістичні та медичні знання: межі використання при розслідуванні злочинів. *Проблеми законності*. 2018. Вип. 142. С. 211–219. DOI: 10.21564/2414-990x.142.139928 (date accessed: 20.05.2025).
- 3 Кноблех Э. Медицинская криминалистика. 2-е изд. Прага, 1960. 420 с.
- 4 Филипчук О. В., Шевчук М. М. Посібник з судово-медичної криміналістики. Львів, 2011. 566 с. ; Филипчук О. В., Гуров О. М. Судово-медична криміналістика : підручник. Харків, 2013. 639 с.

of comparative research, as well as comparative legal, historical-comparative, system-structural, system-functional methods are applied. During the study, we used an interdisciplinary approach.

Analysis of Essential Researches and Publications

In legal literature, the problems of the history of forensic science and forensic examination in Ukraine were covered by: A. Ishchenko ⁵, N. Klymenko and V. Fedchyshyna ⁶, V. Olkhovskiy and V. Shepitko ⁷, S. Tiulieniev and co-authors ⁸, V. Fedchyshyna, V. Iusupov ⁹ et al. A number of

publications were devoted to history of forensic science, formation of forensic science institutions in Ukraine ¹⁰. In scientific sources, attention is paid to the peculiarities of the formation of forensic medical institutions in the twentieth century and the role of M. M. Bokarius is noted ¹¹.

Main Content Presentation

Mykola Mykolayovych Bokarius (Bokarius Jr.) is a well-known medical examiner and forensic scientist, PhD in Medicine, Professor, Head of the Department of Forensic Medicine of the Kharkiv Medical Institute (currently: *Department of Forensic Medicine*,

- 5 Іщенко А. В. Проблеми розвитку наукових досліджень у галузі судової експертизи : монографія. Київ, 1995. 149 с.
- 6 Клименко Н., Федчишина В. З історії розвитку і становлення Київського науково-дослідного інституту судових експертиз Міністерства юстиції України. *Вісн.* 2013. № 14. С. 8—12. URL: http://nbuv.gov.ua/UJRN/viche_2013_14_5 (date accessed: 20.05.2025) ; Федчишина В. В. Літопис становлення і розвитку судової експертизи в Україні: історія створення Київського кабінету науково-судової експертизи. *Інвестиції: практика та досвід.* 2014. № 5. С. 107—109. URL: http://nbuv.gov.ua/UJRN/ipd_2014_5_25 (date accessed: 20.05.2025).
- 7 Ольховський В. О., Шепітько В. Ю. Професор М. М. Бокаріус: судовий медик та криміналіст. *Впровадження сучасних наукових досягнень в судову експертизу* : мат-ли Всеукр. наук.-практ. конф. з міжнар. участю, присвяч. 140-річ. з дня народж. проф. М. С. Бокаріуса та 110-річ. з дня народж. проф. М. М. Бокаріуса (Бокаріусовські читання; Харків, 10—11.09.2009). Харків, 2009. С. 34—36 ; Історія криміналістики / Велика українська юридична енциклопедія : у 20 т. Т. 20 : Криміналістика, судова експертиза, юридична психологія / редкол.: В. Ю. Шепітько (голова) та ін. 2018. С. 344—347 ; Історія судово-експертних установ в Україні / Там само. С. 347—348.
- 8 Тюленев С. А., Спіцина Г. О., Сімакова-Єфремян Е. Б., Хоша В. В. Королі та королеви судової експертизи: 100-річчя Національного наукового центру “Інститут судових експертиз ім. Засл. проф. М. С. Бокаріуса” : монографія. Харків, 2023. 240 с. URL: https://drive.google.com/file/d/1H_UhLVru6sQhUTNEB0Qcuu1PixHrgsMU/view (date accessed: 20.05.2025).
- 9 Юсупов В. Історія формування доктрини криміналістики в Україні. *Право України.* 2021. № 8. С. 44—64. DOI: 10.33498/louu-2021-08-044 (date accessed: 20.05.2025) ; Його ж. Криміналістика в Україні у XX — на початку XXI ст. (історико-теоретичне дослідження) : автореф. дис. ... д-ра юрид. наук. Київ, 2018. 42 с. URL: <https://elar.navs.edu.ua/items/6b356060-5726-450f-ae35-f7118a1e3d10> (date accessed: 20.05.2025).
- 10 Шевчук В. М., Журавель В. А., Шепітько В. Ю. та ін. Криміналістика : підручник / за ред. В. М. Шевчука. Харків, 2024. С. 49—61.
- 11 Юсупов В. В. Розвиток українських судово-медичних закладів у першій половині XX століття. *Науковий вісник Національної академії внутрішніх справ.* 2017. № 3 (104). С. 301—317. URL: <https://surl.it/axkhvm> (date accessed: 20.05.2025).

Medical Law named after prof. M. S. Bokarius of Kharkiv National Medical University), Head of the Department of Criminalistics and Forensic Medicine of the Kharkiv Law Institute (currently: *Department of Forensic Medicine, Medical law named after prof. M. S. Bokarius of Yaroslav Mudryi National Law University*), Director of Kharkiv Institute of Forensic Examination (currently: *National Scientific Center "Hon. Prof. M. S. Bokarius Forensic Science Institute"*)¹².

M. M. Bokarius was born in the family of an outstanding forensic physician and forensic scientist M. S. Bokarius¹³, who significantly influenced the choice of future

profession by his son: his father proved that a person is someone only when he has a goal that becomes the meaning of life¹⁴. Therefore, forensic medicine and forensic science became the meaning of Mykola Mykolayovych life. He was a creative person, he was fond of not only science and medical practice; it is also known about his passion for philately.

M. M. Bokarius received a medical education: after graduating with honors from the gymnasium (1917), he entered the medical faculty of the Imperial Kharkiv University, which he graduated (1924) as the Kharkiv Institute of Public

- 12 Information about M. M. Bokarius is covered in special sources, for example: Кафедра криміналістики: історія становлення та розвитку. До 80-річчя заснування : монографія / за ред. В. Ю. Шепітька. Харків, 2020. С. 34—36, 87—88; Лісовий В. М., Тацій В. Я., Сташис В. В. та ін. Дві Харківські наукові школи в життєвій долі професорів Бокаріусів. *Впровадження сучасних наукових досягнень ...* . С. 5—7; Бокариус Николай Николаевич / *Енциклопедия криминалистики в лицах* ; под. ред. В. Ю. Шепітько. Харьков, 2014. С. 41—44 ; Бокариус Микола Миколайович / *Велика українська юридична енциклопедія ...* . Т. 20 С. 53—55 ; Шепітько В., Шепітько М. Кримінальне право, криміналістика та судові науки : енциклопедія. Харків, 2021. С. 68—70.
- 13 Е.г.: Кафедра криміналістики С. 84—87 ; Ольховський В. О., Губін М. В., Сокол В. К., Коновал Н. С., Наріжна А. В. Педагогічна спадщина Заслуженого професора М. С. Бокаріуса. *Актуальні питання лінгвістики, професійної лінгводидактики, психології і педагогіки вищої школи* : зб. ст. IV Міжнар. наук.-практ. конф. (Полтава, 07—08.11.2019). Полтава, 2019. С. 304—308. URI: <https://surl.li/qmofde> (date accessed: 10.05.2025) ; Шепітько В. Ю. Вчений судовий медик та криміналіст Заслужений професор Микола Сергійович Бокаріус. *Впровадження сучасних наукових досягнень ...* . С. 33—34 ; Лесовой В. Н., Ольховский В. А., Бондаренко В. В. Значение работ заслуженного профессора Н. С. Бокариуса в контексте развития отечественной судебной медицины начала XX века. *Теорія та практика судової експертизи і криміналістики*. 2009. Вип. 9. С. 574—584 ; Лісовий В. М., Ольховський В. О., Кравченко Ю. М., М'ясоєдов В. В. Слово про вчителя: до 150-річчя з дня народження Заслуженого професора М. С. Бокаріуса. *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. 4—7. URL: <https://surl.lu/jzayni> (date accessed: 10.05.2025) ; Шепітько В. Ю. Криміналістика : підручник. Київ, 2010. С. 36 ; Шепітько В. Ю., Журавель В. А., Коновалова В. О. та ін. Криміналістика : підручник : у 2 т. Т. 1 / за ред. В. Ю. Шепітька. Харків, 2019. С. 30 ; Шепітько В., Шепітько М. Знач. твір. С. 70—74 ; Фесюнін В. М., Тяпкін А. С. "Архів Кримінології та судових наук" і наукова спадщина М. С. Бокаріуса (*оглядова стаття*). *Архів кримінології та судових наук*. 2020. № 2. С. 77—86. URL: http://nbuv.gov.ua/UJRN/acrfs_2020_2_16 (date accessed: 10.05.2025) et al.
- 14 Перцева Ж. И. Отец и сын : выступл. на конф. судеб. мед. / Репозитарій Харківського національного медичного університету : вебсайт. 2014-11-25. URI: <https://repo.knmu.edu.ua/items/f3668619-3747-4e48-b63f-bcb9201ffe9c> (date accessed: 20.05.2025).

Education ¹⁵ (currently: *Kharkiv National Medical University*).

Mykola Mykolayovych began his practical medical and pedagogical activities quite early — in his student years he helped his father in practical classes at the Department of Forensic Medicine of the Women's Medical Institute (1919–1920) ¹⁶.

M. M. Bokarius, as a highly organized person, “could combine forensic, forensic and forensic medical activities” ¹⁷. In particular, he headed the identification section (since 1924), then section of forensic biological research of the Research Institute of Forensic Examination in Kharkiv (currently: *National Scientific Center “Hon. Prof. M. S. Bokarius Forensic Science Institute”*) was an assistant director (since 1925) and later Director of this institution (1931–1941, 1944–1946) ¹⁸.

During 1930–1931, M. M. Bokarius worked as an assistant of the Depart-

ment of Forensic Medicine of the Kharkiv Medical Institute, its head (1931–1966), Vice-Rector for Academic Affairs (1952–1964), Academic Secretary of the Council of Professors (1933–1937); Head of the Department of Forensic Medicine of the Kharkiv Institute of Advanced Medical Studies ¹⁹. He received the academic title of Professor in 1931.

M. M. Bokarius' forensic work as a forensic scientist fell on difficult political and economic times: Holodomor in Ukraine (1932–1933) ²⁰, the Second World War (1939–1945), and the mass famine (1946–1947).

In 1933, famine and typhus reigned in Ukraine. The Kharkiv morgue and regional morgues of the region received 8,940 corpses at that time, which was 9 times higher than the figures of previous years ²¹. In addition, “despite the obvious artificial correction of the data of the

15 Ольховский В. А., Шепитько В. Ю. Бокариус Николай Николаевич / Конгресс криминалистов : вебсайт. 11.10.2012. URL: <http://crimcongress.com/portretnaya/bokarius-nikolaj-nikolaevich/> (date accessed: 20.05.2025).

16 Some sources indicate the earlier years of M. M. Bokarius practice — E.g.: Кафедра криміналістики С. 87–88 ; Отец и сын Бокариусы: к 145-летию со дня рождения Николая Сергеевича Бокариуса, отца и 115-летию со дня рождения Николая Николаевича, сына. Жизнь, отданная судебной медицине : презентац. / сост.: Л. В. Скрипченко, С. А. Кравченко, В. В. Вискова. Харьков, 2014. URL: <https://www.calameo.com/read/00289404554f35744ea74> (date accessed: 20.05.2025).

17 Бокариус Микола Миколайович — видатний URI: <https://dspace.nlu.edu.ua/jspui/handle/123456789/20359> (date accessed: 20.05.2025).

18 Бокариус Микола Миколайович / Велика українська С. 54.

19 Там само.

20 Only in 2019, the Security Service of Ukraine opened criminal proceedings against the perpetrators of the genocide and conducted a number of comprehensive forensic examinations, which found that the communist totalitarian regime in 1932–1933 in the Ukrainian SSR and the North Caucasus region killed 10 million 500 thousand Ukrainians, including 4 million children. See: Геноцид української нації 1932–1933. Міжнародно-правові акти, законодавство України, матеріали досудових розслідувань / упоряд.: М. Герасименко, В. Пилипчук, В. Шепитько та ін. Харків, 2024. 656 с. ; Судові експертизи: матеріали кримінального провадження щодо геноциду українців 1932–1933 рр. / упоряд.: В. Журавель, М. Герасименко, В. Пилипчук, В. Шепитько. Київ ; Харків, 2024. 582 с.

21 Кравченко Ю., Баранчук В. Роль професора М. М. Бокариуса у розвитку Харківської судово-медичної служби та діяльності Харківського обласного бюро судово-медичної експертизи. *Криміналістика і судова медицина в умовах сучасних викликів та глобальних загроз* :

death registration books of all regions of the Ukrainian SSR for 1932-1933 with signs of professional medical-statistical and demographic intervention, even with the deficit of a multiple majority of death registration records, the available unnaturally adjusted information is such that with sufficient probability it allows us to determine a direct causal relationship between the death of 85-90% of the Ukrainian population in 1932-1933. And the lack of food. In other words, the onset of the death of Ukrainians in 1932-1933. "Directly related to hunger, its complications, or the diseases that accompany it (hunger) and is in a direct causal relationship with food shortages"²².

In 1933, M. M. Bokarius was appointed city forensic medical inspector²³, he headed the forensic medical morgue of Kharkiv (1933–1937), the regional forensic medical expert (1943–1952), Principal forensic medical inspector of the People's Commissariat of Health of the Ukrainian SSR (1933–1934, 1936–1937)²⁴.

M. M. Bokarius was a member of the Extraordinary State Commission for the Detection and Investigation of the Atrocities of the German Fascist Invaders and Their Accomplices in the Occupied Territories

of Kharkiv and Donetsk Regions. In November 1943, the first public trial of fascist criminals was held in Kharkiv, which participants of referred to extracts from documents prepared by M. M. Bokarius²⁵. Conclusion of the commission of experts on destruction by the Nazis of prisoners of war of officers and soldiers of the Red Army appeared at the International Military Tribunal over the main German war criminals, Nuremberg Trials²⁶.

Important for the formation of Professor M. M. Bokarius as a forensic scientist was his more than 30 years of teaching at the Kharkiv Law Institute, which at various times was called the Kharkiv Institute of National Economy, All-Ukrainian Communist Institute of Soviet Construction and Law (currently: *Yaroslav Mudryi National Law University*). He started working in this institute earlier than in the medical one²⁷.

The scientist successfully combined all areas of his work with teaching at Kharkiv Law Institute, where he Held the positions of assistant (1925–1928), Docent (1928–1931), Professor (1931–1940, 1944–1948) and Head of the Department of Criminalistics and Forensic Medicine (1939–1941). M. M. Bokarius was also a member of the Academic Council for the

зб. мат-лів Міжнар. наук.-практ. конф., присвяч. 125-річ. від дня народж. проф. М. М. Бокаріуса та 85-річ. каф. криміналістики Нац. юрид. ун-ту ім. Ярослава Мудрого (Харків, 12.11.2024). Харків, 2024. С. 48. URI: <https://dspace.nlu.edu.ua/jspui/handle/123456789/20356> (date accessed: 20.05.2025).

22 Висновок комплексної судово-медичної експертизи / Геноцид української нації 1932–1933 С. 626.

23 Отец и сын Бокариусы URL: <https://www.calameo.com/books/00289404554f35744ea74> (date accessed: 20.05.2025).

24 Бокариус Николай Николаевич / Энциклопедия С. 42.

25 Перцева Ж. "Бути людиною серед людей" (до 125-річчя з дня народження професора М. М. Бокаріуса). *Криміналістика і судова медицина* С. 71–72. URI: <https://dspace.nlu.edu.ua/jspui/handle/123456789/20356> (date accessed: 20.05.2025).

26 Отец и сын Бокариусы URL: <https://www.calameo.com/books/00289404554f35744ea74> (date accessed: 20.05.2025).

27 Ольховський В. О., Шепітько В. Ю. Зазнач. твір.

Protection of PhD and Doctoral dissertations in Legal Sciences (1940–1950) ²⁸.

Mykola Mykolaiovych entered the history of the Department of Criminalistics of the Yaroslav Mudryi National Law University as its first Head ²⁹. He also taught forensic medicine and related disciplines in legal courses for police cadets, investigators and prosecutors (in particular, military one).

The range of scientific interests and the main subject of scientific researches of M. M. Bokarius: ballistics (traces of the use of firearms) ³⁰, methods of forensic and forensic research ³¹, thanatology, forensic traumatology, cadaver phenomena and prescription of death, mechanical asphyxiation, research of material evidence. The scientist made a significant contribution to the development of medical forensics – a complex field of knowledge that is used in legal activities for the successful detection and investigation of crimes ³². Medical criminalistics reflects a certain connection between forensic medicine and the theory of forensic evidence ³³.

M. M. Bokarius is the author of more than 200 research papers. The most important of them are: *On microdiagnostics at the entrance of each bullet lumen in the forensic examination of a corpse* (1928),

Practical instructions for the technique of scientific research of crimes (1931), *Police officer's companion during the examination of a corpse at the scene or its discovery* (1933), *New in methods of medical and forensic research* (1936), *Lecture on Forensic Medicine – Procedural Part* (1937), *Lecture on Forensic Medicine – Asphyxia* (1937), *Forensic Medical Examination and its Importance* (1940), *Information for practical classes on the study of injuries of individual organs* (1942), *History of Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations* (1947), *XXV years of work of the Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations* (1948), *To establishing caliber of bullets for gunshot injuries of the skull bones* (in co-authorship; 1956), *Role of Honored Professor Emeritus N. S. Bokarius in the development of forensic examination in Ukraine* (1956), *Work of Honored Professor N. S. Bokarius in the field of research of material evidence* (1956), *Life and work of Professor Emeritus Nikolai Serheevych Bokarius* (1966) et al.

Research paper: *On microdiagnostics of the entrance lumen of each bullet lumen during forensic medical examination of a corpse* is actually his dissertation. In literary sources, it was sometimes called a “diploma” or “internship” that qualification commission

28 Кафедра криміналістики ... ; Шепітько В., Шепітько М. Зазнач. твір. С. 69.

29 Там само.

30 Бокариус Н. Н. Огнестрельные повреждения : стеногр. 5-й лекц. проф. Н. Н. Бокариуса 04.10.1952 г. Ч. 1. Харьков, 1952. 28 с. ; Там же : ... 6-й лекц. ... 11.10.1952 г. Ч. 2. Харьков, 1952. 36 с.

31 *Thanatology* is a branch of medicine that studies the state of the human body in its final stage of the pathological process, the dynamics and mechanisms of dying, the immediate causes of death, clinical, biochemical and morphological manifestations of gradual cessation of life.

32 Shepitko V. Yu., Olkhovsky V. O., Shepitko M. V. The process of scientific knowledge integration in crime prevention and trends of medical criminalistics development in Ukraine in XIX – early XX century. *Wiadomości Lekarskie*. 2020. T. LXIII. Nr 1. Pp. 176–179. DOI: 10.36740/WLek202001133 (date accessed: 20.05.2025).

33 Шепітько В. Ю., Шепітько М. В. Проблеми медичної криміналістики у працях професора М. С. Бокариуса. *Актуальні питання судової експертизи ...* . С. 7–8. URL: <https://surl.lu/jzayni> (date accessed: 10.05.2025).

recognized as “the best of all the works protected up to that time and one that has important practical significance not only for forensic medicine, but also for pathological anatomy and surgery”³⁴. As a part-time assistant, M. M. Bokarius defended this internship at the Qualification Commission of the Kharkiv Medical Institute (1928)³⁵. This research paper contains an introduction, literary material, his own observations and research, conclusions and practical instructions. In particular, the subsection: *Own observations and research* has the following structural components: 1) establishment in the masses destroyed by tissue damage of scattered fibers of clothing through which a bullet penetrated the body; 2) accumulation in the mass of tissues destroyed by damage of torn hair particles, which are introduced into the initial parts of the bullet channel; 3) the nature of the destruction of hairs damaged by the bullet and dust particles with a violation of their integrity; 4) the phenomena of heating hairs and their burning, if the shot is made in a part of the skin where there is hair; 5) the deposition of powder soot particles on the surface of the hair located next to the entrance hole; 6) establishment of the introduction of soot particles into the mass of damaged tissues in the area of the skin lumen next to the entrance hole; 7) establishment of the accumulation of incompletely burned dust particles in the area of the skin adjacent to the edge of the wound lumen and in

the mass of tissues at the beginning of the bullet channel; 8) the nature of blood distribution in the area of tissues adjacent to the wound surface of the beginning of the bullet canal directly next to the lumen of the bullet entrance hole; 9) determination of the presence of a sedimentation ring along the edge of the skin lumen of the bullet entrance hole. The manuscript of this scientific work was transferred to the library of Yaroslav Mudryi National Law University in 2020.

Important is the essay by M. M. Bokarius about his father : *Life and Work of Professor Emeritus Nikolai Sergeevich Bokarius* (1966), which contains important biographical data about M. S. Bokarius, the stages of his life and photo illustrations. M. M. Bokarius notes that the activities of Mykola Serhiiovych were multidirectional: along with the scientific and pedagogical at the Department of Forensic Medicine, he carried out active practical, organizational and public work... It can be confidently stated that Mykola Serhiiovych not only loved teaching and successfully organized the educational process had a congenital predisposition to pedagogical activity.

M. M. Bokarius completed this essay in 1966, but never published it. Almost fifty years later (during 2013–2015), the journal *First Printed Forensic Scientist*” in the section: *Anthology of Criminalistics* finally published a reprint of this work in five issues (№ 6–10)³⁶.

34 Перцева Ж. Н. Отец и сын URL: <https://repo.knmu.edu.ua/items/f3668619-3747-4e48-b63f-bcb9201ffe9c> (date accessed: 20.05.2025).

35 Отец и сын Бокариусы URL: <https://www.calameo.com/books/00289404554f35744ea74> (date accessed: 20.05.2025).

36 Бокариус Н. Н. Жизнь и деятельность заслуженного профессора Николая Сергеевича Бокариуса. *Криміналіст першодрукований*. 2013. № 6. С. 163–171. URL: <https://surl.li/jnjyzt> (date accessed: 20.05.2025) ; Там же. № 7. С. 135–148. URL: <https://surl.li/dliewa> (date accessed: 20.05.2025) ; Там же. 2014. № 8. С. 138–149. URL: <https://surl.li/utphht> (date accessed: 20.05.2025) ; Там же. № 9. С. 134–153. URL: <https://surl.li/ujmyln> (date accessed: 20.05.2025) ; Там же. 2015. № 10. С. 89–108. URL: <https://surl.li/fwjxmn> (date accessed: 20.05.2025)

Scientific forensic school created by M. M. Bokarius ³⁷ has many outstanding students and followers: he has prepared 4 doctors and 26 PhDs. Among his students are well-known professors B. Zorin, M. Marchenko, V. Kononenko, M. Strilets, V. Tatarenko, V. Tsytkovskyi, V. Kolmakov, and PhDs in Medicine: K. Bokarius, M. Hubin, H. Holobrodskyi, N. Namestnikova, V. Moisieiev, L. Sotnikova, E. Tunina, et al. ³⁸

In particular, the senior lecturer of the Department of Criminalistics of the Kharkiv Law Institute E. Tunina taught forensic medicine and forensic psychiatry (late 1950s — 1970s), defended her dissertation: *Maceration. Until the establishment of the period of stay of the corpse in the water* for the degree of PhD in Medicine (1950) ³⁹.

Among the students of M. M. Bokarius are a well-known forensic scientist, Professor V. Kolmakov, who defended his PhD dissertation (*Methods of Investigation of Murder Cases with Dismemberment of Corpses*, 1941) and doctoral (*Forensic Methods of Investigation and Prevention of Crimes against Life*, 1962) theses in jurisprudence and worked for a long time at the Department of Criminalistics of the Kharkiv Law Institute: Senior lecturer, Docent (1946—1952) and Head of the Department of Criminalistics (1952—1957) ⁴⁰.

In fact, the students of M. M. Bokarius include O. Kolesnichenko (his nephew), who took refuge with his uncle after being seriously injured during the Second World War and, on his advice, entered the

Kharkiv Law Institute. O. Kolesnichenko is a well-known forensic scientist, Doctor of Law, Professor, Head of the Department of Criminalistics (1957—1981) ⁴¹.

Confirmation of development of the scientific school of M. M. Bokarius has theses defended over the past 30 years at the Department of Forensic Science of Yaroslav Mudryi National Law University: *Investigation of Murders in the Absence of a Corpse* (O. Bululukov, 1997), *Methods of Investigation of Murders with Dismemberment of a Corpse* (I. Borysenko, 1999), *Tactical Operations in the Investigation of Murders Committed by Organized Groups and Criminal Organizations* (S. Zdorovko, 2002), *Forensic Characteristics of Contract Murders* (M. Kostenko, 2003), *Methods of Investigation of Murders Concealed by Staging* (V. Semenohov, 2004), *Correlation Dependencies Between Elements of Forensic Characteristics and their Use in methods of Murder Investigation* (V. Synchuk, 2004), *Investigation of Serial Sexual-Sadistic murders (organizational and tactical principles)* (M. Kupianskyi, 2016), *Fundamentals of the methodology for investigating murders combined with the alienation of citizens' housing* (V. Sukhodubov, 2019) et al. ⁴²

The Bokarius school of thought is also evident in teaching. During the training of personnel, M. M. Bokarius “creatively combined new scientific forensic and forensic data with practical material and rich illustrations. He preserved and improved the principles and methods of independent work of students, provided them with modern educational, scientific and methodological literature, believing

37 Лісовий В. М., Тацій В. Я., Сташис В. В. та ін. Зазнач. твір.

38 Козаченко І. М. Батько й син Бокаріуси — видатні фундатори вітчизняної судової експертизи. *Теорія та практика судової експертизи і криміналістики*. 2016. Вип. 16. С. 427—435. URL: http://nbuv.gov.ua/UJRN/Tpsek_2016_16_59 (date accessed: 20.05.2025).

39 Кафедра криміналістики С. 176.

40 Колмаков Віктор Павлович / Велика українська С. 386—388.

41 Кафедра криміналістики С. 93—94.

42 Кафедра криміналістики

that independent work of students should be the main means of acquiring knowledge”⁴³.

Currently, at the Department of Criminalistics of the Yaroslav Mudryi National Law University, continuing the tradition started by the father of M. M. Bokarius (M. S. Bokarius at the Faculty of Law of the Imperial Kharkiv University, (later — at the Kharkiv Law Institute) taught a course of forensic medicine for lawyers, and later academic discipline: *Crime Investigation Technique (Criminalistics)*⁴⁴), in addition to the disciplines of forensic science, they teach a course of forensic medicine and psychiatry.

Significant contribution of M. M. Bokarius to the development of forensic science and forensic examination is reflected in the published works about professors of the Yaroslav Mudryi National Law University⁴⁵ and about highly qualified scientists of National Scientific Center “Hon. Prof. M. S. Bokarius Forensic Science Institute”⁴⁶.

Confirmation of a significant contribution to the creation of a separate forensic direction of forensic medicine by M. S. Bokarius and M. M. Bokarius is the

holding of Bokarius readings in Ukraine, where both forensic doctors and forensic lawyers present reports. The first *Bokarius Readings* took place in Ukraine in 2006 and later became traditional.

The merit of M. M. Bokarius is the organization and management of professional public non-governmental organizations that united forensic doctors and criminologists. It was Mykola Mykolaiovych who founded the Kharkiv Society of Forensic Physicians and Criminalists in 1948⁴⁷. He was a member of the board of the All-Union Scientific Society of Forensic Physicians, the Ukrainian Scientific Society of Forensic Physicians and Forensic Scientists, headed the Kharkiv Scientific Society of Forensic Physicians and Forensic Scientists, and was a member of the board of the Kharkiv Scientific Medical Society.

M. M. Bokarius paid considerable attention to publishing activities in the field of forensic medicine and criminalistics: in particular, he participated in the work of the editorial board of the scientific journal: *Forensic Medical Examination*”, founded in 1957⁴⁸.

43 Ольховський В. О., Губін М. В., Сокол В. К. Вшанування пам'яті професорів Бокаріусів — Миколи Сергійовича та Миколи Миколайовича. *Надбання сучасної епідеміології та біостатистики як запорука покращення громадського здоров'я в Україні* : мат-ли наук.-практ. конф. (з нагоди 120-річ. від дня народж. З. А. Гуревича, видат. соціал-гігієніста, зав. каф. соц. гігієни та орг-ції охорони здоров'я ХМУ). (Харків, 18.04.2019). Харків, 2019. С. 16—17. URL: <https://repo.knmu.edu.ua/handle/123456789/24197> (date accessed: 20.05.2025).

44 Кафедра криміналістики

45 Професори Національної юридичної академії України імені Ярослава Мудрого. Харків, 2004. 128 с. ; Там само / редкол.: В. Я. Тацій (голов. ред.) та ін. Харків, 2009. 144 с. ; Там само / редкол.: А. П. Гетьман (голова) та ін. 3-тє вид., змін. й допов. Харків, 2024. 236 с. ; Кафедра криміналістики et al.

46 Науковці вищої кваліфікації Національного наукового центру “Інститут судових експертиз ім. Засл. проф. М. С. Бокаріуса” : довідк. вид. / авт.-укл.: О. М. Ключев, Е. Б. Сімакова-Єфремян, В. В. Хоша. Харків, 2020. 144 с. URL: <https://drive.google.com/file/d/1L2AiWtCHWkzfqfTs82f6seaVaiS1O-1V/view> (date accessed: 20.05.2025).

47 Козаченко І. М. Зазнач. твір. С. 433. URL: <https://vkslaw.com.ua/index.php/journal/article/download/325/296/> (date accessed: 24.04.2025).

48 Бокаріус Микола Миколайович / Велика українська С. 54 ; Козаченко І. М. Зазнач. твір. С. 434. URL: http://nbuv.gov.ua/UJRN/Tpsek_2016_16_59 (date accessed: 20.05.2025).

For his contribution to the development of scientific and practical activities in forensic medicine and criminalistics, M. M. Bokarius was repeatedly awarded state, government and departmental awards: the Order of the Red Banner of Labor, the Order of Lenin, the medal: *For Valorous Work in the Great Patriotic War of 1941–1945*⁴⁹.

In 2005, a memorial plaque with the inscription was installed in honor of Professor Bokarius on the facade of the building housing the Department of Forensic Medicine and Medical Law named after Professor Bokarius of the Kharkiv National Medical University (14/16 Dmytrivska St., Kharkiv): *“In 1943-1952, the Kharkiv Regional Bureau of Forensic Medicine was headed by a prominent national scientist and teacher, Head of the Department of Forensic Medicine of the Kharkiv Medical Institute, Professor Mykola Bokarius”*. In 2009, the Museum of History of the Department of Forensic Medicine of Kharkiv National Medical University and the Kharkiv Regional Bureau of Forensic Medicine updated museum exposition and made a wax sculpture of Professor M. M. Bokarius⁵⁰. By the decision of the Presidium of the Kharkiv Medical Society of 28.05.2008 on the occasion of the 60th anniversary of the Kharkiv Society of medical Examiners and Forensic scientists, this association was awarded the honorary name of Professor Mykola Mykolaiovych Bokarius⁵¹.

Conclusions

Performed research made possible to trace the history of the formation of medical forensics and the formation of forensic activity in Kharkiv in the 1920s-1960s. The scientific, pedagogical and practical medical path of M. M. Bokarius is considered and his role in the development of forensics and forensic science is noted. Of particular importance are research papers by M. M. Bokarius on medical forensics and his contribution to the formation of a complex of forensic knowledge and theory of evidence, special knowledge that is still used to successfully investigate and solve criminal offenses.

It is worth remembering that the forensic work of M. M. Bokarius fell on difficult political and economic times: Holodomor in Ukraine (1932–1933), World War II (1939–1945), mass famine (1946–1947).

The scientist also paid much attention to organizational, public and pedagogical activities, held senior positions in educational institutions and forensic institutions, headed the Kharkiv Society of Forensic Physicians and Criminalists. Another merit of M. M. Bokarius, talented teacher and leader with outstanding organizational and managerial skills is the teaching of the discipline *Crime Investigation Technique (Criminalistics)* to lawyers.

Researches of M. M. Bokarius are related to the problems of forensic medicine,

49 Шепітько В., Шепітько М. Зазнач. твір. С. 70 ; Бокаріус Микола Миколайович / Велика українська ... et al.

50 Лозовий А. І., Лісовий В. М., М'ясоєдов В. В., Ольховський В. О., Дереча Л. М., Бондаренко В. В. Внесок Миколи Сергійовича і Миколи Миколайовича Бокаріусів у розвиток судової експертизи та криміналістики. *Теорія та практика судової експертизи і криміналістики*. 2014. Вип. 14. С. 430–441. URL: <https://khrife-journal.org/index.php/journal/issue/view/13/2014-1> (date accessed: 20.05.2025).

51 Ольховський В. О., Шепітько В. Ю. Зазнач. твір ; Козаченко І. М. Зазнач. твір. URL: http://nbuv.gov.ua/UJRN/Tpsek_2016_16_59 (date accessed: 20.05.2025) ; Шепітько В., Шепітько М. Зазнач. твір.

forensic science and criminalistics. He is the founder of a separate forensic direction in forensic medicine. His scientific interests include the problems of medical forensics: the study of physical evidence, the determination of methods for examining a corpse at the place of its discovery, the study of traces of the use of firearms, signs of mechanical asphyxiation, etc. The analysis shows that M. M. Bokarius laid the foundations for creation of a scientific forensic school that his followers are actively developing at present time.

Роль М. М. Бокаріуса в розвитку та становленні криміналістики і судової експертизи в Україні

Валерій Шенітько

Мета статті — визначити роль професора М. М. Бокаріуса в розвитку криміналістики і судової експертизи в Україні, а також популяризувати криміналістичні знання й можливості їх практичного застосування. Для досягнення мети застосовано методи пізнання та формальної логіки, історичний і біографічний методи, метод порівняльного дослідження, а також порівняльно-правовий, історико-порівняльний, системно-структурний, системно-функціональний методи. Під час дослідження ми послуговувалися міждисциплінарним підходом. Визначено роль професора М. М. Бокаріуса у становленні медичної криміналістики, судово-медичних досліджень і судово-експертної діяльності в Україні у XX ст. Проаналізовано його медичну, педагогічну, наукову й експертну діяльність упродовж 1920—1960 рр. Звернено увагу на виконання ним судово-медичної діяльності у складних політичних та економічних умовах, зокрема під час Голодомору в Україні 1932—1933 рр., Другої світової війни, масового голоду 1946—1947 рр. Розглянуто викладацьку діяльність М. М. Бокаріуса для студентів-юристів (судова

медичина, техніка розслідування злочинів (криміналістика), інші суміжні дисципліни). Він був організатором освітнього процесу й керівником вищих навчальних закладів і судово-експертних установ (обіймав посади завідувача кафедри, проректора з навчальної роботи, директора експертної установи). Розглянуто науковий спадок професора; проаналізовано його основні роботи; систематизовано тематику наукових досліджень (судово-медичні та криміналістичні методики: судово-медична травматологія та танатологія, трупні явища й давність настання смерті, огляд трупа на місці події, механічна асфіксія, сліди вогнепальної зброї та вогнепальні поранення, речові докази). Аргументовано роль М. М. Бокаріуса в застосуванні судово-медичних методів для розслідування злочинів, у становленні криміналістичного напряму в судовій медицині й формуванні медичної криміналістики. Обґрунтовано особливості виникнення та існування в наш час Бокаріусовської наукової та педагогічної криміналістичної школи.

Ключові слова: криміналістика; медична криміналістика; судова медицина; судова експертиза; історія криміналістики; історія медичної криміналістики; судово-експертна діяльність; судово-експертні установи; судово-медичні заклади.

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Declaration of Competing Interest

Author declares no conflict of interest.

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Typical Characteristics of Person who Commits Criminal Offenses against Justice

Vlada Husieva ^{*a}, Yevhen Sup ^{**b}

* Doctor of Law, Educational and Research Institute № 1 Kharkiv National University of Internal Affairs, Kharkiv, Ukraine, ORCID: <https://orcid.org/0000-0001-8614-1573>, e-mail: vaguseva2007@ukr.net

** PhD in Law, Doctoral Student of NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine, ORCID: <https://orcid.org/0009-0009-6912-2157>, e-mail: s.ye.7170@gmail.com

^a Writing – original draft, project administration, methodology.

^b Writing – original draft, resources.

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This article purpose is to clarify the meaning of the forensic characterization of criminal offenses committed by professional participants in the judicial process, to determine the substantive elements of its structure. The goal was achieved through the application of a number of general and special methods of scientific knowledge. Within the framework of the conducted research, a number of theoretical and applied provisions were formed that allow expanding the understanding of forensic characterization of criminal offenses against justice, in particular those committed by professional participants in the judicial process. It was determined that forensic characterization is a basic element in building a forensic investigation methodology, since it systematizes typical data on the mechanism of criminal activity, including information about the identity of the offender, the method of committing the act, trace information, circumstances of the place and time of the crime, as well as the characteristics of the victims. It was found that the identity of the offender in cases of criminal offenses against justice is of particular forensic significance, since offenses are most often committed by investigators, prosecutors, judges and other specialists with a high level of

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legal awareness, who have access to official information and special knowledge of the criminal process. Scientific approaches to structuring knowledge about identity of the offender within the framework of forensics were analyzed. Feasibility of a comprehensive analysis of the socio-demographic, moral and psychological characteristics of the offender was confirmed, the results of which make it possible to more accurately predict the behavior of the offender, substantiate investigative versions and plan tactical actions. It was substantiated that the motive and purpose of criminal behavior are of fundamental importance for establishing the subjective side of the composition of the crime, in particular for distinguishing intentional abuse of authority from official error. It has been established that criminal offenses against justice committed by officials are often latent in nature, hidden behind formal compliance with procedural norms and require special investigative tactics aimed at identifying hidden mechanisms of abuse. It has been generalized that effectiveness of the investigation of such criminal offenses directly depends on the level of awareness of the investigator with the peculiarities of the law enforcement activities of professional participants in the judicial process, which requires in-depth training and systematic analysis of offender's personality. It has been stated that a comprehensive forensic characterization of criminal offenses against justice, adapted to the professional specifics of the subjects of such crimes, is an important condition for creating an effective methodology for their investigation, as well as for developing mechanisms for preventing offenses within judicial system.

Keywords: justice; professional participant in proceedings; suspect; subject of crime; motive; purpose of criminal activity.

Research Problem Formulation

Guaranteeing the independence, objectivity and impartiality of justice is an important characteristic of the key priorities of a democratic, social and legal state. Representatives of the judiciary, together with other participants in the judicial process, ensure the implementation of the principles of legality, justice, the rule of law, etc. However, today's realities show that the provisions of the law are also violated by those subjects who, in accordance with the

provisions of Article 19 of the Constitution of Ukraine, are obliged to strictly comply with ¹. Given the high level of public danger of these acts, the legislator criminalized some of them. Today, the criminal law provides for liability for unlawful interference in the functioning of automated systems of judicial bodies; persecution of knowingly innocent persons; obstruction of the exercise of the right to defense; illegal detention or arrest; pressure to obtain testimony; disclosure of confidential information of the pre-trial investigation

1 Конституція України : Закон України від 28.06.1996 р. № 254к/96-ВР (зі змін. та допов.). URL <https://zakon.rada.gov.ua/laws/show/254k/96-vp#Text> (date accessed: 11.05.2025).

and security measures applied to a person; inaction to guarantee the safety of protected persons, etc.².

Despite seriousness of these criminal-ly punishable offenses, they are still insufficiently studied within the framework of science. In addition, we agree with scientists on this issue that when developing forensic methodology, it is important to take into account a number of key factors: crime specifics, typical features of the criminal's personality, retrospective aspect of the investigation, the influence of the circumstances of a specific situation on its course, as well as the current level of development of technical, tactical and methodological support for forensics. All these elements significantly affect the content and structure of the forensic characteristic, since it is it that accumulates data on nature of the crime, mechanism of its commission and the personality of the offender. However, despite the obvious interdependence between the criminal-legal and forensic characteristics, their identification is methodologically erroneous and scientifically unfounded. Each of them has its own purpose, scope and information structure³. This applies to the forensic characteristic in general, its individual components, the tactical features of conducting investigative (search) actions, tactical operations, the features of planning and organizing an investigation, the issues of interaction, etc. In order to ensure further thorough comprehensive research in the context of crimes committed by representatives of the judicial system and law enforcement agencies, investigating forensic characteristic and its mandatory

(typical) elements is not just a pressing task, but an extremely necessary direction of scientific research in modern legal science.

Article Purpose

Determine typical characteristics of a person; professional participant in the proceedings, who commits criminal offenses against justice.

Research Methods

Methodological apparatus was chosen taking into account the goal: general scientific and special methods of scientific cognition. Their combination not only ensured a deep theoretical understanding of the issue, but contributed to development of practically oriented conclusions and recommendations. First of all, the methods of analysis and synthesis were used in the work that made possible to thoroughly decompose the complex concept of forensic characterization into its structural elements, in particular, offender personality, the method of committing crime, mechanism of criminal activity, motives, purpose, etc. Thanks to the synthesis, it was possible to combine acquired knowledge into a coherent system that reflects the specifics of criminal offenses against justice. Induction and deduction played an important role in formation of theoretical conclusions. Based on the analysis of individual facts from case law, statistical data, materials of criminal proceedings and court decisions, the author formulates general provisions on the typical specifics

2 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: 11.05.2025).

3 Шепітько М. В. Проблеми формування методично-криміналістичних засобів у структурі протидії злочинам у сфері правосуддя. *Теорія та практика судової експертизи і криміналістики*. 2018. Вип. 18. С. 73–79. DOI: 10.32353/khrife.2018.08 (date accessed: 11.05.2025).

of persons who commit criminal offenses against justice by taking advantage of their official position. For ensuring systematic approach to the study of the criminal's personality, author used the systemic and structural method that made possible to consider the person not as an isolated factor, but as part of a holistic mechanism of criminal activity. This allowed for a deeper understanding of the relationship between the characteristics of offender's personality, the way the crime was committed, his or her motivation and reflection of actions in external environment.

Comparative legal method is used to study approaches to forensic analysis of the offender's identity within the legal systems of different countries. This made possible to identify common features and differences in the understanding of the importance of personal factor in criminalistics, in particular during the investigation of professional criminal offenses in the field of justice.

Significant role was played by the formal legal method, through which a legal analysis of the provisions of the Criminal Code of Ukraine, Criminal Procedural Code of Ukraine of Ukraine, resolutions of the Plenum of the Supreme Court of Ukraine, and other normative legal acts defining the identity of the offender as a subject of a criminal offense was carried out. This approach made it possible to determine the legislative limits of responsibility and procedural status of offenders within justice system.

In order to build the logical structure of theoretical justification, a logical and legal method was used, which made possible to build consistent, logically predetermined considerations regarding the need to include in forensic characterization not only the offender person.

All these methods were applied in close interrelation, complementing each other

and ensuring a high level of scientific reliability of the results obtained. Thanks to their integration, it was possible to achieve a comprehensive interdisciplinary approach to the study of the offender's identity as a key element of forensic characterization of criminal offenses against justice. The result of this approach was both theoretically grounded conclusions and practical recommendations for improving methods for investigating crimes of this category.

Analysis of Essential Researches and Publications

The problem of bringing persons to criminal responsibility for committing criminal offenses against justice has been comprehensively covered in the works of such researchers as N. Alieksieieva, M. Bazhanov, H. Bershov, V. Borysov, V. Burdin, A. Vorontsov, S. Didyk, V. Zatolochnyi, S. Knyzhenko, V. Kuznetsov, M. Syiploki, A. Martirosian, L. Paliukh, V. Tiutiuhin with co-authors, M. Shepitko, O. Shnytko, et al. Research papers by these authors form a fairly clear idea of the criminal law nature of offenses that encroach on the sphere of justice, including those committed by professional participants in the proceedings.

At the same time, despite in-depth legal handling of this block of crimes, modern forensic doctrine demonstrates fragmentation in the context of developing methods for investigating criminal offenses against justice. This is especially true of crimes committed by representatives of the legal professions: judges, prosecutors, investigators, lawyers, etc. Only a few researches touch on this topic within the framework of forensic analysis.

One of the few who thoroughly studied this issue is S. Knyzhenko. In her research

papers, she pays attention to such important aspects as the forensic classification of crimes against justice, the peculiarities of the structure of the methods for their investigation, as well as the practical nuances of pre-trial investigation in the proceedings of this category⁴.

M. Shepitko made a significant contribution to understanding the problem. He emphasizes that only a small part of crimes committed by persons professionally connected with the judiciary reaches the stage of pre-trial investigation and trial. The reasons for this are the high level of legal awareness of such persons, their professional status, and existence of special guarantees and legal protection mechanisms that complicate detection and proof of such offenses. This position only confirms that this topic is not only complex, but extremely relevant for forensic science, which should develop practically oriented solutions for such situations⁵.

Offender's identity is an interdisciplinary category, and therefore its various aspects are constantly the subject of re-

search in the sciences of the criminal law cycle, psychology, etc. Leading stages in the formation of the concept of the criminal's personality were the research papers by outstanding scientists who laid the foundation for its modern understanding. Among the founders of this theory are the Italian physician and psychiatrist C. Lombroso, the Austrian professor H. Gross and the French researcher A. Bertillon.

Ukrainian scholars have also made a significant contribution to the development of this concept. For example, best practices of physician and forensic scientist M. Bokarius are significant, in particular his research paper: *Reference book for criminal investigation officers and police officers in drawing up a verbal portrait* (1924). In modern Ukrainian science, the issues of identification of a person and his or her forensic characteristics are actively studied by such scholars as V. Basai, V. Bakhin, V. Honcharenko, V. Zhuravel, A. Ishchenko, N. Klimenko, O. Kirichenko, V. Kuzmichov, V. Nor, M. Salteviskyi, V. Shepitko, et al. Their best practices play a key role in

- 4 Книженко С. О. Криміналістична класифікація злочинів проти правосуддя. *Право і безпека*. 2013. № 1 (48). С. 113–118. URL: http://nbuv.gov.ua/UJRN/Pib_2013_1_26 (date accessed: 03.05.2025) ; Його ж. Особливості розслідування злочинів проти правосуддя, що вчиняються шляхом порушення порядку відбування покарання або попереднього ув'язнення. *Форум права*. 2016. № 3. С. 121–125. URL: http://nbuv.gov.ua/UJRN/FP_index.htm_2016_3_24 (date accessed: 03.05.2025) ; Його ж. Розслідування злочинів, що вчиняються службовими особами правоохоронних органів шляхом порушення порядку здійснення або забезпечення правосуддя. *Науковий вісник Міжнародного гуманітарного університету. Сер.: Юриспруденція*. 2017. № 30. Т. 2. С. 94–97. URL: [http://nbuv.gov.ua/UJRN/Nvmgu_jur_2017_30\(2\)_26](http://nbuv.gov.ua/UJRN/Nvmgu_jur_2017_30(2)_26) (date accessed: 03.05.2025) ; Його ж. Поняття та структурні елементи криміналістичної характеристики злочинів проти правосуддя. *Судова та слідча практика в Україні*. 2018. № 6. С. 111–115. URL: http://nbuv.gov.ua/UJRN/jipu_2018_6_21 (date accessed: 03.05.2025).
- 5 Шепітько М. В. Проблеми формування DOI: 10.32353/khrife.2018.08 (date accessed: 03.05.2025) ; Його ж. Теоретико-методологічні засади формування системи протидії злочинам у сфері правосуддя : автореф. дис. ... д-ра юрид. наук. Харків, 2018. 42 с. URL: <https://uacademic.info/ua/document/0518U000802> (date accessed: 03.05.2025) ; Його ж. Проблеми виявлення та розслідування злочинів проти правосуддя, що вчиняються професійними учасниками судочинства (провадження). *Теорія та практика судової експертизи і криміналістики*. 2019. № 19. С. 55. DOI: 10.32353/khrife.1.2019.04 (date accessed: 03.05.2025).

improving forensic techniques and practice of criminal investigation, taking into account the offender characteristics.

Recently, S. Denysov ⁶, K. Kaliuha ⁷, O. Luzhetska ⁸, D. Ptushkin ⁹, S. Stetsenko ¹⁰ and others have thoroughly approached the study of such an element as identity of the criminal (suspect). At the same time, peculiarities of forensic characteristics of a person who, being a professional participant in justice, commits criminal offenses against justice have not yet been studied in the theory of legal science.

Main Content Presentation

The basis of any forensic methods is appropriate information basis, represented by

a system of generalized data on the main components of the mechanism of criminal illegal activity. All these typical generalized information in the theory of forensic doctrine is represented by forensic characteristics. Usually, scientists note that this component of the forensic methodology is the basis for the formation of other structural elements of individual forensic methods of investigating crimes or entire groups of criminal offenses (depending on the level of generalization of the methodology) ¹¹.

One of the main elements of the forensic characteristics of various types of criminal offenses and their groups is offender's identity ¹². This element is characteristic of all criminal offenses of the group under research.

- 6 Денисов С. Ф. Особа злочинця у кримінологічній теорії України. *Вісник кримінологічної асоціації України*. 2020. № 1 (22). С. 155—156. URL: <https://dspace.univd.edu.ua/server/api/core/bitstreams/6a60c927-1e87-4bed-b0f6-4c4704e2c7c5/content> (date accessed: 09.05.2025).
- 7 Калюга К. Історія походження криміналістичного поняття особи злочинця. *Підприємництво, господарство і право*. 2016. № 12. С. 249—253. URL: http://nbuv.gov.ua/UJRN/Pgip_2016_12_47 (date accessed: 09.05.2025) ; Її ж. Особа злочинця як об'єкт криміналістичного дослідження: сучасний стан та перспективи розвитку : автореф. дис. ... д-ра юрид. наук. Дніпро, 2021. 34 с. URL: https://dduvs.edu.ua/wp-content/uploads/files/Structure/science/rada/new_d0872702/40_1/a.pdf (date accessed: 09.05.2025).
- 8 Лужецька О. Р. Особа злочинця як елемент криміналістичної характеристики вимагання, пов'язаного із застосуванням насильства над потерпілим. *Науковий вісник Національного університету ДПС України (економіка, право)*. 2013. № 4 (63). С. 196—201. URL: http://nbuv.gov.ua/UJRN/Nvnudpsu_2013_4_31 (date accessed: 01.05.2025).
- 9 Птушкін Д. А. Криміналістична характеристика особи, яка вчиняє шахрайства щодо об'єктів нерухомого майна громадян. *Науковий вісник Дніпропетровського державного університету внутрішніх справ*. 2018. № 1 (90). С. 203—208. URL: <http://er.dduvs.edu.ua/handle/123456789/2624> (date accessed: 09.05.2025).
- 10 Стеценко С. В. Криміналістична характеристика особи злочинця, що вчинила кримінальне правопорушення, передбачене статтею 206-2 Кримінального кодексу України. *Право і безпека*. 2024. № 2 (93). С. 96—105. DOI: 10.32631/pb.2024.2.09 (date accessed: 09.05.2025).
- 11 Щур Б. В. Теоретичні основи формування та застосування криміналістичних методик : дис. ... д-ра юрид. наук. Харків, 2011. 407 с. URL: <https://uacademic.info/ua/document/0511U000327> (date accessed: 01.05.2025) ; Колесниченко А. Н., Коновалова В. Е. Криминалистическая характеристика преступлений : учеб. пособ. Харьков, 1985. С. 20.
- 12 Бахин В. П. Криминалистика. Проблемы и мнения (1962—2002) : монография. Киев, 2002. 268 с. URL: <https://coollib.in/b/676021-v-p-bahin-kriminalistika-problemyi-i-mneniya-1962-2002/read> (date accessed: 12.05.2025) ; Салтевський М. В. Криміналістика (у сучасному викладі) : підручник. Київ, 2005. 585 с. URL: <https://surli.cc/xyracd> (date accessed: 12.05.2025) ; Чернявський С. С. Криміналістична характеристика злочинів:

While studying the phenomenon of criminal personality, forensic science inevitably draws on the work of many related sciences. In particular, this concept is considered from perspectives of philosophy, sociology, pedagogy, biology, genetics, psychology, psychiatry, legal psychology, psychopathology, criminal and criminal procedural law, criminology, and penitentiary science, taking into account experience of foreign legal systems.

In forensic science, criminal person is traditionally considered from several angles, in particular: as a component of the forensic characteristics of the crime; as a subject or object of tactical interaction during the pre-trial investigation; as a carrier of a certain model of behavior during commission of a crime, combining internal, mental processes and external, physical actions. Such a comprehensive study of the offender's identity is designed to contribute to the development of practically oriented recommendations for the effective planning and implementation of investigative (search) actions in procedure of disclosing and investigating criminal offenses¹³.

Forensic science is primarily interested in information that has practical value in establishing the identity of a criminal. This is information that helps to determine possible ways to find him, choose the most effective methods of investigation, predict his behavior in various investigative situations, establish a connection between the personal characteristics of

the criminal, the method of committing a criminal offense and the mechanisms of illegal enrichment. This approach makes possible to identify patterns in which categories of persons most often commit offenses of a certain type. The above characteristics of the behavior of typical subjects of crime, according to V. Kornienko, significantly help law enforcement officers: they narrow the circle of persons who may be suspects, contribute to determining the motive and purpose of committing the offense, forming investigative versions and choosing appropriate tactical actions. When the identity of the suspect is established, this data makes it possible to choose the optimal model of interaction with this person during further investigation¹⁴.

The basic signs of a person who commits criminal offenses of the group we are studying are: physicality (i.e., these crimes and criminal offenses can be committed only by individuals), reaching the age of criminal responsibility (mostly 18 years), and compliance of the person's condition with requirements set by medical and legal criteria of sanity. In addition to the general signs subject characteristic of a criminal offense, we cannot ignore the special features that characterize the person who, occupying a certain place in the system of legal relations, commits criminal offenses against justice.

Inquirers, investigators, employees of operational units, prosecutors, judges and other officials may be involved in the

порівняльний аналіз наукових концепцій. *Науковий вісник Київського національного університету внутрішніх справ*. 2010. № 1. С. 137–146. URL: <https://elar.navs.edu.ua/server/api/core/bitstreams/ea88d1af-dcc3-4609-b420-561991b458c2/content> (date accessed: 12.05.2025).

13 Калюга К. В. Особа злочинця ... URL: https://dduvs.edu.ua/wp-content/uploads/files/Structure/science/rada/new_d0872702/40_1/a.pdf (date accessed: 09.05.2025).

14 Корнієнко В. В. Криміналістична характеристика особи злочинця та злочинних груп у сфері банківської діяльності. *Право і безпека*. 2015. № 2 (57). С. 98–102. URL: http://nbuv.gov.ua/UJRN/Pib_2015_2_21 (date accessed: 09.05.2025).

commission of criminal offenses against justice of this type. These persons, due to their professional specialization, have a high level of legal awareness and professional training in the field of criminal procedural activity.

In addition to operational significance during the pre-trial investigation, information about the accused plays a key role at the trial stage. Thus, according to paragraph 3 of Resolution № 7 of the Plenum of the Supreme Court of Ukraine dated October 24, 2003, when passing a sentence, court is obliged to take into account a number of circumstances related to the defendant's personality: age, physical and mental condition, behavior before the crime, the presence of previous convictions, social and household characteristics, marital status, financial status, etc.¹⁵

At the same time, scientists think differently about scientific understanding of forensically significant features of a person who has committed a criminal offense. According to V. Shepitko, assessment of the offender's personality as a component of forensic characterization should contain comprehensive information, in particular demographic characteristics, moral traits and psychological characteristics of the individual. This allows a deeper understanding of nature of his illegal behavior¹⁶.

M. Saltevs'kyi defines personality of a criminal as a socio-biological system, the set of properties of which, in particular physical, biological and social, leaves

traces in the external environment. These properties materialized as a result of criminal activity can be detected, recorded and applied in the process of forensic research to establish circumstances of the offense and the person who committed it¹⁷.

O. Luzhetska's research emphasizes that offender's personality is not just a carrier of certain characteristics, but a typical representative of a certain behavioral model that is important for forensic analysis. It is considered as an integrative object of the study, containing biological, psychological, social signs that can affect formation of the crime mechanism, specifics of its reflection and interaction with the environment¹⁸.

D. Ptushkin emphasizes that collection of information about the offender is of practical importance for the organization of the pre-trial investigation. These data make possible to more effectively choose the direction of criminal proceedings, make tactical and procedural decisions and substantiate the need for specific investigative (search) actions¹⁹.

Yu. Chaplynska proposes to systematize information about the person who committed the crime as follows:

- 1) socio-demographic characteristics: age, gender, level of education, citizenship, marital status, place of residence, professional activity, etc.;
- 2) moral qualities: a system of beliefs, life values, attitude to social norms, orderliness, tendency to deviant behavior;

15 Про практику призначення судами кримінального покарання : пост. Пленуму Верховн. Суду України від 24.10.2003 р. № 7 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/v0007700-03/conv#o4> (date accessed: 09.05.2025).

16 Шепітько В. Ю. Криміналістика : курс лекцій. Харків, 2005. С. 258.

17 Салтевський М. В. Навчально-довідковий посібник з криміналістики. Київ, 1994. С. 112.

18 Лужецька О. Р. Зазнач. твір. URL: http://nbuv.gov.ua/UJRN/Nvnudpsu_2013_4_31 (date accessed: 09.05.2025).

19 Птушкін Д. А. Зазнач. твір. URL: <http://er.dduvs.edu.ua/handle/123456789/2624> (date accessed: 09.05.2025).

- 3) psychological properties: peculiarities of temperament, level of emotional stability, ability to self-control, aggressiveness, motivational factors of behavior ²⁰.

Outlined groups of signs are leading in terms of not only determining the vectors for finding ways to establish the identity of the criminal, but clarifying tactical techniques that can be used during interaction with criminals, predicting their behavior, forms of counteraction that they can resort to, etc. Therefore, even in those criminal offenses where identity of the criminal is known for certain based on the mechanism of criminal illegal activity, it is important to analyze not only his individual, socio-demographic and psychological characteristics, but to determine the purpose and motives of behavior, for example, tendency to abuse procedural rights.

Content analysis of criminal proceedings, data of the Unified report on persons who committed criminal offenses, as well as materials of judicial practice made it possible to generalize that before the commission of criminal offenses against justice, among persons professionally related to activities of judiciary, investigation and pre-trial investigation, most often those persons who have access to official information, are endowed with procedural powers, as well as a high level of legal awareness are involved. Accordingly, the most typical subjects of criminal offenses in this category are:

- 1) representatives of law enforcement agencies. Most often, illegal actions against justice are resorted to by investigators, interrogators and operatives. They are charged with unlawful detention of persons, fabrication

of evidence, coercion to testify, concealment of information, as well as violation of the right to defense. Some abuse their official position in order to achieve career or corrupt interests;

- 2) prosecutors. They can be involved in abuses related to unilateral prosecution, manipulation of evidence, violation of the principle of objectivity, disclosure of pre-trial investigation data, as well as inaction in cases of obvious violations of the rights of suspects or accused;
- 3) judges. They are a separate category of officials who, because of their status, should guarantee judiciary independence. At the same time, practice indicates cases of deliberately unjust decisions, decision-making under the influence of unauthorized persons, violation of the principle of impartiality, as well as participation in corruption schemes during consideration of cases;
- 4) lawyers: although lawyer is a party to the defense, sometimes he can become the subject of an offense against justice if he abuses procedural rights, participates in fictitious agreements, deliberately delays the process or discloses confidential information received from the client or during familiarization with the content of proceedings;
- 5) other officials of justice system. These include judicial clerks, secretaries, assistant judges, as well as employees of administrative bodies. They can violate the procedure for accessing automated systems, falsify documents or transfer information to third parties.

20 Чаплинська Ю. А. Особа злочинця як елемент криміналістичної характеристики злочинів. *Актуальні проблеми вітчизняної юриспруденції*. 2019. № 6. С. 181–184. DOI: 10.15421/3919122 (date accessed: 09.05.2025).

Typical characteristics of subjects of offenses against justice are a high level of legal literacy, the presence of powers to access official or confidential information, as well as abuse of procedural opportunities to achieve benefits, personal or in the interests of third parties. Often, such persons commit unlawful acts, relying on professional immunity, complexity of detecting an offense and the ability to avoid responsibility due to official relations. Thereby, criminal offenses against justice committed by officials of the judicial system have an increased public resonance and pose a serious threat to the principle of the rule of law, fair justice and citizens trust in State institutions.

Thus, the persons who most often commit criminal offenses against justice usually belong to the category of professional participants in the judicial procedure: investigators, inquirers, prosecutors, judges, employees of operational units and other officials who have deep legal knowledge and experience in the field of criminal process. These subjects are characterized by a number of socio-demographic, moral and psychological features that to some extent contribute to the formation of criminal behavior in conditions of reduced control and existence of systemic gaps in countering abuses in the field of justice.

In the socio-demographic aspect, these are mainly persons aged 30 to 55 years, with higher legal education, high level of qualification, practical experience in law enforcement or the judicial system. They usually hold responsible positions, have a certain weight in the professional environment, a stable financial condition, and also belong to the middle or higher social stratum.

Moral qualities of these individuals can be contradictory. On the one hand,

they possess the traits inherent in responsible professionals: ambition, dedication, desire for career growth, and discipline. On the other hand, under influence of professional burnout, prolonged functioning under pressure, excessive formalization of work and constant contact with offenders, some of them develop moral indifference, cynicism, and a tendency to justify illegal means to achieve professional goals. Loyalty to the system is often manifested when a person is more focused on interests of the agency or senior management than on principles of legality and justice.

Psychologically, these individuals demonstrate a high level of self-control, ability to analyze the situation, make quick decisions and act in conditions of conflict or risk. At the same time, there is a tolerance for violations, a tendency to abuse official powers, manipulation of procedural norms, pragmatism in approaches to resolving justice issues. Significant number of such persons demonstrate excessive hierarchical dependence, willingness to obey the interests of their superiors, even if it is contrary to the law. Sometimes there is an attitude in behavior that the main goal is not to respect the rights of the person or the truth in the case, but to ensure a certain result, for example, maintaining prosecution in court or achieving the necessary statistical indicators.

Thus, socio-demographic, moral and psychological characteristics of persons involved in the commission of criminal offenses against justice reflect a complex contradiction between the professional role of law enforcement officers and real practices that can contain a conscious violation of legal and ethical norms. This requires a special approach to the investigation of such offenses, given the high level of preparedness of criminals, their use of various forms of counteraction, the

implementation of the position of protection and potential support for offenders at institutional level.

In the context of investigated criminal offenses, it should be noted that the motive and purpose of his illegal behavior are inseparable from the person of the suspect (offender). These characteristics make possible to explain the direction of his actions and determine the reasons for committing a criminal offense, to provide proof of the signs of subjective side of the criminal offense. In view of this, we come to the logical conclusion that the structure of the forensic characteristics of the criminal offenses of this group should correspond to the proposed classification.

Conclusions

Performed research makes possible to make a number of important generalizations about the forensic characteristics of criminal offenses against justice, especially those committed by professional participants in the proceedings.

Firstly, the author establishes that forensic characterization of a crime is a key element in the construction of a forensic investigation methods, since it accumulates typical data on the mechanism of a criminal offense including information about the identity of the offender, the manner of committing the act, the trace pattern, the circumstances of the place and time of the act, and the characteristics of the victim.

Secondly, it was found that offender's identity in the context of criminal offenses against justice is of particular importance as a source of information for the development of effective investigative tactics. Most often, such offenses are committed by investigators, prosecutors, judges, em-

ployees of operational units, that is, persons with a high level of legal awareness, access to official information and experience in law enforcement activities. Their behavior, motivation and psycho-emotional state can affect nature and mechanism of the offense.

Thirdly, the approaches of scientists to determining structure and content of the criminal's personality in criminalistics are analyzed. Expediency of a comprehensive analysis of socio-demographic characteristics, moral qualities and psychological properties was confirmed that allows investigators to more accurately predict the behavior of the offender, build the logic of investigation, formulate investigative versions and choose tactics.

Fourthly, it is argued that motivation and purpose of criminal behavior are essential for establishing the subjective side of the crime. Taking into account the motive contributes to an in-depth understanding of the reasons for committing a criminal offense and makes it possible to distinguish official error from intentional abuse.

Fifthly, it is established that criminal offenses against justice are often disguised, accompanied by formal compliance with the law, and their detection is complicated by professional training of the perpetrators, abuse of power and potential availability of support at the institutional level. This necessitates a highly skilled investigative approach based on in-depth knowledge of the mechanisms of criminal procedure.

Therefore, forensic characterization of offenses against justice should be thorough, comprehensive and adapted to the specifics of offenses committed within the framework of professional legal activities. Knowledge of the staff, professional and social characteristics of the subject

of a criminal offense makes it possible not only to develop an effective investigation method, but to formulate practical recommendations for prevention of such crimes.

**Типові характеристики
особи, яка вчиняє
кримінальні правопорушення
проти правосуддя**

**Влада Гусева,
Євген Суп**

Мета статті — з'ясувати значення криміналістичної характеристики кримінальних правопорушень, учинених професійними учасниками судочинства, визначити змістовні елементи її структури. Поставлену мету реалізовано завдяки застосуванню низки загальних і спеціальних методів наукового пізнання. У межах проведеного дослідження сформовано низку теоретичних і прикладних положень, які дають змогу розширити уявлення про криміналістичну характеристику кримінальних правопорушень проти правосуддя, зокрема тих, що вчиняються професійними учасниками судочинства. Визначено, що криміналістична характеристика є базовим елементом побудови криміналістичної методики розслідування, оскільки вона систематизує типові дані про механізм злочинної діяльності, включно з відомостями про особу правопорушника, спосіб учинення діяння, слідову інформацію, обстановку місця й часу вчинення злочину, а також з характеристиками потерпілих. Виявлено, що особа злочинця у справах щодо кримінальних правопорушень проти правосуддя має особливу криміналістичну значущість, адже правопорушення найчастіше вчиняються слідчими, прокурорами, суддями та іншими фахівцями з високим рівнем правової обізна-

ності, які мають доступ до службової інформації та спеціальні знання щодо кримінального процесу. Проаналізовано наукові підходи до структурування знань про особу правопорушника в межах криміналістики. Підтверджено доцільність комплексного аналізу соціально-демографічних, моральних та психологічних характеристик злочинця, результати якого дають змогу більш точно прогнозувати поведінку злочинця, обґрунтовувати слідчі версії й планувати тактичні дії. Обґрунтовано, що мотив і мета злочинної поведінки мають принципове значення для встановлення суб'єктивної сторони складу злочину, зокрема за відмежування умисного зловживання повноваженнями від службової помилки. Установлено, що кримінальні правопорушення проти правосуддя, учинені посадовими особами, часто мають латентний характер, приховуються за формальним дотриманням процесуальних норм і потребують особливої слідчої тактики, орієнтованої на виявлення прихованих механізмів зловживань. Узагальнено, що ефективність розслідування таких кримінальних правопорушень безпосередньо залежить від рівня обізнаності слідчого з особливостями правозастосовної діяльності професійних учасників судочинства, що потребує поглибленої підготовки та системного аналізу особи правопорушника. Констатовано, що комплексна криміналістична характеристика кримінальних правопорушень проти правосуддя, адаптована до професійної специфіки суб'єктів таких злочинів, є важливою умовою для створення ефективної методики їх розслідування, а також для розроблення механізмів запобігання правопорушенням у межах судової системи.

Ключові слова: правосуддя; професійний учасник судочинства; підозрюваний; суб'єкт злочину; мотив; мета злочинної діяльності.

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Participants

Authors 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

Authors declare no conflict of interest.

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Role of the Ministry of Justice of Ukraine in the formation of a system of forensic science support for justice (*Review Article*)

Nataliia Filipenko ^{*a}, Aleksandar Ivanović ^{**b}

^{*} Doctor of Law, Professor, Professor at the Law Department of National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine, ORCID: <https://orcid.org/0000-0001-9469-3650>, e-mail: n.filipenko@khai.edu

^{**} Doctor of Law (PhD), Professor, Director of Forensic Center Montenegro, Danilovgrad, Montenegro, ORCID: <https://orcid.org/0000-0002-8186-0883>, e-mail: ialeksandar@t-com.me

^a Writing – original draft, project administration, supervision.

^b Validation, formal analysis.

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Leading role of the Ministry of Justice of Ukraine in forensic science management is analyzed, with emphasis on the features of coordination, subordination, planning and information mechanisms, as well as ability to respond to pressing issues and challenges of the present time. It is determined that this activity has a scientific and practical orientation and depends on the departmental affiliation of forensic expertise institutions of Ukraine. A wide range of functional capabilities of the Ministry of Justice of Ukraine, which vary in form and content, is outlined, in particular, it is noted that expert support of justice is one of its main legislatively enshrined tasks. The purpose of the article is to examine the role of the Ministry of Justice of Ukraine as a central coordinating body in the formation of an effective system of forensic support of justice. The main challenges and prospects for improving forensic support of justice in the context of reforming the judicial system and ensuring compliance with international standards in this area are outlined. To achieve the set goal, a set of methods (logical analysis, comparative law, system, statistical analysis, content analysis, etc.) was used. The main areas of activity of the Ministry of Justice of Ukraine as a management and coordination body in the field of criminal activity of forensic institutions were identified, in particular: development and implementation of effective state

policy in the field of management of forensic activities; optimization of management methods of state forensic institutions and non-state expert organizations; increasing the requirements for judicial activity and its organization; increasing efficiency of activities of judicial institutions of Ukraine, etc.

Keywords: Ministry of Justice of Ukraine; forensic expert activity; justice; State policy; international experience; integration of expert structures; legislative regulation; interaction.

Research Problem Formulation

Rapid changes, covering all spheres of public life in Ukraine and the world, necessitate deep transformations in the functioning of state institutions (in particular, the criminal justice system). Ongoing judicial reform in Ukraine is a response to these challenges and is aimed at creating a transparent, effective and fair justice system. In this context, forensic examination (as integral part of the judicial system) is of particular importance. The increase in the number of requests for expert research actualizes the need to strengthen the institutional capacity of forensic institutions, since high-quality, independent and objective expertise is an important factor in ensuring justice.

In the context of Russian aggression against Ukraine, the issue of conducting professional and impartial expert research becomes particularly acute. The need for accurate and objective analysis, the urgency of which is growing day by day, covers such important areas as the study of war crimes, documentation of human rights violations and the collection of evidence for future trials. High-quality forensic examination is the main prerequisite for bringing the perpetrators to justice and ensuring justice, while at the same time it plays an

important role in restoring confidence in the legal system.

In addition, independent forensic examinations contribute to the formation of truthful information for international community, governments and non-governmental organizations, which makes it possible to develop effective mechanisms to support Ukraine and increase diplomatic pressure on the aggressor state. Objective expert research is also the basis for the development of strategies for the protection of civilians and critical infrastructure, which are daily and nightly victims of Russian terrorist attacks. Thus, introduction of modern methods of forensic examinations and the expansion of international cooperation in this area is a necessary step to increase the level of trust in the legal system of Ukraine and strengthen its ability to withstand the legal challenges of our time.

The Ministry of Justice of Ukraine, in accordance with the Regulation on the Ministry of Justice of Ukraine, approved by the Resolution of the Cabinet of Ministers of Ukraine № 228 ¹ dated on 02.07.2014 (hereinafter referred to as Regulation on the Ministry of Justice), acting as a coordinating body of executive power in the field of forensic expert activity, aims to consolidate the efforts of all entities involved in the justice process. Such coordination

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allows not only to optimize management decisions but also to effectively use the human resources of experts and the material and technical resources necessary to conduct high-level forensic examinations.

Ensuring proper functioning of forensic science institutions is critical for law enforcement practice, since qualitative examinations affect the adoption of sound procedural decisions. Ministry of Justice of Ukraine implements this function through strategic planning, introduction of modern methods of forensic research, raising standards of professional training of experts and improving mechanisms of information interaction between State and independent forensic science structures.

Such measures are aimed at meeting the needs of investigative bodies and courts

in conducting accurate, rapid and impartial forensic researches that meet international standards and ensure objectivity of judicial procedure. Introduction of innovative approaches in the field of forensic science contributes to the development of the legal system of Ukraine and strengthening its ability to ensure effective justice.

Analysis of Essential Researches and Publications

General aspects of management in the field of forensic activity were analyzed by both Ukrainian scientists (in particular: O. Agapova², L. Holovchenko³, V. Honcharenko⁴, I. Petrova and Ha. Spitsyna⁵, I. Pyrih⁶, M. Sehai⁷, E. Simakova-Yefremian⁸, N. Tkachenko⁹, N. Filipenko¹⁰,

- 2 Агапова О. В. Адміністративно-правове регулювання публічного адміністрування у сфері юстиції України в умовах європейської інтеграції : автореф. дис. ... д-ра юрид. наук. Запоріжжя, 2024. 38 с. URL: http://phd.znu.edu.ua/page/Doc/2024/agapova/Agapova_referat-1.pdf (date accessed: 03.05.2025).
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- 4 Експертизи у судовій практиці / за заг. ред. В. Г. Гончаренка. Київ, 2005. 386 с.
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- 6 Пиріг І. В. Теоретико-прикладні проблеми експертного забезпечення досудового розслідування : монографія. Дніпропетровськ, 2015. 432 с. URL: <https://surl.li/exvexy> (date accessed: 03.05.2025).
- 7 Сегай М. Я. Судова експертологія — наука про судово-експертну діяльність. *Вісник Академії правових наук України*. 2003. № 2 (33)—3 (34). С. 740—764. URL: <https://dspace.nlu.edu.ua/handle/123456789/694> (date accessed: 03.05.2025).
- 8 Сімакова-Єфремян Е. Б. Теоретико-правові та методологічні засади комплексних судово-експертних досліджень : дис. ... д-ра юрид. наук. Харків, 2017. 503 с.
- 9 Ткаченко Н. М. Особливості державного управління в сфері судово-експертної діяльності (на прикладі Міністерства юстиції України). *Теорія та практика судової експертизи і криміналістики*. 2019. № 20 (2). С. 121—138. DOI: [10.32353/khrife.2.2019.09](https://doi.org/10.32353/khrife.2.2019.09) (date accessed: 03.05.2025).
- 10 Філіпенко Н. Є. Координація кримінологічної діяльності судово-експертних установ України. *Міжнародний науковий журнал "Верховенство права"*. 2016. № 3. С. 236—241. URL: https://sd-vp.info/wp-content/uploads/2020/11/vp_2016_3-2.pdf (date accessed: 03.05.2025) ;
Її ж. Сутність та особливості координаційної діяльності Міністерства юстиції України в сфері експертного забезпечення правосуддя. *Там само*. 2017. № 1. С. 196—201. URL: https://sd-vp.info/wp-content/uploads/2021/09/vp_2017_1-6.pdf (date accessed: 03.05.2025) ;

V. Shepitko¹¹, M. Shcherbakovskyi¹² et al.) and well-known foreign researchers (for example: O. Cataraga and R. Petcovići¹³, S. D. Andrić and A. B. Ivanović¹⁴, et al.).

Their best practices contributed to formation of conceptual approaches to organization of forensic science activity in Ukraine and laid foundation for further improvement of management mechanisms.

However, the rapid transformation of social conditions in our country, caused by complex domestic political and security challenges, has significantly affected the dynamics of crime. Negative changes in the quantitative and qualitative indicators of offenses, as well as the reform of the main state institutions, including the judicial system, necessitate the modernization of management processes in the field of forensic expertise in providing justice. This, in turn, requires increasing the efficiency of forensic expertise institutions, expanding their analytical capabilities, strengthening interaction with justice bodies, and introducing innovative methods of expert research. In view of these changes, ensuring an adequate level of management of expert activities remains a priority task of the state. Creating an effective system of coordination between state and non-state ex-

pert structures, improving personnel training mechanisms, expanding information interaction, and integrating international experience are necessary steps to ensure a high level of forensic science support for justice in Ukraine.

Article Purpose

Study the role of the Ministry of Justice of Ukraine as a central coordinating body in the formation of an effective system of forensic science support of justice. Analyze the management mechanisms that ensure the quality of forensic activity, including regulation, coordination and integration of expert structures. Focus on legal aspects, organizational approaches and scientific and practical principles of forensic science functioning. Outline the main challenges and prospects for improving the expert support of justice in the context of reforming the judicial system and ensuring compliance with international standards in this area.

Research Methods

Comprehensive approach was applied to the study of the role of the Ministry of Justice of Ukraine in formation of the system of

Філіпенко Н. Є., Лукашевич С. Ю. Діяльність судово-експертних установ щодо запобігання злочинності з використанням прогресивних інформаційних методик та технологій. *Наукові інновації та передові технології. Серія "Право"*. 2023. № 14 (28). С. 487—495. DOI: 10.52058/2786-5274-2023-14(28)-487-495 (date accessed: 03.05.2025).

- 11 Шепітько В. Судова експертиза та судово-експертна діяльність: погляд крізь призму думок експертів. *Теорія та практика судової експертизи і криміналістики*. 2023. Вип. 1 (30). С. 12—22. DOI: 10.32353/khrife.1.2023.02 (date accessed: 03.05.2025).
- 12 Щербаківський М. Г. Проведення та використання судових експертиз у кримінальному провадженні : монографія. Харків, 2015. 560 с.
- 13 Cataraga O., Petcovići P. Modern Aspects of Digitalization and Artificial Intelligence in Judicial Expertise. *Діджиталізація судово-експертної науки в умовах воєнного стану* : зб. мат-лів Міжнар. наук.-практ. конф. (Харків, 08.11.2024). Харків, 2024. С. 18—23. URL: <https://drive.google.com/file/d/1cDRJ14KDOGLXe5Y6HdNVBzqAS7gBR-ML/view> (date accessed: 03.05.2025).
- 14 Andrić S. D., Ivanović A. B. Forenzičke nauke i etika u eri primjene vještačke inteligencije. *Kriminalističke Teme*. 2023. God. XXIII. Br. 3—4. Str. 95—102. DOI: 10.51235/kt.2023.23.3-4.95 (date accessed: 03.05.2025).

forensic support for justice. The analysis of regulatory acts makes it possible to assess the legislative and regulatory mechanisms that determine the functioning of forensic expertise and the competence of this ministry. The comparative legal method helped in the study of international experience in organizing forensic expertise with the aim of implementing best practices in the legal system of Ukraine. The systemic approach made it possible to consider forensic expertise as an integral structure that functions in interaction with other state and non-state organizations. The methods of logical analysis contributed to the generalization of scientific concepts and the formulation of conclusions regarding the effectiveness of expert activity management. Empirical methods, in particular statistical analysis, were used to evaluate the activities of forensic institutions, and content analysis made it possible to thoroughly examine scientific works, reports and official documents that highlight the role of the Ministry of Justice of Ukraine in this area. Integrated use of these methods provided a comprehensive study of the mechanisms for managing forensic activities and contributed to identifying prospects for its improvement in accordance with modern law enforcement requirements.

Main Content Presentation

Forensic science institutions of the Ministry of Justice of Ukraine play a crucial role in ensuring justice by promoting compliance with the principles of independence, objectivity and high professional competence of expert research. Their activities are an integral part of the law enforcement system, which requires clearly structured management and effective coordination at the state level to ensure timely and

high-quality forensic science support for investigative bodies and courts.

Ministry of Justice of Ukraine is authorized to perform the function of organizing and regulating expert support of justice in accordance with the legal requirements stipulated by the applicable regulations. In accordance with the Regulation on the Ministry of Justice, the Ministry of Justice ensures the implementation of state policy, in particular in the field of forensic science, coordinating the activities of relevant institutions and promoting the improvement of mechanisms for conducting forensic examinations¹⁵.

The Ministry of Justice of Ukraine performs an important function of coordination and organization of expert support of legal proceedings, ensuring effective interaction between forensic institutions and State bodies. Its activities cover a number of main tasks aimed at improving the processes of conducting forensic examinations, improving skills of experts and developing research activities, in particular:

1. Forensic science support of justice and scientific activity

Expert provision of justice and scientific activity *are* important components of the functioning of the system, aimed at ensuring the objectivity, reliability and scientific validity of court decisions. Ministry of Justice of Ukraine plays a leading role in the regulation and organization of these procedures, ensuring the conduct of forensic examinations and promoting research activities in the field of forensic science.

Organization components of forensic examinations are formation of a regulatory framework, the management of expert institutions, the provision of methodological support and the introduction of modern technologies in research. The Ministry of

15 Положення про Міністерство юстиції України URL: <https://zakon.rada.gov.ua/laws/show/228-2014-%D0%BF#Text> (date accessed: 03.05.2025).

Justice coordinates the work of forensic science institutions, directing their activities to improve quality of forensic expert conclusions and implementation of international standards in this area.

Research activities in the field of forensic science are of strategic importance, as they contribute to the development of new methods, improvement of expert analysis procedures and increasing the level of training of specialists. Conducting scientific research makes possible to integrate best practices into the work of forensic institutions, which ensures the accuracy and reliability of forensic expert conclusions.

2. Work of central commissions

Functioning of central commissions is an important element in ensuring high-quality and objective forensic expert activity in Ukraine. Ministry of Justice of Ukraine coordinates the work of the Central Expert Qualification Commission that is responsible for defining professional standards for forensic experts, certifying specialists and assessing their competence. This commission plays a leading role in the formation of requirements for the qualification of experts that contributes to increasing the level of reliability and validity of expert opinions in the trial.

In addition, Coordination Council for Forensic Examination Problems under the Ministry of Justice¹⁶ develops methodological recommendations, improves expert methods and integrates advanced scientific achievements into the practical activities of expert institutions. It provides regulatory and methodological support to the forensic system, contributing to its compliance with international standards and modern requirements of justice.

3. Qualification of forensic experts

Qualification of forensic experts is important mechanism for ensuring the objectivity and professional competence of forensic research, which directly affects the quality of justice. The Ministry of Justice of Ukraine plays a leading role in this procedure carrying out certification of specialists, defining professional standards and monitoring activities.

Qualification of forensic experts involves a rigorous assessment process, which includes a test of knowledge, practical skills and compliance with regulatory requirements. Experts who successfully pass certification receive official confirmation of their competence and the right to conduct forensic researches.

Ministry of Justice pays special attention to monitoring the activities of experts working outside state institutions, in independent or private forensic science structures. Maintaining the State Register of Certified Forensic Experts ensures the transparency of this process, allowing to monitor qualification level of specialists and guarantee the compliance of this level with the requirements of forensic science activity.

In addition, the Ministry ensures development and updating of methodological recommendations for experts, promotes professional trainings and advanced training courses, which helps to adapt expert methods to modern standards of justice and integrate the best international experience in this field into the activities of Ukrainian forensic science institutions.

This approach is a guarantee of a high level of professional competence of forensic experts ensuring reliability of their conclusions and strengthening legal system of Ukraine.

16 Положення про Координаційну раду з проблем судової експертизи при Міністерстві юстиції України : затв. постанов. КМУ від 16.11.1994 р. № 778 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/778-94-%D0%BF#Text> (date accessed: 03.05.2025).

4. Registers of experts and methods

Maintaining registers of experts and methods is an important element of the organization of forensic expert activity, which contributes to standardization of expert research, increasing the transparency of their conduct and ensuring a high level of competence of specialists. The Ministry of Justice of Ukraine plays a leading role in this process by administering the State Register of Certified Forensic Experts and the Register of Forensic Examination methods.

State Register of Certified Forensic Experts¹⁷ contains information on specialists who have officially qualified and have the right to conduct forensic researches. This helps to ensure control over their professional activities, ensure compliance with the standards provided for by law and the reliability of expert opinions. The register is also an important tool for investigators, judges and lawyers, who have the opportunity to use information from it to check the status of the expert and his compliance with qualification requirements.

The register of methods of conducting forensic examinations¹⁸ contains officially approved methods of expert research, which are mandatory for use during forensic examination. Its conduct guarantees uniform standards for conducting expert research, promotes the introduction of scientifically sound methods and prevents possible errors or subjective interpretations during expert research. Updating of this Register makes possible to integrate modern scientific achievements and international experience into the forensic expert practice of Ukraine.

5. Control over activities of forensic science institutions

This area of activity is an important element of functioning of the justice system, as it ensures the quality, reliability and compliance of forensic expert conclusions with legislative and professional standards. The Ministry of Justice of Ukraine directs, coordinates and controls activities of research institutions conducting forensic examinations, providing their regulatory and methodological guidance.

6. Coordination of interdepartmental interaction

Coordination of interdepartmental interaction is an important element in ensuring effective functioning forensic examination system. The Ministry of Justice of Ukraine plays a strategic role in organizing interaction between ministries, state institutions and other executive bodies with the aim of developing forensic science, increasing its efficiency and harmonizing regulatory and methodological approaches.

One of the main aspects of interdepartmental coordination is the development and implementation of state policy in the field of forensic science which involves harmonizing activities of justice bodies, investigative structures and scientific research institutions. The components of this process are the integration of modern expert methods, implementation of international standards of forensic expertise and development of mechanisms for monitoring their application.

Use of a systematic approach in forensic activities contributes to the rational use of

17 Порядок ведення державного Реєстру атестованих судових експертів : затв. наказ. Мін'юсту України від 29.03.2012 р. № 492/5 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0484-12#Text> (date accessed: 03.05.2025).

18 Порядок атестації та державної реєстрації методик проведення судових експертиз : затв. постанов. КМУ від 02.07.2008 р. № 595 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0484-12#Text> (date accessed: 03.05.2025).

the intellectual potential of specialists and material and technical resources, which ensures a high level of objectivity, accuracy and reliability of expert research. The introduction of effective mechanisms for coordination, standardization of methods and quality control of expertise allows you to reduce the time for conducting research and increase their compliance with international standards. This, in turn, ensures the timely adoption of reasoned court decisions, contributes to the strengthening of interaction between law enforcement agencies and forensic institutions, and also forms a stable system of evidence in criminal and civil proceedings.

7. Adaptation of international experience

Adaptation of international experience in the field of forensic expertise is one of leading areas of activity of the Ministry of Justice of Ukraine, aimed at improving the methodological, organizational and regulatory and legal foundations of expert activity. Application of advanced practices of other countries allows integrating modern technologies, improving quality of forensic expert conclusions and increasing the level of trust in forensic science. In this context, the Ministry actively cooperates with international organizations and specialized institutions specializing in forensic expertise, exchanges scientific developments and experience in using specific legal mechanisms to regulate expert activity. One of the main aspects is the implementation of international standards in conduct-

ing forensic expertise, which contributes to the harmonization of the Ukrainian expert process with established world standards.

Particular attention in the field of forensic science is also paid to the introduction of *modern technological solutions*, including digital methods of analysis, automated research systems and the latest achievements in the field of forensic science and artificial intelligence, which helps in performing complex tasks of forensic science¹⁹. The issues of improving legislation, unifying expert methods and adapting legal procedures that meet European and international standards remain relevant.

Functions of public administration determine the leading areas of activity of state bodies aimed at implementing the tasks of administrative activity and ensuring the effective functioning of the state apparatus. In domestic scientific literature, they are traditionally classified into general, special and auxiliary²⁰.

General functions cover basic management processes specific to all areas of public administration, including forecasting, planning, organization, control and regulation. These functions provide strategic management of state processes, definition of goals and development of mechanisms for their implementation.

Special functions relate to specific areas of public administration, they are implemented in accordance with specific tasks, such as legal regulation, national security, organization of justice, regulation of economic

19 Ivanović A., Filipenko N. Proposal for Introducing the Institution of Forensic Artificial Intelligence. *Актуальні питання судової експертизи і криміналістики* : зб. мат-лів Міжнар. наук.-практ. конф., присвяч. пам'яті видат. вчен. Владислава Федоренка ("Федоренківські читання"; Харків, 15.10.2024). Харків, 2024. С. 16—19. URL: <https://drive.google.com/file/d/1C-JSGFYFcKMFu310UeR5dzoPmiMP-C0CP/view> (date accessed: 03.05.2025).

20 Е.г.: Рябець К. Система та сутність загальних функцій державного управління у сучасний період. *Науковий вісник: Державне управління*. 2022. № 1 (11). С. 207—221. DOI: 10.33269/2618-0065-2022-1(11)-207-221 (date accessed: 03.05.2025) ; Пашко Л. До проблеми змістового наповнення простору публічного управління. *Публічно-управлінські та цифрові практики*. 2024. Вип. 2. С. 69—75. DOI: 10.31673/2786-7412.2023.022427 (date accessed: 03.05.2025) та ін.

activity or social policy. Their goal is to create conditions for the implementation of state tasks in highly specialized areas.

Support functions contribute to effective performance of general and special functions, in particular, provide information, personnel, logistics and financial management. These include mechanisms for maintaining statistics, resource administration, internal coordination and documentary support of management activities.

The Ministry of Justice of Ukraine, carrying out management in the field of forensic expert activity, uses general management functions that objectively affect certain processes occurring in forensic expert activity. These functions are basic, characteristic of any management, regardless of at what level and in what areas they are carried out. The general functions of public administration are organization, forecasting, planning, regulation, coordination. This system is built on the basis of the internal technology of management activities. At the same time, Ministry of Justice of Ukraine in its activities exercises power and organizational influence on the management object of special functions²¹.

As N. Tkachenko notes, special functions characterize specifics of a particular subject or object of management. Special powers of the Ministry of Justice of Ukraine in the field of forensic expert activity are related to the subordinate research institutions of forensic examinations, for which the successful implementation of the state policy on forensic science support of justice is one of the main purposes²².

At the same time, the main goal of the coordination activities of the Ministry of Justice of Ukraine is to unite management efforts for better performance of common tasks by all subjects of criminological support of forensic activities in Ukraine. Coordination is a necessary prerequisite for effective implementation of functions assigned to forensic institutions, since the unification of efforts of all expert institutions of the state for the optimal use of the resource base (intellectual (expert personnel) and instrumental), aims at the most complete and effective satisfaction of the needs of investigative and judicial practice in conducting expert studies. In continuation of this thesis, we consider it necessary to regulate social relations regarding the implementation of forensic activities in Ukraine, determine its legal, organizational and financial foundations in the conditions of judicial reform²³.

V. Iemelianov and P. Repeshko note in this regard: since the activities of forensic institutions, services and units have accumulated quite a lot of problems associated with changes in both political courses and economic standards of public life, this has significantly changed the overall picture of internal factors that are effective in the internal systems of institutions, services and units. In addition, there are signs of deepening interdepartmental confrontations, individual attempts to commercialize forensic activities and attempts to redistribute spheres of influence and areas of activity. These and other problems necessitate reorganization taking into account changes in the socio-political system in our country²⁴.

21 Філіпенко Н. Є. Сутність та особливості С. 200. URL: https://sd-vp.info/wp-content/uploads/2021/09/vp_2017_1-6.pdf (date accessed: 03.05.2025) ; Ткаченко Н. М. Зазнач. твір. С. 121. DOI: 10.32353/khrife.2.2019.09 (date accessed: 03.05.2025).

22 Ткаченко Н. М. Зазнач. твір. С. 123. DOI: 10.32353/khrife.2.2019.09 (date accessed: 03.05.2025).

23 Філіпенко Н. Є. Координація С. 240. URL: https://sd-vp.info/wp-content/uploads/2020/11/vp_2016_3-2.pdf (date accessed: 03.05.2025).

24 Ємельянов В., Репешко П. Організаційно-правові основи державного управління судово-експертною діяльністю. *Державне управління та місцеве самоврядування*. 2011. Вип. 2 (9). С. 73.

In academic circles ²⁵, the issue of advisability of creating a specialized body that would perform the function of a centralized coordinator of forensic science in Ukraine has been repeatedly raised. This need is due to the complex structure of forensic science industry, which includes a significant number of institutions with different profiles of activity, departmental subordination, and a wide range of entities involved in the procedure of forensic science provision of justice.

Extensive system of forensic science institutions creates certain challenges in terms of unification of methodological approaches, harmonization of regulatory and legal regulation, ensuring a single information space and coordination between entities participating in forensic expertise. Lack of a single management center can lead to duplication of functions, inconsistency in decision-making and problems with integration of modern methodologies and international standards into national forensic science practice.

Creation of such a body would allow centralizing management of forensic science institutions, ensuring effective control over the quality of forensic science, standardizing the procedures for certification and qualification of experts, and improving the regulatory and methodological support for forensic science. In addition, it would contribute to optimizing the use of the intellectual potential of experts, simplifying interdepartmental interaction and increasing the level of trust in forensic expert conclusions in legal proceedings.

The idea of creating such a body can be implemented by forming a single center that would combine the functions of regulation, scientific support, control and management of forensic science activities. Its main tasks could be development and implementation of unified standards of forensic expertise, integration of international experience, improvement of mechanisms of information interaction between judicial and investigative bodies, as well as promotion of development of scientific and research work in the field of forensic science.

In this regard, I. Pyrih notes the lack of centralized organizational and managerial support for forensic science institutions that in turn leads to numerous problems related to the coordination of their activities in various areas ²⁶.

E. Simakova-Yefremian believes that the issue of establishing a forensic institution that is truly independent of the ministries and agencies responsible for investigative functions needs to be discussed. It is necessary to create a unified system of state expert institutions that will be responsible for conducting examinations, scientific and methodological work, and educational activities in the field of forensic science and criminalistics. At the same time, the structures whose potential and means are focused on technical and forensic support of inquiry and pre-trial investigation should be retained in departmental subordination: recording traces and collecting evidence, excluding forensic researches ²⁷.

Reforms in economic, social, political and legal fields of the Ukrainian state entail

25 E.g.: Martynenko N. Coordination Council on the Problem of Forensic Expertise under the Ministry of Justice of Ukraine: Composition, Tasks, Authorities, Rights. *Theory and Practice of Public Administration*. 2024. Vol. 1. No. 78. Pp. 20–35. DOI: 10.26565/1727 6667-2024-1-02 (date accessed: 03.05.2025) ; Філіпенко Н. Є., Лукашевич С. Ю. Зазнач. твір. DOI: 10.52058/2786-5274-2023-14(28)-487-495 (date accessed: 03.05.2025) et al.

26 Пиріг І. В. Зазнач. твір. С. 68. URL: <https://surl.li/exvexy> (date accessed: 03.05.2025).

27 Сімакова-Єфремян Е. Б. Зазнач. твір. С. 294.

changes in the organizational and legal foundations of state management of forensic activities. The tasks facing forensic science institutions, services and units in the new conditions require finding and identifying ways to increase the efficiency of the existing system of forensic activities, optimizing its organization and legal support. Currently, courts and law enforcement agencies are putting forward qualitatively new requirements for forensic activities, which is one of the important factors that determine the need to improve the organizational and legal foundations of State management of forensic activities²⁸.

It is the Ministry of Justice of Ukraine that today carries out a coordinating role in implementing state policy in the field of ensuring the criminological activities of forensic institutions, is an organizational core, a management center that guarantees the high-quality performance of its subordinate structures.

Conclusions

Successful performance of the Ministry of Justice of Ukraine in fulfilling its functions largely depends on a whole range of factors, among which the socio-political environment, the level of institutional support and adequate funding play a major role. For effective functioning of the forensic science system, it is necessary to focus on several promising areas of development that require in-depth research, improvement of management mechanisms and integration into practical activities.

Formation of strategic State policy in the field of forensic science. An important task is to develop a comprehensive management approach that will be based on the achievements of various areas of forensic science, ensuring their effective integration into law enforcement practice. A systematic and balanced approach to management policy

will contribute to stability and high quality of forensic expert work.

Optimization of management methods of forensic science institutions. Improving the organizational management of both state forensic institutions and non-state structures will allow to increase the level of coordination between all actors in this field ensuring effective communication and high-quality forensic science support for justice.

Raising standards of certification and professional training of forensic experts. It is necessary to improve mechanisms of certification and retraining of staff, expand the access of experts to the latest scientific developments and methods. This will contribute to formation of a highly qualified expert community capable of providing substantiated and reliable conclusions.

Development of interdepartmental coordination and integration of forensic science institutions. Strengthening interaction between state and independent forensic science institutions, as well as improving information exchange mechanisms will allow harmonizing methods and standards for conducting forensic examinations, eliminating duplication of functions and ensuring effective cooperation between all actors.

Adapting international experience in the field of forensic science. Research and implementation of successful practices of other countries with developed forensic models will help increase the efficiency of the work of Ukrainian forensic science institutions and promote their integration into international legal space.

Comprehensive implementation of these tasks will ensure increased efficiency in the management of forensic activities, high-quality communication between its subjects, and the formation of public trust in the judicial process. Improving the fo-

28 Ткаченко Н. М. Зазнач. твір. С. 132. DOI: [10.32353/khrife.2.2019.09](https://doi.org/10.32353/khrife.2.2019.09) (date accessed: 03.05.2025).

rensic infrastructure in the context of dynamic changes is an important component of the overall reform of the legal system of Ukraine aimed at achieving and maintaining its transparency, efficiency, and compliance with international standards.

**Роль Міністерства юстиції України
у формуванні системи
експертного забезпечення правосуддя
(оглядова стаття)**

**Наталія Філіпенко,
Александр Іванович**

Проведено аналіз провідної ролі Міністерства юстиції України в управлінні судово-експертною діяльністю, акцентовано увагу на особливостях координування, субординації, механізмах планування та інформування, а також здатності реагувати на нагальні питання та виклики сьогодення. Визначено, що ця діяльність має науково-практичне орієнтування й залежить від відомчої належності судово-експертних установ України. Окреслено широкий спектр функційних можливостей Мін'юсту України, які варіюються за формою та змістом (зокрема, зауважено, що експертне забезпечення правосуддя є одним із його основних законодавчо закріплених завдань). Мета статті — дослідити роль Мін'юсту України як центрального координаційного органу у формуванні ефективної системи експертного забезпечення правосуддя. Окреслено основні виклики та перспективи вдосконалення експертного супроводу правосуддя в умовах реформування судової системи й забезпечення дотримання міжнародних стандартів у цій сфері. Для досягнення поставленої мети застосовано комплекс методів (логічного аналізу, порівняльно-правовий, системний, статистичний аналіз і контент-аналіз та ін.). Виокремлено основні напрями діяльності Мін'юсту України як управлінського й коорди-

наційного органу у сфері кримінологічної діяльності судово-експертних установ, зокрема: розроблення та впровадження ефективної державної політики у сфері управління судово-експертною діяльністю; оптимізація методів керівництва державними судово-експертними установами й недержавними експертними організаціями; підвищення вимог до судової діяльності та її організації; підвищення ефективності діяльності судових установ України тощо.

Ключові слова: Міністерство юстиції України; судово-експертна діяльність; правосуддя; державна політика; міжнародний досвід; інтегрування експертних структур; законодавче регулювання; взаємодія.

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Authors declare no conflict of interest; although Aleksandar Ivanović is member of Editorial Board 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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- sence of General Functions of Public Government in the Modern Period]. *Naukovyi visnyk: Derzhavne upravlinnia*. № 1 (11). DOI: 10.33269/2618-0065-2022-1(11)-207-221 [in Ukrainian].
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Peculiarities of Using DNA Research Results From Mobile Laboratories in Criminal Proceedings

Kateryna Latysh ^{*a}, Danylo Zhydkov ^{**b}

* PhD in Law, Docent, Yaroslav Mudryi National Law University, Kharkiv, Ukraine, ORCID: <https://orcid.org/0000-0002-9110-116X>, e-mail: k.v.latysh@nlu.edu.ua

** Yaroslav Mudryi National Law University, Kharkiv, Ukraine, e-mail: d.v.zhydkov@nlu.edu.ua

^a Conceptualization, methodology, writing – original draft.

^b Writing – original draft.

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The primary concerns of this paper are to analyze the procedural status of rapid DNA test results obtained in mobile and stationary DNA laboratories. It identifies the benefits and restrictions of such studies and determines whether the results comply with the requirements for adequacy, admissibility, credibility, and sufficiency of evidence. Additionally, it proposes ways to improve the legal regulation concerning the procedural form for applying specific expertise in this area. To achieve this goal, the author employs a range of general scientific and special legal methods, including induction, deduction, analysis, synthesis, comparison, prognostic, comparative legal, and formal logical. The paper explores the procedural status of rapid DNA test results obtained in both mobile and stationary DNA laboratories. The paper discusses the differences between mobile and stationary laboratories, identifies peculiarities in the collection and processing of biosamples, and outlines problematic aspects of admitting such results as evidence. Emphasis is placed on the relevance of utilizing mobile technologies under martial law in Ukraine and the need to improve the legal regulation of their use. The latest legislative changes and case law on evaluating rapid studies were also carefully analyzed.

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Keywords: *mobile DNA laboratories; biological samples; expert research; evidence, evidence properties; process of proving; DNA identification.*

Research Problem Formulation

Traces remaining at the molecular level, particularly DNA traces, have a special probative value in today's criminal proceedings. These traces may be found in biological samples collected at the scene. The development of forensic technologies has played a role in the introduction of mobile DNA laboratories capable of conducting forensic genetic examination directly in the field. This is especially important under martial law when it is urgent to quickly identify human remains at sites of mass graves or armed clashes.

Despite the obvious efficiency and technological convenience of mobile laboratories, their utilization is linked to certain forensic and procedural challenges. Specifically, we are discussing how to assess the probative value and admissibility of findings obtained through rapid DNA testing, as well as their place in the system of proving within criminal proceedings. Under these circumstances, it is important to distinguish between the capabilities of mobile and stationary DNA laboratories, to clarify the legal nature of analysis findings, their procedural status, and to determine the criteria for assessing the adequacy, admissibility, credibility, and sufficiency of such evidence.

The article analyzes the key differences between mobile and stationary DNA laboratories, outlines the peculiarities of collecting, processing, and using biosamples, and highlights the types of evidence that can be developed according to DNA analysis findings. It also addresses cer-

tain problematic aspects of the procedural form and evidentiary status of rapid tests obtained using mobile technologies.

The relevance of this scientific article lies in the realities of armed aggression against Ukraine, accompanied by active hostilities, mass burials, tortures of civilians, and other war crimes. Given these circumstances, it is crucial to quickly and accurately clarify circumstances of a criminal offense, particularly the identification of the deceased. Mobile DNA laboratories have become an essential tool for fulfilling criminal proceedings tasks, especially in temporarily occupied or just liberated territories where additional expert infrastructure cannot be deployed.

With the onset of the Russian Federation's full-scale invasion, mobile DNA laboratories have been extensively utilized not only for investigating war crimes but also for general criminal proceedings. This practice demonstrates the significant potential of integrating state-of-the-art technologies into investigative activities under the rule of law. Simultaneously, the statutory regulation of this area is insufficient. The issue regarding the probative value of DNA analysis results produced by mobile laboratories is particularly understudied. The lack of a unified approach to determining their procedural status leads to uncertainty during pre-trial investigation and trial, especially in cases requiring promptness and high accuracy of findings.

In addition, a number of related questions arise:

- "Can rapid test results be recognized as independent evidence?";

- “What is their correlation with other pieces of evidence: are they primary or derived?”;
- “Can printouts of mobile laboratory reports have procedural independence and what evidentiary value do they possess in judicial practice?”.

The answers to these questions are important for law application and necessitate proper theoretical and regulatory substantiation.

Analysis of Essential Researches and Publications

On October 9, 2024, the Verkhovna Rada of Ukraine adopted the Law of Ukraine *On Amendments to the Code of Ukraine on Administrative Offenses, the Criminal Code and the Criminal Procedure Code of Ukraine Regarding the Optimization of Specialists' Activities in Criminal Proceedings* (hereinafter referred to as *Law 4009-IX*), which gives

the specialist the same standing as the expert in the identification of persons, weapons, explosives, drugs, and grants him/her further authority to provide certificates, conclusions, and other documents during research and use these documents as evidence ¹. Such changes stem from the fact that experts in the field of immunology, cytology, genetics, ballistics, and explosives are under considerable strain today. At the same time, promptness, speed, and quality of the pre-trial investigation are required to draw timely procedural decisions in the investigation of general criminal offenses (murder, rape, drug possession, etc.) and criminal offenses against peace, human security, and international law and order ².

Researchers such as P. Davydiuk et al. ³, V. Dem'ianchuk ⁴, V. Zhuravel and A. Kovalenko ⁵, M. Shumylo ⁶ addressed the problematics of certain proving aspects during criminal proceedings. Re-

- 1 Про внесення змін до Кодексу України про адміністративні правопорушення, Кримінального та Кримінального процесуального кодексів України щодо оптимізації діяльності спеціалістів у кримінальному провадженні : Закон України від 09.10.2024 р. № 4009-IX. URL: <https://zakon.rada.gov.ua/laws/show/4009-20#Text> (date accessed: 22.04.2025) ; 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: 22.04.2025).
- 2 Пояснювальна записка до проекту Закону про внесення змін до Кримінального процесуального кодексу України з метою оптимізації залучення спеціалістів під час досудового розслідування від 20.09.2023 р. № 10075. URL: <https://itd.rada.gov.ua/billinfo/Bills/pubFile/1991295> (date accessed: 22.04.2025).
- 3 Давидюк П. П., Пелешок І. І., Якимчук М. Ю. Сучасний стан розвитку молекулярно-генетичної експертизи в Україні. *Науковий вісник Ужгородського національного університету. Серія Право*. 2023. Вип. 75. Ч. 2. С. 171—176. DOI: 10.24144/2307-3322.2022.75.2.27 (date accessed: 22.04.2025).
- 4 Дем'янчук В. Застосування поняття “документ” у кримінальному процесі. *Правова інформатика*. 2008. № 2 (18). С. 57—60. URL: <https://ippi.org.ua/sites/default/files/08dvdkp.pdf> (date accessed: 22.04.2025).
- 5 Журавель В. А., Коваленко А. В. Дослідження доказів у кримінальному провадженні як складова процесу доказування. *Вісник Національної академії правових наук України*. 2022. Т. 29. № 2. С. 313—328. DOI: 10.31359/1993-0909-2022-29-2-313 (date accessed: 22.04.2025).
- 6 Шумило М. Є. Поняття “докази” у Кримінальному процесуальному кодексі України: спроба критичного переосмислення ідеології нормативної моделі. *Вісник Верховного Суду України*. 2013. № 2 (150). С. 40—48. URL: http://nbuv.gov.ua/UJRN/vvsu_2013_2_10 (date accessed: 22.04.2025).

search by T. Mykhalchuk and Ye. Svoboda⁷, O. Narozhna⁸ and M. Khrapytska, M. Shcherbakovskiy⁹ emphasized forensic molecular genetic examination and the possibility of utilizing its results as evidence. Furthermore, the issues of conducting forensic DNA analyses in mobile laboratories are raised in research papers by foreign scientists (R. S. Turingan et al.)¹⁰.

V. Zhuravel and A. Kovalenko point out that evidence is examined at both the trial stage and the pre-trial investigation stage, and single out various subjects of research. Researchers stress that the investigator's procedural activity on the study of evidence encompasses drawing up a report to record information¹¹. We find this opinion convincing because, before submitting evidence to the court for direct forensic examination as required by the Criminal Procedure Code of Ukraine (hereinafter referred to as the CPC), it is expected that the parties to the criminal proceedings will independently

gain an understanding of the evidence obtained and the factual information available in the procedural source. They must also evaluate all of the above for admissibility, credibility, and sufficiency alongside other evidence¹². Thus, the investigator and the prosecutor possess the right to inspect documents and computer data (Art. 237 of the CPC)¹³. Such an inspection results in a report, which is merely a means of recording relevant facts and may be considered derivative evidence.

In this context, it is important to note that, in compliance with amendments in cl. 5 of P. 2 of Art. 99 of the CPC, documents such as certificates, conclusions, and other documents of a specialist are viewed as evidence¹⁴. However, unfortunately, the CPC does not define the *other documents of a specialist* concept. This results in additional problems that investigators and prosecutors may encounter when proving their cases and may contradict the principle of legal certainty

- 7 Михальчук Т. В., Свобода Є. Ю. Система ANDE RAPID DNA — унікальна технологія швидкісного встановлення ДНК. *Актуальні питання криміналістики та судової експертизи* : мат-ли міжвідом. наук.-практ. конф. (Київ, 25.11.2022). Київ, 2022. С. 82—85. URL: https://www.navs.edu.ua/files/kafedru/ksm/2023/mater_konf_251122.pdf (date accessed: 22.04.2025).
- 8 Нарожна О. В., Храпицька М. О. Значення молекулярно-генетичної експертизи для криміналістичної ідентифікації особи. *Правовий вимір конституційної та кримінальної юрисдикції в Україні та світі. Треті юридичні читання* : мат-ли ювіл. всеукр. дистанц. конф., присвяч. 155-річ. Одес. нац. ун-ту ім. І. І. Мечникова (Одеса, 10.04.2020). Одеса, 2020. С. 245—248.
- 9 Щербаківський М. Г. Проблеми формулювання висновків молекулярно-генетичної експертизи. *Процесуальне та техніко-криміналістичне забезпечення досудового розслідування* : тези доп. всеукр. наук.-практ. конф. (Харків, 28.11.2019). Харків, 2019. С. 193—195. URL: <http://dspace.univd.edu.ua/xmlui/handle/123456789/13593> (date accessed: 22.04.2025).
- 10 Turingan R. S., Vasantgadkar S., Palombo L. et al. Rapid DNA analysis for automated processing and interpretation of low DNA content samples. *Investigative Genetics*. 2016. Vol. 7. Is. 2. 12 p. DOI: 10.1186/s13323-016-0033-7 (date accessed: 22.04.2025).
- 11 Журавель В. А., Коваленко А. В. Зазнач. твір. DOI: 10.31359/1993-0909-2022-29-2-313 (date accessed: 22.04.2025).
- 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: 22.04.2025).
- 13 Там само.
- 14 Там само.

following the practice of the European Court of Human Rights¹⁵.

From V. Ishchenko's perspective, the document is a physical medium that directly conveys information about events and facts relevant to criminal procedures in a fixed format. Such information is set out in signs that can be reproduced uniquely in the form of images or oral speech. These signs also allow for the transmission and interpretation of human opinion. The document is compiled by a specific person, enterprise, institution, or organization, or it is received by the bodies of investigation or court in a stipulated order and added to the case file¹⁶.

The above definition is more relevant, but the issue of *other documents of a specialist* is yet to be discussed. Let us delve into the Law: *On Information*, according to which document shall mean a physical medium containing the information the main functions of which include storage and transmission thereof in time and space¹⁷. That is, another document of a specialist can be considered a physical medium containing recorded information about events or facts in the form of signs and is capable of transmitting this information through space and time. It is drawn up by a specialist in the course of investigating circumstances that require specific expertise.

When discussing evidence obtained as a result of molecular genetic examinations, P. Davydiuk et al. state that the object of study of molecular genetic examination is human DNA, namely acids containing

cell nucleus (nuclear DNA), as well as acids that are in the mitochondria of a cell (mitochondrial DNA). The task of forensic examination is to determine whether traces found at the scene belong to a specific person suspected of committing a crime; establish whether traces found at several crime scenes belong to one person and substantiate the link between a criminal offense and a person under investigation; estimate the number of people associated with a scenario where mixed biological substances were seized from the scene; identify parts or remains of unidentified corpses using DNA data obtained from suspected close relatives¹⁸.

Article Purpose

Analyze the procedural status of rapid DNA test results obtained in mobile and stationary DNA laboratories, identify the benefits and restrictions of such studies and determine whether the results comply with the requirements for adequacy, admissibility, credibility, and sufficiency of evidence, and propose ways to improve legal regulation concerning the procedural form of applying specific expertise in this area.

Research Methods

To achieve this goal, the authors employ a range of general scientific and special legal methods. The comparative legal method enabled to compare the peculiarities

15 Case of the Sunday Times v. the United Kingdom. Appl. No. 6538/74. Judgm. of 26 Apr 1979 / European Court of Human Rights. URL: <https://hudoc.echr.coe.int/eng#%7B%22itemid%22%3A%5B%22001-57584%22%5D%7D> (date accessed: 22.04.2025).

16 Іщенко В. М. Поняття документа як джерела доказів у кримінальному судочинстві. *Право України*. 1997. № 2. С. 42–45.

17 Про інформацію : Закон України від 02.10.1992 р. № 2657-XII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2657-12#Text> (date accessed: 22.04.2025).

18 Давидюк П. П., Пелешок І. І., Якимчук М. Ю. Зазнач. твір. DOI: 10.24144/2307-3322.2022.75.2.27 (date accessed: 22.04.2025).

of how mobile and stationary DNA laboratories function, as well as to analyze the differences in legal regulation and judicial practice regarding the admissibility of rapid test results. The formal and logical approach provided a clear definition for the key legal categories of “adequacy”, “admissibility”, ‘credibility’, and “sufficiency” of evidence. What is more, it also made it possible to formulate the criteria to which DNA analysis results must comply in order to be used in criminal proceedings.

The comparison method was used to evaluate court decisions regarding the recognition of rapid test results as evidence, particularly with regard to the use of the report printout as a source of independent evidence. The inductive method was used to analyze certain criminal cases and provide an overview of law enforcement practices. The deductive method was employed to test the practical relevance of general theoretical conclusions. The prognostic method contributed to the formation of proposals for improving the legal regulation of specific expertise use in the field of forensic examination.

The methods of analysis and synthesis helped to systematically review the legislative rules, judicial practice, as well as organizational and procedural peculiarities of collecting and processing biosamples. This enabled to comprehensively evaluate the pros and cons of utilizing mobile forensic technologies in proving.

Main Content Presentation

Since the beginning of Russia’s full-scale invasion against Ukraine, forensic experts have often used *ANDE* rapid DNA technology mobile laboratories, a company registered and operating in the United States¹⁹. Such DNA laboratories have been developed as a high-tech tool for prompt identification of biological material under field-like conditions.

They have several advantages when it comes to investigating criminal offences. Firstly, mobile DNA laboratories can *automate routine processes* because they do not require a technical operator. All processes, from the application of biological samples to the output of the genetic profile, are automated and do not require third-party intervention. It minimizes the human factor and reduces the risk of errors. The laboratory contains three main components: sample collection containers, a sample preparation cartridge, and an automated analyzer. Thanks to its compact size and compliance with US military standards (specifically *810G*), the system can be used directly at the scene, even outside a controlled laboratory environment²⁰.

Secondly, the DNA laboratory *identifies a wide range of biological samples*: buccal swabs, blood stains, traces of weapons and ammunition, clothing, samples from bottles, cups, cigarettes, chewing gums, car steering wheels, touch controls, etc.

19 Хрипун В. “Якість і швидкість експертиз Міністерства юстиції суттєво покращаться завдяки новим мобільним ДНК-лабораторіям”,— заступник міністра юстиції Андрій Гайченко / Судово-юридична газета : вебсайт. 04.06.2024. URL: <https://surl.lu/brcliq> (date accessed: 22.04.2025).

20 Саковський А. А., Атаманчук В. М., Волошин О. Г. Особливості встановлення загиблих осіб в умовах воєнного стану. *Актуальні питання криміналістики та судової експертизи* : мат-ли міжвідом. наук.-практ. конф. (Київ, 25.11.2022). Київ, 2022. С. 25—29. URL: https://www.navs.edu.ua/files/kafedru/ksm/2023/mater_konf_251122.pdf (date accessed: 22.04.2025) ; Turingan R. S., Brown J., Kaplun L. et al. Identification of human remains using Rapid DNA analysis. *International Journal of Legal Medicine*. 2020. Vol. 134. Pp. 863—872. DOI: [10.1007/s00414-019-02186-y](https://doi.org/10.1007/s00414-019-02186-y) (date accessed: 22.04.2025).

Thirdly, *identifying the biological sample takes no longer than two hours*, so the process is quick. This contributes to compliance with the pre-trial investigation deadlines, and can even accelerate the process in some cases. *Automation enables to minimize human involvement* in identifying a biological sample, *thus reducing the cost of research and logistics, especially in the conditions of active investigative (search) actions*.

Fourthly, *it is possible to accomplish a preventative result* by prompt identification of suspects or victims, which may also have a significant psychological impact on offenders, contribute to solving crimes, and prevent their reoccurrence. That is, *this system helps to prevent new criminal offenses*.

Furthermore, DNA laboratories have the advantage of being highly accurate (with a 99.9% probability of identification), meaning the results can be used as reliable evidence in criminal proceedings. A striking example is the scientific experiment by Richard Selden, a renowned American scientist, who proved that there are no discrepancies between the results of DNA analyses obtained from different types of biological material: from buccal swabs to liver, brain and bones. According to the results of this study, the most suitable samples for analysis are buccal swabs and muscle tissue, depending on how long the body has been in an open environment²¹.

The procedure for obtaining a result in a mobile DNA laboratory involves the following steps:

- 1) collection of biological samples using a cotton, foam, or flocked swab;

- 2) placement of the swab in the cartridge (lab-on-a-chip);
- 3) concentration and purification (isolation of cellular DNA and its purification from impurities);
- 4) amplification (multiplication of short tandem repeats [STR loci] using polymerase chain reaction, hereinafter referred to as PCR);
- 5) processing STR loci during PCR modification through dye incorporation;
- 6) detection of the region of interest (using laser detection);
- 7) interpretation: determination of allelic composition;
- 8) result production: automatic analysis of fragments and generation of DNA profile report. See the result in Fig.

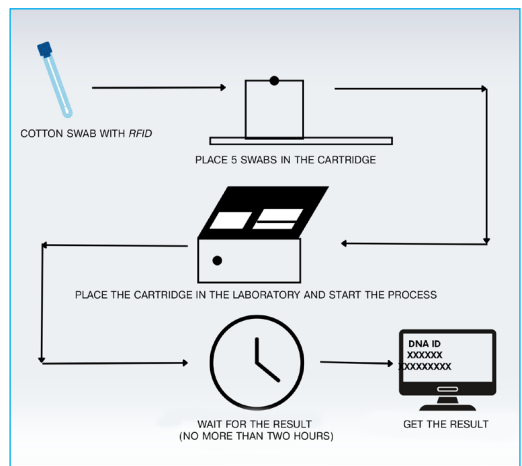


Fig. Schematic representation of obtaining the result in a mobile DNA laboratory

Thanks to the built-in *Expert System* software, the DNA profile is automatically uploaded to the system, where it is com-

21 Turingan R. S., Brown J., Kaplun L. et al. Op. cit. DOI: [10.1007/s00414-019-02186-y](https://doi.org/10.1007/s00414-019-02186-y) (date accessed: 22.04.2025).

pared with samples in the database to determine identity or detect matches ²².

In conformity with the Instruction on the Appointment and Conduct of Forensic Examinations and Expert Studies (hereinafter referred to as the *Instruction*), the Scientific and Methodological Guidelines on the Preparation and Appointment of Forensic Examinations and Expert Studies, and the CCP, a forensic molecular-genetic examination is conducted by forensic experts and relevant institutions involved by the parties to the criminal proceedings or the investigating judge at the request of the defense counsel ²³. In view of the 4009-IX Law, the prosecution is not required to engage a forensic expert to conduct a forensic examination for identification of a person, narcotic substances, explosives ²⁴. On the contrary, based on its decision formalized by a ruling in accordance with Pt. 3 of Art. 110 of the CPC, the investigator or prosecutor may involve a specialist under Art. 71 of the CPC to inspect the scene and seize corresponding biological samples for the purpose of identifying the deceased person at the place of scene inspection. This will expedite the pre-trial investigation and help establish all circumstances relevant to the criminal proceedings ²⁵. It

is worth noting that in compliance with Art. 5 of the Law of Ukraine: *On State Registration of Human Genomic Information*, state registration is mandatory for certain types of genomic information ²⁶.

Following cl. 4.19 of Sec. IV of the Instruction, the results of the expert molecular genetic testing shall be indicated in written documents: the expert's opinion and the registration card. The expert's opinion (excluding the introductory, research section, summary, and evaluation of research results) comprises date and number of a person's application, registration card for biological sample, name of the body conducting research and/or the last name, first name, and patronymic, position of a person conducting research, name of the biological sample collection tool and its manufacturer, storage period of the selected biological material. Notably, research findings and the expert's opinion both indicate the possibility that the compared objects (biological samples) are coincident. This ensures that the court will make a final decision after studying the evidence in its totality. The registration card is issued in accordance with the procedure determined by the Ministry of Justice of Ukraine ²⁷.

22 The image created in the *Canva* graphic editor illustrates the process of obtaining a result in a mobile DNA laboratory.

23 Інструкція про призначення та проведення судових експертиз та експертних досліджень ; Науково-методичні рекомендації з питань підготовки та призначення судових експертиз та експертних досліджень : затв. наказ. 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: 22.04.2025) ; Кримінальний процесуальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 22.04.2025).

24 Про внесення змін до Кодексу України ... URL: <https://zakon.rada.gov.ua/laws/show/4009-20#Text> (date accessed: 22.04.2025)

25 Кримінальний процесуальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 22.04.2025).

26 Про державну реєстрацію геномної інформації людини : Закон України від 09.07.2022 р. № 2391-IX. URL: <https://zakon.rada.gov.ua/laws/show/2391-20#Text> (date accessed: 22.04.2025).

27 Інструкція про призначення ... URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 22.04.2025).

Research findings obtained by a forensic specialist in the ANDE 6C DNA laboratory are displayed as computer data in the context of the investigator's or prosecutor's evidentiary activities. Pursuant to the provisions of the CPC, such data possess all the features of a document as a type of evidence, whether in print or electronic format.

Under Pt. 1 of Art. 84 of the CPC, evidence in criminal proceedings is factual data obtained in the manner prescribed by this Code, on the basis of which the investigator, public prosecutor, investigating judge, and court establish the presence or absence of facts and circumstances relevant to criminal proceedings. As stipulated in Pt. 2 of the same Article, documents are procedural sources of evidence²⁸.

Furthermore, in accordance with Pt. 1 of Art. 71 of the CPC, a specialist has the right to provide not only explanations, certificates, and opinions, but also other documents²⁹. The law does not define the *another specialist document* concept, but given the legal doctrine and law enforcement practice, it is understood as a physical medium containing recorded information about events or facts in the form of signs and is capable of transmitting this information through space and time. Such a document is compiled by a specialist who has relevant specific expertise and authority.

The main features of *another specialist document* containing the results of a DNA test:

- 1) physical medium form (telephone, paper document, computer file, digital report, etc.);
- 2) recording information in signs (digital or alphanumeric codes, genetic profiles, etc.);
- 3) recorded information is of legal relevance, confirming circumstances pertinent to criminal proceedings;
- 4) ability to share this information through space and time (e.g., by attaching to the case file);
- 5) compiled by an authorized person who possesses specific expertise³⁰.

In this context, computer data or printouts of the results of rapid DNA tests obtained in a mobile DNA laboratory can be regarded as aligning with a document's features. As set forth in Pt. 4 of Art. 99 of the CPC, copies of information, specifically computer data, made by the investigator, public prosecutor with the involvement of a specialist, shall be recognized by the court as the original document provided that the agreed procedure for their receipt is followed. That is why *another document* may be computer data or printouts of rapid DNA laboratory tests on selected biological samples.

The case law analysis shows that DNA analysis results obtained by the *Ande Rapid DNA 6C System* are heterogeneous. For instance, the investigating judge of the Pyatikhatsky District Court in the Dnipropetrovsk region reviewed an incident in which an investigator requested a search based on the results of a rapid DNA analysis performed using *Rapid DNA* technology. On September 9, 2023, it was found that biological material was seized from the scene, which was examined using the *ANDE 6C* device. Research into the substances found in the victim's body led to

28 Кримінальний процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 22.04.2025).

29 Там само.

30 Кримінальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 22.04.2025).

the identification of a male's genotype. Later, as part of the pre-trial investigation, samples of buccal mucosa were taken from the suspect, which were also examined via *ANDE 6C*, as confirmed by the property inspection report dated September 6 and 22, 2023. The comparative analysis of genetic profiles showed a match, which served as the basis for subsequent procedural actions³¹.

It is also worth noting that, in this case, the materials were attached to the reports on item inspection that documented the use and presence of the DNA analyzer, rather than being included in a separate report or specialist opinion on the identity of DNA profiles. From a procedural standpoint, this approach is insufficient since using the device does not provide information about the genetic match, credibility, research method, or *STR* loci used, etc.

Let us conclude that results of the DNA laboratory analysis are issued as a specialist's document as per Pt. 1 of Art. 71 of the CPC, and not just recorded in the device inspection report. Otherwise, there is a risk of such data being recognized as improper evidence due to the lack of a procedural method for fixing and certifying them.

The use of the *ANDE 6C* mobile DNA laboratory in criminal proceedings in Ukraine is increasingly being documented in investigative reports and court rulings as part of the evidentiary basis. The analysis of court practice indicates the forma-

tion of certain trends in the application of such results, but also reveals a number of procedural inaccuracies regarding the correct definition of an investigative action: inspection of items or documents. Let's consider some examples.

According to the court judgment drawn by the Fastiv City District Court of Kyiv Region dated October 20 and 21, 2023, it was found that the investigator, in collaboration with a forensic specialist, conducted an inspection of items and reports on the identified DNA profiles and tables of illustrations. Everything was recorded in the report. Four envelopes containing wooden swabs with samples from a bucket, the floor, the feet of PERSON_4, and his/her buccal mucosa were inspected. Each swab was placed in a separate *ANDE I-Chip*, assigned a unique identifier in the *FAIRS* system, and then placed in the *ANDE 6C* genetic analyzer. Consequently, the corresponding DNA profiles were obtained. They were later compared using *FAIRS Client Software*³².

Interestingly, in this case, the investigator, in collaboration with a forensic specialist, inspected items and reports of DNA analysis, which does not contradict the CPC and the Instruction on the procedure for seizure, accounting, storage, and transfer of physical evidence in criminal cases, valuables, and other property by the inquiry, pre-trial investigation, and court³³; however, it would be preferable if they

31 Ухвала П'ятихат. райсуду Дніпропетр. обл. від 23.09.2023 р. Справа № 190/1885/23. Провадж. № 1-кп/190/376/23 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/113676188> (date accessed: 22.04.2025).

32 Вирок Фастів. міськрайсуду Київ. обл. від 23.01.2024 р. Справа № 381/321/24. Провадж. № 1-кп/381/232/24 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/116472692> (date accessed: 22.04.2025).

33 Інструкція про порядок вилучення, обліку, зберігання та передачі речових доказів у кримінальних справах, цінностей та іншого майна органами дізнання, досудового слідства і суду : затв. наказ. Генпрокуратури України, МВС України, ДПА України, СБ України, Верхов. Суду України, ДСА України від 27.08.2010 р. № 51/401/649/471/23/125. URL: <https://zakon.rada.gov.ua/laws/show/v0051900-10#Text> (date accessed: 22.04.2025).

first inspected items (from the moment of unpacking the envelopes containing the seized items to the time they are placed in DNA laboratory cartridges), followed by a document inspection. This would involve displaying computer data after the samples have been loaded into the system. However, it is noteworthy that rapid analysis reports were attached to the aforementioned inspection report of items and documents, so we have every reason to believe that such reports are independent evidence in these criminal proceedings. Thus, the inspection report included not only items (swabs), but also the report documents with rapid analysis results, which are, in fact, computer data obtained after processing samples. The report exhibits signs of two different investigative actions: the inspection of items and the inspection of documents. It would be more appropriate, however, to conduct these inspections separately: first, inspect physical media, and then information recorded in digital format.

The ruling of the investigating judge of the Kyiv District Court of Odesa states that the suspicion is based on the data of the document inspection report (information from the *ANDE 6C Rapid DNA-Analysis* mobile laboratory³⁴). Thus, in this case, the investigator complied with procedural requirements (inspection of the document on the information about mobile DNA laboratory).

The ruling of the investigating judge of the Industrial District Court of Dnipro City notes the following: *“From the motion records, it is clear that the suspicion is confirmed and substantiated by the evidence*

collected in the criminal proceedings: <...> Item and document inspection reports dated September 5, 6, and 22, 2023, state that, following the seizure of biological material from the body of the deceased PERSON_7, it was examined via the technology of automatic rapid DNA profiling using “ANDE Rapid DNA 6C” devices. According to the indicated study, the male sex genotype was identified. As part of the pre-trial investigation, biological samples were seized from PERSON_6, INFORMATION_1, namely the buccal mucosa (saliva), and his genotype was determined with the help of a rapid DNA analyzer. An automated DNA database search established a match between the identified genotype obtained from the sample collected during the inspection of PERSON_7’s body and the genotype obtained from the buccal mucosa of PERSON_6”³⁵. Subsequently, a genetic molecular examination was conducted in these criminal proceedings. According to the results, the male DNA found in the under-nail contents of the victim’s left hand (PERSON_7) could have come from the suspect (PERSON_6) with a probability of at least 99.9999999999999982%. The DNA found in the vaginal contents of PERSON_7 (the victim) can be attributed to PERSON_6 (the suspect) with a probability of at least 99.9999999999999982%.

In this case, we observe that the investigator, in collaboration with the forensic specialist, also conducted an inspection of items and documents (information on mobile DNA laboratory). This revealed a match in the samples, which was further confirmed by the molecular genetic examination with a probability of 99.9 %.

34 Ухвала Київ. райсуду м. Одеса від 26.03.2024 р. Справа № 947/10256/24. Провадж. № 1-кс/947/4278/24 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/117923939> (date accessed: 22.04.2025).

35 Ухвала Індустр. райсуду м. Дніпро від 16.01.2024 р. Справа № 202/19874/23. Провадж. № 1-кс/202/512/2024 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/116367914> (date accessed: 22.04.2025).

For instance, the ruling of the Kyiv-Svyatoshinsky District Court of Kyiv Region issues the statement as follows: *“The validity of PERSON_5’s suspicion of committing this crime is supported by the evidence collected in the criminal proceedings, namely: <...> the inspection report of items using ANDE 6C genetic analyzer No. NUMBER_1. This device was used to produce and process DNA profiles from the following samples: “01.12.2023_ERDR_3420_shtanu”, “01.12.2023_ERDR_3420_skotch”, “01.12.2023_3420_zapalnuchka”, “01.12.2023_3420_rykavutsya_prava”, “01.12.2023_3420_ztyashka”, “01.12.23_Rubin_A.G.07.05.1951_5” dated December 1, 2023; the inspection report of items using ANDE 6C genetic analyzer No. NUMBER_1, which was used to produce and process DNA profiles from the following samples: “11.12.23_buk_POGREBNUY_O.V._1981”, “11.12.23_buk_POGREBNUY_O.V._1981_2”; a match was found between the DNA profiles “11.12.23_buk_POGREBNUY_O.V._1981”, “11.12.23_buk_POGREBNUY_O.V._1981_2” with samples “INFORMATION_2”, “INFORMATION_3”, “01.12.2023_3420_zapalnuchka”, “01.12.2023_ERDR_3420_skotch”, “01.12.2023_3420_ztyashka” (i.e., these samples belong to one male person, namely PERSON_5, INFORMATION_1) as well as among other evidence considered in its totality”*³⁶.

In this case, the investigator also made a procedural error because he examined documents rather than physical evidence from the moment the data displayed by the genetic analyzer and reproduced by the computer were examined. This constitutes a different investigative action.

The Zhytomyr Court of Appeal dismissed the suspect’s appeal on the following grounds: *“The reported suspicion is supported by: <...> the report on item inspection, specifically her underwear, voluntarily provided by PERSON_10 (the victim), revealed the presence of white and brown biological traces of an unknown origin; the report on PERSON_8’s detention, during which his personal belongings were seized, including underwear on which traces of a brown substance of biological origin were found; the report on item inspection, during which the ANDE 6C genetic analyzer No. and 7236 was used, established that the brown substance found on PERSON_11’s underwear contained biological traces of PERSON_10 (the victim); witness interrogation protocols; and physical evidence”*³⁷. Therefore, in this case, the investigator also made a procedural error, since he did not examine the ANDE 6C DNA laboratory itself, but the information displayed in it and reproduced on the computer.

The ruling of the Kyiv-Svyatoshinsky District Court of Kyiv Region issues the following statement: *“the reasonableness of PERSON_4’s suspicion is confirmed by the case materials from the criminal proceedings that have been collected so far: <...> the item inspection report dated February 17, 2024, compiled with the participation of a forensic expert from the Criminal Support Department of the Investigative Division of the Main Department of the National Police of the Kyiv Region. The “ANDE 6C” DNA analyzer was used to process the samples and the following DNA profiles were identified: Paper envelope No. 1: swabs from the head wounds of PERSON_7’s corpse; Paper envelope No. 2: swabs*

36 Ухвала Києво-Святош. райсуду Київ. обл. від 12.12.2023 р. Справа № 369/20974/23. Провадж. № 1-кс/369/4121/23 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/115861608> (date accessed: 22.04.2025).

37 Ухвала Житомир. апеляц. суду від 03.06.2024 р. Справа № 279/3104/24. Провадж. № 11-сс/4805/345/24 / Там само. URL: <https://reyestr.court.gov.ua/Review/119587381> (date accessed: 22.04.2025).

from the head wounds of PERSON_7's corpse; Paper envelope No. 3: blue pants with traces of RNA that were collected from PERSON_4. The results established a probable match between the DNA profile and the sample: "541_krov_tryp_mirshyk.v.o.1937.2" (taken from the head wound belonging to PERSON_7), and "541_zmuv_RBK_shtanu.1", "541_zmuv_RBK_shtanu.2" (taken from the blue pants containing RNA traces belonging to PERSON_4)"³⁸.

In this case, the investigator also made a similar procedural error: instead of inspecting the DNA laboratory, he inspected the information displayed in it and reproduced on the computer. He should have inspected the DNA laboratory documents (DNA laboratory information).

As we can see, document inspection reports were used in the above court decisions. Nevertheless, it is no longer undisputable that opinions of specialists entirely derived from reports obtained from the *Ande 6C* DNA Laboratory cannot be used as evidence. Such opinions will be considered evidence in conformity with the CPC. The procedural source of this evidence is a document, since a specialist's opinion corresponds to the features of the above-mentioned document. According to the resolution of the Criminal Court of Cassation of the Supreme Court in Case No. 344/8350/22 dated November 7, 2024, a system analysis of the rules of Arts. 84 and 298-1 of the CPC shows that "*specialist's opinion, as defined in paragraph 2 of Article 298-1 of the CPC, is not considered evidence in criminal proceedings for crimes. Therefore,*

it cannot be used to confirm or refute the circumstances that need to be proven in criminal proceedings for the crimes set out in Part 1 of Article 91 of the CPC"³⁹. This thesis is difficult to substantiate because it fails to differentiate between the concepts of *evidence* and *sources of evidence*, which is unacceptable.

Conclusions

In light of the above, we can assert that mobile DNA laboratories, particularly the *ANDE 6C* system, represent a significant advancement in the field of pre-trial investigation and are becoming increasingly commonplace in Ukraine. These laboratories provide fast, accurate, and mobile examination of biological samples directly at the scene, which is highly important amid active hostilities, humanitarian disasters, or the need for rapid identification. Thanks to its capacity to automate processes, deliver highly accurate results, and efficiently process a variety of samples, the *ANDE 6C* has proven to be an effective tool that promotes procedural efficiency, has a psychological impact on the offender, and prevents the commission of new crimes.

The experience of utilizing this technology in other jurisdictions, specifically in the US, has been validated through the official recognition by the Federal Bureau of Investigation and the development of appropriate standards. In this regard, the procedural aspect of proper presentation of results is of particular importance. As shown by this research, the report from

38 Ухвала Києво-Святош. райсуду Київ. обл. від 16.04.2024 р. Справа № 369/6089/24. Провадж. № 1-кс/369/1338/24 / ЄДРСР : вебсайт. URL: <https://revestr.court.gov.ua/Review/118520604> (date accessed: 22.04.2025).

39 Постанова Касаційн. кримін. суду Верховн. Суду від 07.11.2024 р. Справа № 344/8350/22. Провадж. № 51-1808км24 / ipLex : вебсайт. URL: <https://iplex.com.ua/doc.php?reg-num=123081920&red=10000308c65932c94111ffbf6be800b1e242da&d=5> (date accessed: 22.04.2025).

the ANDE 6C DNA laboratory can be issued as a specialist's opinion. Following the CPC, such an opinion is recognized as evidence in criminal proceedings, and the document is considered the procedural source of this evidence.

A printout of the rapid DNA test report has all the features of a document: contains a physical medium, information recorded in alphanumeric format that confirms legally relevant circumstances and can be reproduced in electronic or paper format. This printout is to be compiled by an authorized person with specific expertise. The investigator or forensic specialist's signature is another form of its certification. Court practice analysis demonstrates that such documents are already being used as evidence in criminal proceedings. Although, procedural errors in their presentation have been also revealed, including the combination of two different investigative actions—inspection of items and inspection of documents—in one report. Nevertheless, investigating judges focus predominantly on the content of such documents rather than their titles, unless these errors significantly affect the rights of the parties to the proceedings.

Given the identified challenges, we deem it feasible to develop a separate departmental instruction that would govern the procedure for conducting *Ande 6C* DNA laboratory examinations and introduce a standardized format for the relevant specialist conclusion. Implementing clear rules will increase legal certainty and the general level of confidence in the results of such analyses as a full-fledged source of evidence.

To conclude, rapid DNA analysis technologies have the potential to substantially alter the practice of collecting evidence in criminal proceedings, enhance the

efficiency of law enforcement, and promote the prompt establishment of truth in a case.

**Особливості використання
результатів ДНК-досліджень
мобільних лабораторій
у кримінальному процесі**

**Катерина Латиш,
Данило Жидков**

Мета статті — проаналізувати процесуальний статус результатів експресаналізів ДНК, виконаних за допомогою мобільних і стаціонарних ДНК-лабораторій, виокремити переваги й обмеження таких досліджень, визначити критерії відповідності їх результатів вимогам щодо належності, допустимості, достовірності та достатності доказів, а також запропонувати шляхи вдосконалення правового регулювання процесуальної форми застосування спеціальних знань у цій сфері. Для досягнення поставленої мети застосовано комплекс загальнонаукових і спеціально-правових методів: індукцію, дедукцію, аналіз, синтез, порівняння, прогностичний, порівняльно-правовий, формально-логічний. Досліджено процесуальний статус результатів експресаналізів ДНК, виконаних за допомогою мобільних і стаціонарних ДНК-лабораторій. Розглянуто відмінності між мобільними та стаціонарними лабораторіями, з'ясовано особливості збирання й оброблення біозразків, окреслено проблемні аспекти допустимості таких результатів як доказів. Особливу увагу приділено актуальності застосування мобільних технологій в умовах воєнних дій в Україні та необхідності вдосконалення правового регулювання їх застосування. Ретельно проаналізовано також останні законодавчі зміни й судову практику з оцінювання експресдосліджень.

Ключові слова: мобільні ДНК-лабораторії; біологічні зразки; експертне

дослідження; докази, властивості доказів; процес доказування; ДНК-ідентифікація.

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Declaration of Competing Interest

The authors declare no conflict of interest.

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Determining the Market Value of Completely Destroyed Property Through the Russian Federation's Armed Aggression

Olena Usenko*

* PhD in Law, Chernihiv Branch of the Kyiv Scientific Research Institute of Forensic Expertise, Chernihiv, Ukraine,
ORCID: <http://orcid.org/0000-0003-0534-5422>,
e-mail: chernihiv@kndise.gov.ua

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The aim of this study is to examine the methodology and practical aspects of assessing the market value of assets that have been completely destroyed, and to identify the legal and methodological principles that govern this process. To achieve this goal, we analyzed the relevant statutory instruments, employed system-structural and comparative methods, and applied the expert-valuation method. We address the pressing issue of valuing property that has been entirely erased by the Russian Federation's armed aggression against Ukraine. We demonstrate the necessity of developing and implementing effective damage-assessment mechanisms, since conventional valuation approaches are inapplicable under wartime conditions. Our review encompasses current Ukrainian legislation and international practices in this field. We analyze existing methodologies for determining the market value of destroyed real estate and movable property, including damaged land

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parcels. Special attention is paid to the legal and regulatory environment in Ukraine, which fails to meet the requirements arising from large-scale destruction during armed conflicts. We argue that merely compensating direct losses is insufficient; it is equally essential to ensure the full restoration of enterprise operations and infrastructure, and to account for potential economic losses arising from destroyed assets. In addition to evaluating current methodologies and legal rules, we offer specific recommendations for improving legislation and practical valuation procedures in an armed-conflict context.

Keywords: market value; destroyed property; asset valuation; legislative framework; valuation methodology; armed aggression; damage compensation; case law.

Research Problem Formulation

Determining the market value of property that has been completely destroyed poses one of the most critical challenges in law application, particularly during armed conflicts. The Russian Federation's aggression against Ukraine has inflicted widespread damage on private and commercial assets, generating complex legal, economic, and social issues. This research is motivated by the urgent need to establish a unified mechanism for accurately quantifying losses and delivering fair compensation to affected parties.

Article Purpose

The article aims to analyze current legislation and judicial practice, develop science-based proposals for improving the methodology for determining the market value of fully destroyed property, and formulate recommendations for enhancing the regulatory framework in this area.

Research Methods

To achieve the stated objective, a range of methods was applied: analysis of legal regulations (study of Ukrainian legislation and international property valuation standards); system and structural analysis (examination of organizational and legal structures ensuring the valuation of destroyed property); comparative method (comparing Ukrainian practice and international damage-assessing experience in wartime); forensic appraisal method (relying on the expertise of property valuation specialists to identify primary problems and propose solutions).

Analysis of Essential Researches and Publications

The issue of determining the market value of destroyed property due to armed conflict is actively investigated by both domestic and foreign scientific and forensic communities. However, many relevant field studies are either incomplete

or cover only certain aspects (for example, valuation methodologies or legal compensation mechanisms). Ukrainian researchers point to the imperfection of regulatory frameworks, the difficulty of documenting destruction, and the lack of a single approved methodology. For instance, M. Havrys and O. Havrys in their thesis: *The Issues in Damage Cost Estimation due to the Russian Armed Aggression in Ukraine* note that the key barrier is legal uncertainty in documenting the extent of damage ¹. V. Andrieieva and M. Hofman in the *Appraisal of Damages From Destruction of Property Consequences of Military Aggression of the Russia Federation in Ukraine* research paper focus on analyzing the impact of inflation on the value of assessed movable and real estate property, as well as on categorizing approaches to determining damage and losses inflicted on Ukraine by the Russian aggression ². Ukrainian scholars also cite examples of effective compensation approaches from foreign practice. O. Senatarova's textbook: *Human Rights and Armed Conflicts* examines the experience of the UN Compensation Commission and the European Court of Human Rights (hereinafter referred to as ECtHR), noting the importance of the presumption of proven loss in cases of armed aggression when victims lack access to evidence ³.

The legal basis for compensation for damage caused to natural persons and legal entities of private law as a result of the full-scale war of the Russian Federation against Ukraine by O. Havrylenko emphasizes that one of the tasks currently facing Ukraine is the development and implementation of effective mechanisms not only at the national level, but also through close cooperation with the entire civilized world—in other words, with the broader international community—to restore and protect the human rights and freedoms violated by Russia in its aggression against Ukraine ⁴. Thus, the analysis of sources indicates scholarly interest in the topic and confirms the need for comprehensive interdisciplinary research that combines legal, economic, and technical approaches.

Main Content Presentation

Valuing market value for completely destroyed property demands accounting for multiple factors: condition before destruction, market conditions at the time of destruction, and environmental context. Various methods should be also deployed: comparative, cost, and income.

Since Russia's full-scale invasion on February 24, 2022, Ukraine has experienced the mass destruction of property

- 1 Гаврись М., Гаврись О. Проблеми оцінки збитків від російської агресії в Україні. *Маркетингові стратегії, підприємництво і торгівля: сучасний стан, напрямки розвитку* : тези доп. V Міжнар. наук.-практ. інтернет-конф. (Київ, 18.04.2024). Київ, 2024. С. 40—43. URL: https://library.knuba.edu.ua/books/zbirniki/25/18_04_2024.pdf (date accessed: 21.04.2025).
- 2 Андреева В., Гофман М. Оцінка збитків від пошкодження майна внаслідок військової агресії російської федерації в Україні. *Вчені записки Університету "КРОК"*. 2024. № 1 (73). С. 20—22. DOI: 10.31732/2663-2209-2024-73-20-27 (date accessed: 21.04.2025).
- 3 Сенаторова О. В. Права людини і збройні конфлікти : навч. посіб. Київ, 2018. 208 с. URL: https://nlu.edu.ua/wp-content/uploads/2021/05/msc_6_copy.pdf (date accessed: 21.04.2025).
- 4 Гавриленко О. О. Правова основа відшкодування шкоди, завданої фізичним особам та юридичним особам приватного права внаслідок повномасштабної війни російської федерації проти України. *Науковий вісник Ужгородського національного університету. Серія: Право*. 2024. Т. 2. № 86. С. 51—58. DOI: 10.24144/2307-3322.2024.86.2.8 (date accessed: 21.04.2025).

belonging to both natural and legal persons. Determining the market value of completely destroyed property is an essential step in the process of filing compensation claims, both within the national jurisdiction and at the international level.

Market value equals the most probable price achievable in an arm's-length sale between informed, willing parties on the valuation date (on the open market) ⁵.

When determining the value of completely destroyed property, appraisers reconstruct that pre-loss value instead of examining the destroyed object ⁶.

The main valuation purpose is to determine the extent of losses/damage for subsequently:

- filing claims with Ukrainian courts;
- filing claims with international courts;
- recording losses in state registers (specifically via the Diia platform).

The appraiser must conduct a thorough market analysis, considering location, physical characteristics, and other pertinent attributes.

Determining the market value for destroyed property has certain distinct features:

- the need to apply the retrospective valuation date (immediately predating destruction) ⁷;
- the physical asset absence;
- analyzing secondary documentation: technical reports, photographs, video footage, contracts, cadastral records, etc. ⁸
- Complete property destruction is verified via:
 - inspection reports;
 - expert's opinions;
 - government or municipal decisions;
 - photo documentation;
 - video footage.

The procedure for valuing property that has been totally destroyed in an armed conflict can be considered a complex task, demanding close attention to the conflict's specific circumstances. Any retrospective valuation must rest on a thorough review of original documents and the market conditions prevailing at that time.

Ukraine's current legislation falls short, since it does not address the unique challenges of wartime valuation. Passing a specialized law on property valuation in armed-conflict settings—one that introduces streamlined procedures for documenting destruction and compensating losses—would be a crucial step forward.

5 Про оцінку майна, майнових прав і професійну оціночну діяльність в Україні : Закон України від 12.07.2001 р. № 2658-III (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2658-14#Text> (date accessed: 21.04.2025).

6 Національний стандарт № 1 “Загальні засади оцінки майна і майнових прав” : затв. постанов. КМУ від 10.09.2003 р. № 1440 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1440-2003-%D0%BF#Text> (date accessed: 21.04.2025).

7 Методика оцінки майна : затв. постанов. КМУ від 10.12.2003 р. № 1891 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1891-2003-%D0%BF#Text> (date accessed: 21.04.2025).

8 Порядок подання інформаційного повідомлення про пошкоджене та знищене нерухоме майно внаслідок бойових дій, терористичних актів, диверсій, спричинених збройною агресією Російської Федерації проти України : затв. постанов. КМУ від 26.03.2022 р. № 380 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/380-2022-%D0%BF#Text> (date accessed: 21.04.2025).

The full-scale armed aggression of the Russian Federation against Ukraine has caused massive destruction of real estate, vehicles, movable property, and other assets. To determine fair market value for those losses, Ukraine needs a clear legal framework covering valuation methods, damage registration, and protection of victims' property rights. Such a framework should include basic legislative acts, special decrees and regulations, international legal acts, and judicial recourse mechanisms. Let's examine these elements in detail.

1. Basic legislative acts

- The Law of Ukraine: *On Valuation of Property, Property Rights and Professional Valuation Activity in Ukraine* establishes the legal basis for appraisal practice, defines "market value", and sets out core valuation principles ⁹.
- Ukraine's national valuation standards—approved by Cabinet of Ministers resolutions—specifically National Standard No. 1: *General Principles of Valuing Property and Property Rights* ¹⁰; National Standard No. 2: *Valuation of Immovable Property*—lay down general requirements for determining market value ¹¹.

2. Special wartime regulations

- The Procedure for Determining Damage and Losses Incurred by Ukraine Due to the Russian Federation's Armed Aggression ¹².
- Ukraine's Cabinet of Ministers Resolution No. 380: *On Collection, Processing and Accounting of Information on Damaged and Destroyed Real Estate Caused by Hostilities, Terrorist Acts or Sabotage in Connection with the Russian Federation's Armed Aggression Against Ukraine* dated March 20, 2022, which approves the procedure for submitting an information report on damaged or destroyed real estate resulting from hostilities, terrorist acts, or sabotage caused by Russia's armed aggression against Ukraine ¹³.
- The Methodology for Determining Damage and Losses Suffered by Enterprises, Institutions, and Organizations of All Ownership Forms Due to Destruction or Damage to Their Property in Connection With the Russian Federation's Armed Aggression, Including Lost Profit from Interruptions or Obstacles to Business Activity ¹⁴.

9 Про оцінку майна ... URL: <https://zakon.rada.gov.ua/laws/show/2658-14#Text> (date accessed: 21.04.2025).

10 Національний стандарт № 1 ... URL: <https://zakon.rada.gov.ua/laws/show/1440-2003-%D0%BF#Text> (date accessed: 21.04.2025).

11 Національний стандарт № 2 "Оцінка нерухомого майна" : затв. постанов. КМУ від 28.10.2004 р. № 1442 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1442-2004-п#Text> (date accessed: 21.04.2025)

12 Порядок визначення шкоди та збитків, завданих Україні внаслідок збройної агресії Російської Федерації : затв. постанов. КМУ від 20.03.2022 р. № 326 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/326-2022-%D0%BF#Text> (date accessed: 21.04.2025).

13 Порядок подання інформаційного повідомлення ... URL: <https://zakon.rada.gov.ua/laws/show/380-2022-%D0%BF#Text> (date accessed: 21.04.2025).

14 Методика визначення шкоди та обсягу збитків, завданих підприємствам, установам та організаціям усіх форм власності внаслідок знищення та пошкодження їх майна у зв'язку

These acts require mandatory documentation of property destruction, retrospective valuation as of the destruction date, and specify how to handle documentary evidence.

3. International legal acts

- Convention relative to the Protection of Civilian Persons in Time of War (Geneva Convention IV, 1949) — obliges states to compensate for damage to civilian property¹⁵;
- Convention for the Protection of Human Rights and Fundamental Freedoms (Protocol No 1, Art. 1) — guarantees the right to peaceful enjoyment of possessions¹⁶.

Violation of these rules opens the door to compensation claims before international tribunals.

4. Judicial recourse mechanisms

Determining market value is crucial for substantiating loss amounts in civil, commercial, and administrative cases. Valuation reports must accompany the claim or serve as evidence.

In sum, Ukraine's regulatory framework for valuation of destroyed property rests on the current property valuation legislation, supplemented by special wartime acts. Yet, there is a need for further improvement of

procedures that would ensure effective protection of affected persons' rights.

An analysis of Ukraine's court decisions demonstrates that there is no uniform approach to valuing destroyed assets, complicating enforcement.

Case law on determining the market value of lost property and compensation for damages resulting from Russia's armed aggression has been developing in Ukraine since 2022. Such cases rely on detailed documentary proof of the relevant facts of destruction, proper valuation of lost property, and legal arguments holding the aggressor state responsible. Let us provide a few examples.

1. The LLC "Progress" submitted a claim against the Russian Federation, represented by its Ministry of Defense, to recover USD 16,490,691 in damages for destroyed and stolen property resulting from the occupation of the territory. Documents confirming the property's ownership, inspection reports, photographic evidence of the damage, and financial statements substantiating the value of the lost property served as pieces of evidence. In its decision of October 3, 2024 (No. 908/1891/24), the Zaporizhzhia Commercial Court issued the following: to partially satisfy the claim, recognizing the existence of the defendant's unlawful actions and the causal link

із збройною агресією Російської Федерації, а також упущеної вигоди від неможливості чи перешкод у провадженні господарської діяльності : затв. наказ. Мінекономіки України, Фонду держмайна України від 18.10.2022 р. № 3904/1223. URL: <https://zakon.rada.gov.ua/laws/show/z1522-22#Text> (date accessed: 21.04.2025).

15 Женевська конвенція про захист цивільного населення під час війни від 12.08.1949 р. : ратифік. із застереж. Указом ПВР УРСР від 03.07.1954 р. (зі змін. та допов.). URL: https://zakon.rada.gov.ua/laws/show/995_154#Text (date accessed: 21.04.2025).

16 Протокол до Конвенції про захист прав людини і основоположних свобод від 12.03.1952 р. (зі змін. та допов.) : ратифік. Законом України від 17.07.1997 р. № 475/97-ВР. URL: https://zakon.rada.gov.ua/laws/show/994_535#Text (date accessed: 21.04.2025).

between those actions and the inflicted losses ¹⁷.

2. A claim was filed with the Kyiv Commercial Court seeking compensation for property destroyed during hostilities in Kherson Oblast. The claimant presented ownership documents, inspection reports, photographic evidence of the damage, and financial statements establishing the value of the lost assets as pieces of evidence. In its decision of May 13, 2024 (No. 119166228 in Case No. 910/2822/24), the court found actual losses and a causal link between the defendant's actions and the damage incurred, and it awarded compensation ¹⁸.
3. Another claimant petitioned the Malynovskyi District Court in Odesa to have the right of ownership formally recognized for a house and outbuildings destroyed by the Russian Federation's armed aggression. The claimant sought to secure compensation and provided documents confirming ownership, inspection reports, and photographic evidence documenting the destruction. The court granted that petition on June 18, 2024 (Case No. 521/7347/24), establishing the claimant's ownership of the destroyed property ¹⁹.
4. In Mykolaiv Oblast, the Domanivskyi District Court heard a claim for compensation for property damaged or destroyed as a result of combat operations. Relying on title documents, inspection reports, photographic evidence documenting the destruction, and financial statements of the assets' value, the court determined that all elements of a civil offense were met and ordered to compensate for the caused damages on August 29, 2024 (Case No. 910/3112/24) ²⁰.
5. In Chernihiv Oblast, the Commercial Court accepted a claim for compensation on account of property destroyed by armed aggression. The claimant submitted documents confirming ownership, inspection reports, photographic evidence documenting the destruction, and financial statements confirming the value of the lost property. On September 25, 2024, the court docketed Case No. 927/813/23, taking into account the application submitted by the claimant; the dispute concerns the restitution of UAH 6,609,775.00 in material losses ²¹.

Case law in Ukraine for determining and recovering the market value of property completely destroyed is evolving

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- 17 Рішення господар. суду Запоріж. обл. від 03.10.2024 р. № 122497577. Справа № 908/1891/24. URL: <https://youcontrol.com.ua/catalog/court-document/122497577> (дата звернення: 21.04.2025).
 - 18 Рішення господар. суду м. Києва від 13.05.2024 р. № 119166228. Справа № 910/2822/24. URL: <https://youcontrol.com.ua/catalog/court-document/119166228> (date accessed: 21.04.2025).
 - 19 Рішення Малинов. райсуду м. Одеси від 18.06.2024 р. Справа № 521/7347/24. Провадж. № 2-о/521/323/24. URL: <https://zakononline.com.ua/court-decisions/show/120054806> (date accessed: 21.04.2025).
 - 20 Рішення Доманів. райсуду Миколаїв. обл. від 29.08.2024 р. Справа № 910/3112/24. URL: <https://opendatabot.ua/court/121724492-0a5909d91cd339ac102ce623822e1c16> (date accessed: 21.04.2025).
 - 21 Рішення господар. суду Чернігів. обл. від 25.09.2024 р. № 121858775. Справа № 927/813/23. URL: <https://youcontrol.com.ua/catalog/court-document/121858775/> (date accessed: 21.04.2025).

rapidly. Key trends include relying on retrospective valuation; demanding airtight proof of ownership and of the destruction itself; involving certified appraisers and experts; and a welcoming shift toward accepting digital evidence (photo and video registration in the Diia app).

Determining destroyed property value and securing compensation—whether in domestic or international courts—plays a crucial role in crafting fair-compensation mechanisms for civilians caught in conflict zones.

Ukraine can also draw on other countries' experiences to refine its own legal approaches. Let's consider a few examples.

1. Iraq's post-Gulf War reparations to Kuwait under the United Nations Compensation Commission (1991–2022). After Iraq's invasion (1990–1991), UN Security Council Resolution 692 created the United Nations Compensation Commission to process claims for destroyed property, natural resources, and infrastructure²². Claimants backed their cases with independent expert reports, on-site inspection records, and internationally certified valuations. Over 31 years of the Commission's activity, Iraq has paid out more than USD 52.4 billion in compensation to Kuwaiti claimants, including those affected by the destruction of real estate²³. This is the first time a large-scale international mechanism has

held an aggressor state financially accountable for civilian property losses.

2. The case of *Sargsyan v. Azerbaijan* (ECtHR, decision of 16 June 2015, No. 40167/06). An Armenian citizen claimed that the Nagorno-Karabakh conflict had stripped him of his home. The evidence consisted of: ownership documents and supporting materials demonstrating the impossibility of accessing the property. The Court found a breach of Art. 1 of Protocol No. 1 of the Convention for the Protection of Human Rights and Fundamental Freedoms (hereinafter referred to as the *Convention*)—peaceful enjoyment of possessions—and ordered Azerbaijan either to restore his property rights or to pay compensation²⁴. ECtHR underscored that states must respect ownership even in wartime.
3. Similarly, in the *Loizidou v. Turkey* case (*Article 50*; ECtHR, decision of 28 July 1998, No. 15318/89), a Cypriot citizen sought redress for loss of access to her home in Northern Cyprus following the Turkish invasion. She submitted the recording of property rights in the State Register and the proof that she could not enter her property. ECtHR ruled that indefinite occupation of property without compensation violated the

22 Resolution 692 (1991) / adopted by the Security Council at its 2987th meeting, on 20 May 1991. URL: <https://digitallibrary.un.org/record/113598?v=pdf> (date accessed: 21.04.2025).

23 Компенсаційна комісія ООН — перспектива фінансування відновлення довкілля в Україні після війни із РФ / Екологія. Право. Людина : вебсайт. 2022. 14 с. URL: <https://epl.org.ua/wp-content/uploads/2022/05/Kompensatsijna-komisiya-OON.pdf> (date accessed: 21.04.2025).

24 Case of *Sargsyan v. Azerbaijan*. European Court of Human Rights. Strasbourg. Judgment of 16.06.2015. № 40167/06. URL: <https://hudoc.echr.coe.int/eng?i=001-155662> (date accessed: 21.04.2025).

Convention and made the following decision: Turkey must compensate the woman for the loss of control over her real estate ²⁵.

4. The case *Concerning the Factory at Chorzów (Germany v. Poland*; Permanent Court of International Justice, 1928). Germany sought restitution for expropriated industrial assets in Poland, backing its claims with ownership records and contemporaneous valuations. The Court ordered Poland to pay full compensation reflecting the actual pre-expropriation value ²⁶. This case became the basis for the international principle that “pecuniary damage is that the applicant should be placed, as far as possible, in the position in which he or she would have been in had the violation not occurred”.
5. In *Nicaragua v. United States* (International Court of Justice, 1986), Nicaragua alleged U.S. interference in its internal affairs and the destruction of infrastructure. With evidence including eyewitness testimony regarding damage to civilian infrastructure and damage-cost estimates, the Court held the U.S. responsible and ordered compensation (though the U.S. did not acknowledge the ruling) ²⁷. The judgment reinforced that any use of force causing civilian property damage triggers an obligation to make reparations.

Thus, international case law confirms a universal principle: destroyed property warrants full compensation; payouts must reflect actual market losses; meticulous proof of ownership and of the property's pre-loss condition is vital; and, where appropriate, special compensation mechanisms through international bodies are available.

Valuation methodology for real estate property combines three core elements: estimating reconstruction costs, surveying market conditions at the valuation date, and quantifying an owner's lost benefits from interrupted use. It covers not only direct repair or rebuilding expenses but also compensation for income the property would have generated under normal operation.

Russia's armed aggression has inflicted widespread destruction on Ukraine's built environment. Accurately determining the market value of completely destroyed real property is indispensable for recording losses, assembling evidentiary support in court disputes, securing compensation awards, and processing insurance claims.

The foundation of this methodology rests on both international and national valuation standards.

Key approaches to real estate valuation include:

- 1) *Cost approach*. Values the asset by calculating the cost to rebuild or replace it, then subtracting depreciation. Steps: estimate the cost of con-

25 Case of *Loizidou v. Turkey*. European Court of Human Rights. Strasbourg. Judgment of 30.07.1998. № 15318/89. URL: <https://hudoc.echr.coe.int/eng?i=001-58201> (date accessed: 21.04.2025).

26 The *Factory At Chorzow (Claim for Indemnity) (The Merits)*. *Germany v. Poland*. Judgment of 13.09.1928. № 13. URL: https://www.worldcourts.com/pcij/eng/decisions/1928.09.13_chorzow1.htm (date accessed: 21.04.2025).

27 *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*. Overview of the Case / International Court of Justice : web. URL: <https://www.icj-cij.org/case/70> (date accessed: 21.04.2025).

structing an identical new building; account for physical wear and functional or economic obsolescence.

- 2) *Comparative (market) approach*. Relies on sales of similar properties before the destruction. Adjustments consider market prices for comparable real estate, local adjustments based on location, lot size, and condition.
- 3) *Income approach*. Used less often for residential property and more for commercial assets. Projects the income the destroyed property would have generated.

Valuation process steps:

- 1) *Document destruction*. Capture photos and video; obtain damage inspection reports from the State Emergency Service of Ukraine or local councils.
- 2) *Confirm ownership*. Secure an extract from the State Register of Property Rights and cadastral records.
- 3) *Collect pre-destruction data*. Collect technical documentation (plans, permits, design drawings) and any earlier valuations (if available).
- 4) *Select valuation method*. The cost approach usually prevails, since finding direct market comparables is difficult in wartime.
- 5) *Estimate reconstruction cost*. Use current building-code estimates (DBN) or market prices for materials and labor.
- 6) *Calculate depreciation*. Determine physical deterioration, functional, and economic aging.
- 7) *Set a retrospective valuation date*. Typically, the day of destruction or before the full-scale invasion—i.e., prior to February 24, 2022.

Wartime real estate valuation faces its own challenges: no comparable sales in active combat zones; restricted access to

ruined sites; and limited means to verify technical specifications, etc.

The main method for determining the market value of completely destroyed real estate is the cost approach. It is important to apply retrospective valuation as of the pre-destruction date. Clear proof of ownership and documented destruction is essential. Valuations should draw on publicly accessible construction-market data or official state cost norms.

Valuations of movable property (technology or other objects) are also grounded on cost, comparative, and income approaches. Factors include replacement or repair costs, the asset's market value before destruction, physical condition, age, remaining useful life, and demand for similar items.

Movable assets (machinery, equipment, furniture, appliances, personal belongings, etc.) are often completely destroyed as a result of combat operations. Correctly determining its market value is of paramount importance for filing compensation claims, confirming damages in litigation, and ensuring insurance indemnity.

Key approaches to valuing movable property:

- 1) *Comparative (market) approach* is the most common method for movable assets. It relies on sales data for similar items as of—or closest to—the valuation date.
- 2) *Cost approach* used when no market comparables exist (for example, specialized machinery). You estimate the price of a new equivalent item and subtract accumulated depreciation.
- 3) *Income approach* rarely applied to movables, but suitable for revenue-generating equipment (e.g., manufacturing machines).

Valuation workflow:

- 1) *Documenting the loss* (photo- and video evidence; eyewitness testimony; official reports from the State Emergency Service or police).
- 2) *Providing documentary proof of ownership* (collect delivery-acceptance certificates, warranty cards, purchase receipts).
- 3) *Describing an item's characteristics* (brand, model, year of manufacture, special features, and any included accessories).
- 4) *Determining the market value* (search for comparables on online platforms (Prom.ua, OLX, international marketplaces). Adjust for condition, age, and usage history).
- 5) *Retrospective valuation*. Using the destruction date or the start of hostilities as the valuation benchmark.

Wartime valuation challenges: lack of exhaustive information about the trim; impossibility of physical inspection; difficulty in establishing the initial value without documents.

For totally destroyed movables, the comparative approach prevails, with the cost method reserved for unique or industrial items.

Every datum must rest on solid documentation or independent sources. Valuations should reflect the asset's condition immediately before its destruction.

Estimating the value of a vehicle that was completely destroyed as a result of combat operations presupposes the application of standard methods for assessing vehicle value. These methods include assessing the value of a new piece of equipment and taking into account the reduction in value due to the vehicle's age and use.

The widespread destruction of vehicles resulting from Russia's armed aggression has become commonplace in Ukraine. Accurate market-value assess-

ments are vital for compensation claims, litigation, insurance settlements, and account for losses.

These valuations are performed according to methodologies that adhere to national and international standards.

Fundamental approaches to valuing vehicles:

- 1) *Comparative approach* is frequently employed. Analyzing sale prices of similar vehicles, adjusting for mileage, model year, trim level, and mechanical condition.
- 2) *Cost approach* is applied for rare or special vehicles (e.g., military or heavy equipment), calculating the new unit price minus physical and functional depreciation.
- 3) *Income approach*. Occasionally used for revenue-generating commercial vehicles (trucks, taxis, buses).

Valuation steps:

- 1) *Record the destruction* (photo and video evidence; inspection reports from police or state emergency services).
- 2) *Confirm ownership* (present the vehicle registration certificate [log-book]).
- 3) *Collect vehicle data* (brand, model, year; engine type, displacement, mileage; trim level, and service history).
- 4) *Conduct market research* (identify vehicles' sales of comparable vehicles on websites like RST.ua, AUTO.RIA or international catalogs — using dates as close as possible to the destruction).
- 5) *Adjust valuation* (account for mileage, maintenance status, and any pre-existing damage).
- 6) *Apply retrospective valuation* (estimate value as of the date of destruction or the onset of hostilities).

Challenges of valuation in wartime: no access to a vehicle due to combat operations; rapid market shifts, with severe vehicle shortages; and lost vehicle documents.

The comparative approach is the main method for valuing vehicles. In specific cases, the cost approach is applied.

All vehicle specifications must be meticulously recorded, with all calculations anchored in real market data at the moment of destruction.

Russia's armed aggression has caused widespread loss of Ukraine's fertile topsoil through munitions explosions, land mining, and heavy machinery movement. Topsoil loss carries both ecological and substantial economic consequences. Accurately assessing its market value is essential for holding perpetrators liable, planning land restoration, and calculating fair compensation.

Valuing land parcels with destroyed fertile topsoils requires accounting not only for the land's base value, but also for the costs of restoring soil fertility. It is necessary to include reclamation expenses and any potential environmental impacts that may affect the parcel's value in the future.

Valuation approaches for fertile soils market value:

- 1) *Restoration-cost* approach: value is determined by expenses to rehabilitate the damaged layer or artificially restore fertility;
- 2) *Income* approach is calculated as the loss of income the landowner would have earned by using the land as intended;
- 3) *Comparative* approach is applied only in exceptional cases by comparing land value before and after destruction.

Stages of determining value:

- 1) *Document damage* (images, video footage; inspection acts and protocols issued by appropriate authorities such as State Geological Cadastre, Environmental Protection Agency).
- 2) *Determine affected area* (remote-sensing data; on-field investigations).
- 3) *Analyze damage nature* (complete destruction of topsoil; contamination by toxic substances).
- 4) *Calculate restoration charges* (cleaning the area; import of fertile soil; agronomical and technical measures — land amelioration, fertilizer application).

Valuation peculiarities: when the topsoil layer is entirely destroyed (> 30 cm), complete replacement with new soil is normally required; if the soil is contaminated, additional costs for chemical remediation must be included; mined areas demand separate demining-cost estimates.

The most appropriate method is the restoration-cost approach. The income approach is used only as a supplement to calculate lost profits.

Valuation must rely on actual data about soil types and the damage nature.

Key challenges in valuing destroyed property: lack of clear mechanisms for documenting losses; difficulty applying existing valuation standards; obstacles to accessing damaged assets. To address these issues, new valuation standards that reflect the realities of war must be developed, and modern technologies for remote damage assessment should be implemented.

The process of valuing destroyed property encounters a range of problems that complicate accurate market-value determination:

- 1) *No physical access* to the site due to occupation, minefields, or active combat operations. *Solution methods*: use

satellite imagery; eyewitness photo/video; owner and neighbor testimony; available prior technical documentation.

- 2) *Loss of title documents. Solution methods:* obtain duplicates from registration authorities (State Register of Property Rights to Immovable Property; Unified State Register of Vehicles in Ukraine); use notarized copies or archival extracts.
- 3) *Difficulty determining pre-destruction condition* (impossible to assess exact physical wear or technical state before destruction). *Solution methods:* apply average depreciation statistics by years in service; reliance on the average condition of similar-category assets.
- 4) *Market instability* (sharp price fluctuations for real estate and movable property during war). *Solution methods:* base valuations on market data as of the destruction date rather than the valuation date; conduct retrospective valuations.
- 5) *Uncertainty in valuing unique assets* (rare buildings, specialized machinery, artworks). *Solution methods:* consult international market comparables; seek guidance from specialized experts (museums, auction houses, technical institutes).
- 6) *Object identification issues* (destroyed boundaries of land parcels or building layouts). *Solution methods:* use cadastral maps; data from the Bureau of Technical Inventory; archival plans, and technical passports.

General recommendations to minimize problems: thoroughly document the asset before-war condition (photos, videos, valuations); regularly update appraisers' databases; create simplified

valuation procedures for emergencies; establish a unified registry of destroyed property to track losses.

Valuing destroyed property is a complex undertaking under war conditions. Challenges are resolved by leveraging alternative data sources, applying retrospective valuation, and adopting flexible methodologies.

Legislative and regulatory improvements are urgently needed. To improve the legislation, specialized legal regulations for wartime valuation should be introduced, featuring streamlined loss-documentation procedures and enhanced compensation mechanisms for small businesses and individuals.

The large-scale destruction caused by the Russian Federation's aggression has exposed significant gaps in Ukraine's legal framework for valuing destroyed assets. Refining legislation is critical for prompt loss accounting, fair compensation for citizens and businesses, and filing claims with international courts.

The current legislation poses the following challenges:

- 1) absence of a specialized procedure for valuing destroyed property under martial-law conditions;
- 2) lack of standardized approaches to valuing different asset classes (residential, vehicles, land);
- 3) no clear mechanisms for proving ownership when documents have been lost;
- 4) insufficient procedural assurance for valuation evidence in damage-compensation proceedings.

Proposals for legislative improvement encompass

1. Adopting a specialized law: *Recording and Valuation of Damaged and*

Destroyed Property through Armed Aggression, which shall define the procedure for valuing assets under extreme conditions and provide simplified mechanisms for confirming ownership (e.g., requests, neighbor testimony, archival extracts).

2. Amending the Law of Ukraine: *On Valuation of Property...* specifically by adding a standalone chapter: *Valuation of Property Destroyed Through Force Majeure Circumstances*.
3. Establishing a unified register of damaged / destroyed property by aligning it with the State Geocadastral data, Ministry of Justice, and State Register of Property Rights. Granting open access to judges, notaries, and insurance companies.
4. Developing a model loss-assessment methodology for various asset categories (buildings, vehicles, land, equipment). It should be mandatory for all forensic experts and courts.
5. Streamlining damage-documentation procedures — e.g., formally admit citizen-sourced photo/video, UAV data, and satellite imagery as evidence in trial proceedings.
6. Aligning national approaches with international standards.
7. Reviewing international experience, in particular:
 - Croatia (after the 1991–1995 Homeland War): enacted the Law: *On Registration and Valuation of Damaged Property*, which allows damages to be assessed based on public commission reports even without a court order;
 - Kuwait (after the 1990–1991 Iraqi invasion): established a national loss database; compensation was

paid on the basis of retrospective valuations;

- Bosnia and Herzegovina: courts accept eyewitness testimony and photographic evidence to establish property destruction.

Improving legislation is critical to protecting the rights of citizens and businesses. There is an urgent need to adopt a specialized legal act that incorporates international best practices and standards as soon as possible.

The methodological maintenance for the valuation of destroyed property must be firmly based on international standards, while also taking into consideration the specific local conditions. In addition, it must adequately address the realities of wartime circumstances, capturing the technical and economic shifts within the affected markets. The integration of modern technologies—such as satellite imagery and drone-based aerial photography—for the purpose of remote valuation is essential. Furthermore, the methodology should allow for expedited valuations so that compensation can be issued promptly.

In this context, the availability of clear and reliable tools is vital to ensure accuracy and consistency in valuations.

Principal components of methodological maintenance:

- 1) *Valuation standards*. Market-value valuations should follow international standards to guarantee uniform criteria for all assets and independent appraisers.
- 2) International Valuation Standards (IVS) are a set of globally recognized principles that ensure valuations are transparent and consistent.
- 3) National Standards of Ukraine (ДСТУ) complement international requirements by adjusting them to local specifics.

- 4) ISO 9001: provides overarching quality principles for property valuation.
- 5) *Valuation methods*. The framework must incorporate the three primary approaches—income, market/comparative, and cost—to constitute a unified methodology;
- 6) *Deploying technical tools*. Employing satellite imagery and UAV surveys to document damage in active combat zones, mined areas, or occupied territories. Using specialized software to automate data collection and processing, reducing human error during valuations. Modeling damage where physical access is impossible.

In sum, methodological support for valuing destroyed property requires clear, consistent principles to ensure objective and accurate valuations. Leveraging modern technology and international standards will create an effective system. Streamlining procedures for affected citizens and small businesses will accelerate the economic recovery process and ensure they receive necessary assistance. All valuations should use a single, internationally aligned methodology adapted to specific wartime conditions.-

Courts should adopt simplified processes to resolve disputes quickly and fairly.

Conclusions

The provided research confirmed just how crucial—and how challenging—it is to pin down market value for assets completely destroyed by Russia's armed aggression. An analysis of the current legislation exposed the lack of a single, consistent valuation methodology, which makes it harder both to document losses and secure fair

compensation. Ukrainian courts are gradually developing approaches to resolve damage disputes, but their rulings still vary in scope and rigor.

International experience, specifically practices of European Court of Human Rights, the International Court of Justice, and the UN Compensation Commission highlight three essentials: the use of full compensation principles, impartial asset valuation, and recognition of non-pecuniary harm.

Major obstacles include murky regulations, imperfect valuation methodologies, and the sheer difficulty of collecting evidence in active combat zones. To tackle these gaps, we propose adopting a specialized compensation law, launching a national register of destroyed property, developing standardized valuation methodologies, and leveraging international best practices.

These measures will safeguard the rights of individual victims and build the legal foundation for pursuing reparations against the aggressor state on the world stage.

До питання визначення ринкової вартості повністю знищеного майна внаслідок збройної агресії російської федерації

Олена Усенко

Мета наукової роботи — розглянути методологію та практичні аспекти оцінювання ринкової вартості знищеного майна, визначити правові й методологічні засади, що регулюють цей процес. Для досягнення поставленої мети застосовано аналізування нормативно-правових актів, системно-структурний, порівняльний методи, а також метод експертних оцінок. Розглянуто важливу й актуальну

проблему визначення ринкової вартості майна, цілком знищеного внаслідок збройної агресії російської федерації проти України. Обґрунтовано необхідність розроблення та впровадження ефективних механізмів оцінювання завданих збитків, адже в умовах війни традиційні підходи до оцінювання майна застосувати неможливо. Здійснено системний огляд чинного законодавства України, а також міжнародного досвіду в цій сфері. Проаналізовано наявні методики визначення ринкової вартості знищеного майна, нерухомого й рухомого, а також земельних ділянок, що зазнали пошкоджень. Особливу увагу приділено аналізуванню нормативно-правового регулювання, яке в Україні не відповідає всім вимогам, що постають у разі масштабних руйнувань під час збройних конфліктів. Акцентовано увагу на тому, що недостатньо компенсувати прямі збитки, важливо також забезпечити повне відновлення функціонування підприємств, інфраструктури, а також зважати на потенційні втрати від знищеного майна. У статті не лише проаналізовано наявні методи і правові норми, а й запропоновано конкретні рекомендації щодо вдосконалення законодавства та практики оцінювання майна в умовах збройного конфлікту.

Ключові слова: ринкова вартість; знищене майно; оцінювання майна; законодавче регулювання; методика оцінювання; збройна агресія; компенсація збитків; судово практика.

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Declaration of Competing Interest

The author states that there is no conflict of interest relating to this topic.

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Pricing Aspects of Amber: Consumer Characteristics and How They Determine the Value of Raw Materials

Petro Baranov ^{*a}, Olena Slyvna ^{**b}, Liudmyla Chernysh ^{***c}

* D.G., Professor, Dnipropetrovsk Scientific Research Forensic Center of the MIA of Ukraine, Dnipro, Ukraine, ORCID: <https://orcid.org/0000-0002-3367-4277>, e-mail: pn2dsbaranov@gmail.com

** PhD (Geol.), Dnipropetrovsk Scientific Research Forensic Center of the MIA of Ukraine, Dnipro, Ukraine, ORCID: <https://orcid.org/0000-0002-7063-1938>, e-mail: e.slivna@gmail.com

*** Dnipropetrovsk Scientific Research Forensic Center of the MIA of Ukraine, Dnipro, Ukraine, ORCID: <https://orcid.org/0009-0009-8958-8528>, e-mail: super.ndkc@ukr.net

^a Writing – original draft, project administration, methodology, supervision.

^b Writing – original draft, resources.

^c Writing – original draft, validation, visualization.

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This study aims to conduct an integrated analysis of the amber market and determine the aesthetic and economic relationship between the characteristics of raw amber, such as shape, color, clarity, impurities, cracks, and inclusions, as well as the characteristics of amber products as perceived by consumers. The topic is relevant since expert studies on determining the cost of raw amber have failed to consider its pricing consumer characteristics. This poses a risk of not complying with the basic principles of forensic examination: objectivity and completeness of research. The authors consider the mechanism for assessing the quality of raw amber and its cost, taking into account the active price lists of Ukraine, and also identify consumer characteristics affecting the cost of amber products. The validity of the results and conclusions is ensured by using a set of general scientific and special research methods. Existing difficulties in determining the cost and peculiarities of modern expert

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evaluation systems have been identified. The scientific novelty of this study lies in the discovery that, through experimental work and theoretical calculations, the characteristics of amber establish an aesthetic and economic connection with each type of product, enhancing the perceived value of each individual item. The qualitative characteristics of amber determine its cost in the market and become the main factors influencing pricing.

Keywords: *amber; raw materials; product; consumer characteristics; cost; price list; market.*

Research Problem Formulation

The modern amber market is split into two primary segments: products and raw materials. The first segment contains products that are actively advertised on commercial websites providing information on consumer characteristics of amber (color, clarity, impurities, cracks, and inclusions), geometric (dimensional) data, and price.

The second segment, raw materials, is less noticeable in advertising. It involves professionals forming pricing policies and strategies for future products. However, it is worth pointing out that there is a certain gap between these segments. This is because the price lists do not explain how the cost of raw materials is formed.

To resolve this issue, keep in mind that the cost of products equals the price of raw materials plus the production cost. Consumer characteristics of amber (aesthetic characteristics and optical effects) function as a bridge between raw materials and finished products. Therefore, by

comparing prices and product characteristics, you can make an objective estimate of the cost of raw materials.

Analysis of Essential Researches and Publications

An important aspect of market relations between the mining, processing, and trade industries is how consumer characteristics significantly impact the cost formation of raw amber. This issue captures the interest of both Ukrainian¹ and foreign² researchers, indicating its relevance in the context of global economic processes.

Mining enterprises are primarily guided by price lists based on the costs linked to geological exploration, extraction, and sorting of amber. These price lists tend to be stable, undergoing minor adjustments only at the beginning or end of the calendar year. The main problem, however, is the lack of clear criteria for objectively determining amber grades³. This fact calls into question the fairness and transparency of pricing in the amber market.

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- 2 Rippa A., Yang Y. The Amber Road: Cross-Border Trade and the Regulation of the Burmite Market in Tengchong, Yunnan. *TRaNS: Trans-Regional and National Studies of Southeast Asia*. 2017. Vol. 5. Is. 2. Pp. 243–267. DOI: [10.1017/trn.2017.7](https://doi.org/10.1017/trn.2017.7) (date accessed: 10.03.2025).
- 3 Баранов П. М., Шевченко С. В., Коротаєв В. М. Гемологія: діагностика, дизайн, обробка, оцінка самоцвітів : підручник. Вид. 2-ге, перероб. і допов. Дніпро, 2019. 210 с.

Research and commercial organizations analyzing the amber market record significant price fluctuations throughout the year and seek to identify factors leading to these changes. These factors include seasonal fluctuations, fashion trends, as well as political and economic upheavals ⁴. Moreover, these studies often overlook consumer characteristics that can significantly influence product perception and, consequently, its cost.

For this reason, currently, there is a significant lack of understanding of how the consumer characteristics of particular products impact the cost of raw materials. This lack of a clear link between consumer characteristics and price fluctuations in the raw amber market requires further study and systematization of data, which will contribute to more informed pricing and improved market strategy, and will benefit both producers and consumers.

Article Purpose

The Article's Purpose is to comprehensively analyze the amber market and understand the aesthetic and economic ties between the characteristics of raw materials (shape, color, clarity, impurities, cracks, inclusions) and consumer characteristics of products. This will give you a complete idea of the cost of products and lay the groundwork for addressing practical and theoretical tasks. Specifically, ana-

lyzing factors influencing the cost of raw materials will positively impact the results of expert research, research work, and educational activities of students and post-graduate students.

Research Methods

General scientific and special methods of scientific cognition serve as the methodological foundation for the research.

Main Content Presentation

Throughout the history of human society, amber (due to its decorative characteristics and variety of colors) has earned a significant place in the market of precious and semi-precious stones.

Amber is an important resource for the Ukrainian economy, as it is used in various industries, from jewelry industry to medicine.

The ruling of the Cabinet of Ministers of Ukraine No. 827: *On Approval of the Lists of Minerals of National and Local Significance* ⁵ dated December 12, 1994, defines amber as minerals of national importance, raw material jewelry, and gem. As defined by the Law of Ukraine No. 637/97-BP: *On State Regulation of Mining, Production and Use of Precious Metals and Precious Stones and Control Over Operations With Them* dated November 11, 1997 ⁶, raw amber falls within the group of precious stones of organogenic origin (pearls and amber),

4 Kelly J. Amber growth turns red as oversupply knocks value. *Financial Times*. 30 May 2019. URL: <https://www.ft.com/content/5217f05a-5f8d-11e9-9300-0becfc937c37> (date accessed: 10.03.2025).

5 Про затвердження переліків корисних копалин загальнодержавного та місцевого значення : постанова КМУ від 12.12.1994 р. № 827 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/827-94-%D0%BF#Text> (date accessed: 10.03.2025).

6 Про державне регулювання видобутку, виробництва і використання дорогоцінних металів і дорогоцінного каміння та контроль за операціями з ними : Закон України від 18.11.1997 р. № 637/97-ВР (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/637/97-%D0%B2%D1%80#Text> (date accessed: 10.03.2025).

peculiarities of accounting, storage, and use of which are provided by the Ministry of Finance of Ukraine⁷.

Accordingly, amber is a precious stone of organogenic origin and the only precious stone mined in Ukraine. Therefore, amber evaluation is one of the most common types of gemstone valuation in Ukraine today and requires modern techniques and methods.

A required component for determining the cost of a gem is the classification of its main consumer characteristics according to a quality grading scale. This procedure considers all essential factors, including historical, cultural, and aesthetic ones. Only by considering these factors can a reliable conclusion be made.

Thus, amber evaluation means defining consumer characteristics of stones as a product, its qualitative and quantitative characteristics, as well as verifying their adherence to established Ukrainian and international expert evaluation systems.

The cost of gems is determined by the price lists in effect at a specific point in time. The quality of amber in raw materials is assessed under ДСТУ 8847:2019⁸. The cost of amber in raw materials and in products is assessed in compliance with the reference edition and bulletin: *Price Guide for Precious and Decorative Stone*⁹, which issues the State Gemmological Centre of Ukraine (SGCU), established under the Ministry of Finance of Ukraine.

Amber is one of the oldest gemstones, which was used thousands of years ago to create women's jewelry. Although amber is not a natural stone, but rather an ancient resin, its jewelry characteristics do not diminish. On the contrary: amber has a huge range of shades. These are not only honey-yellow and brown, but also very dark colors up to black, milky white, and even rare green and blue. Its internal patterns, inclusions, bubbles, and various degrees of clarity give it extraordinary originality.

There is a huge number of amber species in the world. Their cost varies tenfold. Therefore, it is quite evident that the question arises: what are the criteria for assessing the cost of this amazing organic stone and products made from it?

The main feature of a stone made of hardened resin is the uniqueness of each specimen. There are no two identical amber stones in the world. They differ in color and pattern, and the color palette is represented by a variety of shades. Stones with a centuries-old history of existence that have acquired a unique matte texture are a real treasure attracting collectors. However, the value of the organic-origin mineral lies not only in its unique appearance and exclusivity of each specimen.

There are long-held principles of amber expert evaluation. They stem from the historical experience of using this stone by humans and encompass four main factors: *color, clarity, cut, and carat weight*¹⁰.

- 7 Про Правила торгівлі дорогоцінними металами (крім банківських металів) і дорогоцінним камінням, дорогоцінним камінням органогенного утворення та напівдорогоцінним камінням у сирому та обробленому вигляді і виробами з них, що належать суб'єктам господарювання на праві власності : постанова КМУ від 04.06.1998 р. № 802. URL: <https://zakon.rada.gov.ua/laws/show/802-98-%D0%BF#Text> (date accessed: 10.03.2025).
- 8 ДСТУ 8847:2019 Бурштин-сировина. Загальні технічні умови. [Чинний від 01.07.2020]. Київ, 2020. 8 с.
- 9 Довідник цін коштовного та декоративного каміння : бюлетень / ред. А. М. Ткаленко. Київ, 2024. № 4 (63). 44 с.
- 10 Николаенко С. Критерии оценки изделий из янтаря: особенности и принципы / Новости Украины : вебсайт. 12-12-2018. URL: <https://replyua.net/123453-kriterii-ocenki-izdelyiy>

These factors are considered simultaneously:

- *natural stone color*. Blue amber is the most expensive one, which is not easy to find. The second most expensive is matte amber, light yellow. The darker the color, the lower the price of amber;
- *clarity*. A “pure” stone, through which the sun’s rays make their way, will cost less than its matte “competitor”;
- *stones’ quality of cutting*. Smooth round beads without flaws can be sold at the highest price. Deformed ones with spalling or cracks diminish the cost of both raw materials and products.
- *carat weight*: the weight of a single bead or the product as a whole.

Another important factor in determining the cost of amber is the *presence of inclusions*. Fragments of plants or insects trapped in resin confirm the millennial age of

the natural stone. Inclusions give the stone a sense of exclusivity and uniqueness, making it an exceptional piece to include in any collection of precious minerals.

Thus, the price of amber products is based on comprehensive research into all of the above factors.

In contrast, according to the current price lists ¹¹ of the State Antimonopoly Committee of Ukraine (SACU), the color of amber is not given its proper consideration when determining its quality and cost. In such price lists, the amber quality criterion “color” is presented as “any coloring”, greatly reducing its artistic value.

Moreover, the price lists outline the clarity of amber ambiguously (“from clear to opaque”). We observe similar ambiguity in the description of other characteristics (such as texture, shape, and surface of a sample: see Table 1).

This issue has already been discussed in more detail ¹².

Table 1

**Qualitative characteristics of amber as set forth in SACU price lists
and consumer characteristics of amber**

Parameters of price lists	Consumer characteristics
Carat weight (<i>determined</i>)	Shape and artistry
Shape (biphasic)	Color
Texture (biphasic)	Clarity
Impurities (biphasic)	Size
Cracks (<i>determined</i>)	Inclusions and their uniqueness
Surface (biphasic)	Aesthetic effects
Color (not determined)	Cracks
Clarity (not determined)	
Inclusions (not determined)	

[iz-yantarya-osobennosti-i-principy.html](https://khrife.org.ua/iz-yantarya-osobennosti-i-principy.html) (date accessed: 10.03.2025).

¹¹ Довідник цін ...

¹² Kirin R. S., Baranov P. M., Shevchenko S. V., Korotayev V. M. Method of price formation of amber samples on the basis of gemmological-consumer indicators. *Journal of Geology, Geography and Geoecology*. 2022. Vol. 31. Is. 2. Pp. 321–332. DOI: 10.15421/112230 (date accessed: 10.03.2025) ; Баранов П. М., Сливна О. В., Коротаєв В. М. Прейскуранти на бурштин, їх значення в ринковому та плановому регулюванні економіки. *Криміналістичний вісник*. 2024. Т. 41. № 1. С. 32–43. DOI: 10.37025/1992-4437/2024-41-1-19 (date accessed: 10.03.2025).

An analysis of Table 1 has demonstrated that out of the entire list of consumer characteristics, only two parameters are well-defined in the price lists: carat weight and cracks. Gemologically speaking, these documents fail to include characteristics defining amber as a gem, let alone a precious stone. This shows that it is impossible to determine the cost of raw amber and amber products based on the available price, since they do not specify principal qualitative characteristics of raw amber: color, shape, and clarity.

The second column of Table 1 presents the consumer characteristics of amber in products. These characteristics are common to both raw materials and products, since there is a principle of characteristic inheritance (these characteristics affect the pricing of both raw materials and products)¹³ between raw materials and finished products.

In natural conditions, the *shape* of amber usually has irregular outlines and can be isometric, flat, or slightly elongated. There are also samples of an indefinite (amoebic) shape.

The *surface* of natural amber is often uneven and covered with an oxidation crust. Various depressions or even holes are not uncommon. Therefore, when a perfectly symmetrical shape is required, it is logical that the cutting process will result in considerable material loss. The more rounded the future product's shape, the higher the requirements for the size and thickness of the raw amber. Two

samples of the same weight but different shapes will be offered at varying prices. Beads demand the highest requirements for the shape and size of the raw stone, so round parts are always more expensive than flat or thin ones.

Experimentally proven results show that the shape of samples plays a pivotal role in choosing a technological (design) solution¹⁴, for instance:

- isometric samples (ratio of dimensions: 1:1:1) are used to make balls, beads, and figurines;
- flat samples (ratio of dimensions: 0.3:0.3:1) are used for cameos, healing beads, mosaics, intaglios;
- elongated samples (ratio of dimensions: 0.3:1:1): for figurines and healing beads;
- amoeboid samples: for original works;
- specimens in the form of droplets within a natural crust and without mechanical damage are considered collector's items.

The above varieties in shapes and their applications are typical for small samples (5–10 g). Large samples (weighing more than 50 g) can be used to produce smaller roughs for specific products. This method is usually employed by technologists for the manufacture of beads when it is necessary to ensure the consistency of color, shades, pattern, and clarity for all beads.

To illustrate the above, let's consider one isometrically shaped amber sample weighing 500 g, which can be used to

13 Баранов П. М., Сливна О. В., Шевченко С. В., Кірін Р. С. Критерії оцінки якості бурштину на основі принципу порівняння зі споживчими властивостями. *Збірник наукових праць Національного гірничого університету*. 2021. № 67. С. 125–135. DOI: [10.33271/crpnmu/67.125](https://doi.org/10.33271/crpnmu/67.125) (date accessed: 10.03.2025).

14 Баранов П., Сливна О. Роль дизайнерських рішень при експертизі бурштину. *Сучасні напрямки розвитку судової експертизи та криміналістики* : зб. Всеукр. наук.-практ. конф. з нагоди 110-річ. діяльн. ОНДІСЕ Мін'юсту Укр. (Одеса, 05.09.2024). Одеса, 2024. С. 47–51. URL: <http://ndekc.lviv.ua/pdf/311020242.pdf> (date accessed: 10.03.2025).

make a ball with a diameter of 6.45 cm (weight 149.88 g). In the second case, the 8K principle is applied. This means that each cube is sliced along three mutually perpendicular planes. The same sample is used. From this, 8 amber blanks can be obtained. 8 balls with a diameter of 3.2 cm can be made of them. Alternatively, you can apply the 8K principle to eight

finished cubes. As a result, you will have 64 cubes that can be used to make 64 balls, each with a diameter of 1.6 cm. Applying the 8K principle to these 64 cubes again will produce 512 balls, each with a diameter of 0.8 cm.

In this case, the forecasted cost of finished products will be equal to the amount shown in Table 2.

Table 2

**The cost of products that can be made
from one amber sample weighing 500 g**

Quantity of balls	Diameter, cm	Product, pcs.	Cost, \$
1	6,45	Ball	590
8	3,20	8 balls	$167 \times 8 = 1336$
64	1,60	3 necklaces with 21 beads in each	$2326 \times 3 = 6978$
512	0,80	10 necklaces with 21 beads in each	$1079 \times 10 = 10\,790$

The above examples of shaping the described amber sample do not represent all possible options. In addition to those listed, one can also create quadrangular prisms, plates, etc., from an isometric-shaped sample.

The flat shape and dimensional-weight values of natural amber specimens also directly affect the choice of the future product. For instance, small fractions (starting from 0.4 g) are used to make Pompeii necklaces (polished and unpolished), healing necklaces, brooches, cameos, and cabochons. Samples of amber with a thickness of more than 1 cm are suitable for making cubic blanks for balls.

The *size of amber* is a characteristic that is fundamental to the formation of a technological project for jewelry production. Although weight and shape are of paramount importance, especially for isometric specimens, it is the size of amber that determines many aspects of its classification and pricing¹⁵.

If you know the ratio of dimensions (1:1:1) and the weight of a sample, you can accurately calculate its dimensions. For example, an isometric cube weighing 4.9 g will measure 1.65×1.65×1.65 cm. However, this method is inappropriate for other shapes, such as flat, elongated, or amoeboid, since their ratio of dimensions is often inconsistent. Knowledge of the exact size of the samples is therefore critically important because it directly affects the scope and type of products.

From an economic perspective, the key factor is the yield of a usable product. Yield is calculated as the ratio of the weight of finished products to the weight of used samples, expressed as a percentage. For example, for the production of balls, an isometric mold with a yield of more than 30% is the most profitable. If this figure is less than 30%, the production of balls becomes economically unfeasible.

Accordingly, determining the shape and size of amber samples affects both the

15 Класифікація бурштину / Янтар Полісся : вебсайт. URL: <https://yantar.ua/ua/klasifikatsiya-yantarya.html> (date accessed: 10.03.2025).

quality of the final product and its subsequent economic efficiency.

The *color of amber* has a wide spectral range from white to black. Experts estimate that there are nearly 350 color shades of amber. The absolute leaders in this spectrum of colors are yellow, golden yellow, and golden orange. This color range contributed to the emergence of the *amber color* concept (“amber hair”, “amber honey”, “amber fruit”). Amber is known as the “sun stone” due to the warm tones of the stone and its ability to radiate warming light ¹⁶.

The cost of amber is mainly estimated by its color, according to the current market research.

In fact, the price of amber depends on its color, clarity, and how it refracts light. The brighter the color, the purer the amber, and the higher the light refraction, the more valuable it is. This is unaffected by its clarity and milkiness. Conversely, cracks, inclusions, or other imperfections, such as uneven surfaces or visible bubbles, reduce the value of amber. The most expensive and rarest is blue-green amber. However, it is important to acknowledge that this perspective is held by collectors, connoisseurs, and museum staff.

The domestic market analysis of beaded necklaces demonstrates that the most expensive are those made of landscape amber, followed by honey amber (with a clear lead) and lemon, cognac, and black amber (*see Figure*).

Let us point out that this conclusion applies only to ball beads and does not apply to other types of jewelry. To illustrate the above, research findings revealed that cognac and black amber are the most favored choices for the “diamond facet” necklace.

Lemon amber looks even better in such a necklace, as it has a more pronounced “*diamond facet*” effect. The cost of the necklace is also distributed in the same way: the most expensive necklaces are those made of lemon-colored amber, followed by cognac and black amber.

Hence, when discussing the price of amber, we should take into account what products it is intended for (or if it will become a collector’s item).

Another advantage for designers and lapidaries is *amber’s clarity*. The clarity of amber can vary widely: from almost opaque to extremely clear. It depends on how much light passes through this stone of organogenic origin, substantially determining its visual appeal. Amber lapidaries have long made use of its clarity to create an aesthetic effect through an internal design (pattern). For the first time, the technique of in-depth relief (counter-relief) was used in crafting flat intaglio cabochons and intaglio frames for the creation of the Amber Room.

Later, amber’s clarity made it ideal for crafting intaglios. The perfect clarity combined with the cognac or lemon color gives amber products a special artistic quality and a sense of mystery. Such products remain among the most expensive.

Therefore, amber’s demand and value are determined by its clarity. Clear amber is highly appreciated because it transmits light, demonstrating any inclusions inside. This characteristic enhances the visual appeal of amber and makes it more desirable for buyers. Although opaque amber is less valuable than the clear one, it has its own charm: it is frequently used in carvings and in larger decorative products. Such an opaque, cloudy kind of amber emphasizes

16 Забарвлення та прозорість бурштину : блог / Янтар Полісся : вебсайт. 29.09.2017. URL: https://ukrburshtyn.com/ua/blog/rastsvetka_i_prozrachnosts_yantarya.html (date accessed: 10.03.2025).

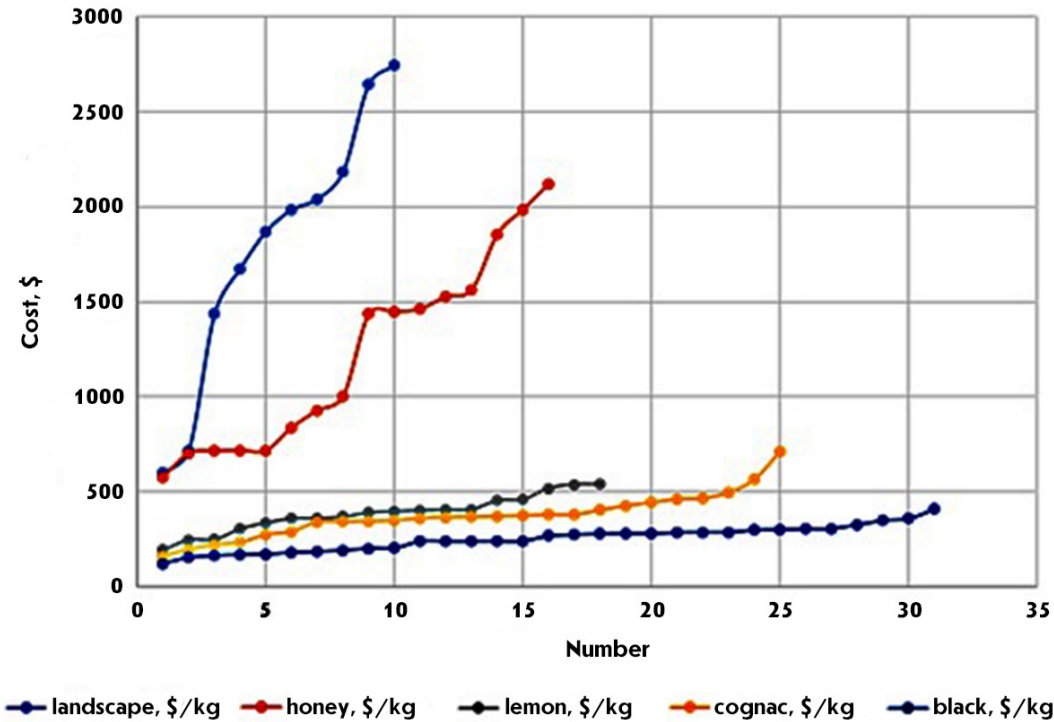


Fig. Chart showing the cost of raw amber for beads and balls.

the uniqueness of the jewelry's texture and the rest of objects.

As an example, the price of white Baltic amber (landscape amber) is also influenced by whether it is clear, semi-matte, or matte. It is the rarest and therefore the most valuable type. Overall, milky amber is more expensive than clear amber: it is almost 10 times more expensive than its yellow counterpart, but its quality is also important.

Amber's clarity depends on the number of air bubbles and various inclusions in a stone. Currently, there is a system of evaluation based on this criterion:

a fractional grading system¹⁷. In the East, opaque varieties of gem have always been appreciated. In European countries, another opinion is prevalent: the fewer extraneous inclusions, the more expensive amber. The exception is clear stones containing fossilized insects that are clearly visible. These stones can cost several times more than amber of the same quality.

Research findings on calculating the cost of one gram of amber in products indicate that product cost depends on the cost of raw materials and the specific type of product (see Table 3).

17 Sedawie R. Amber Gemstone: Properties, Meanings, Value & More / Gem Rock Auctions : web. 8 May 2018. URL: https://www.gemrockauctions.com/learn/a-z-of-gemstones/amber-information?srsId=Afm_BOo0Jm4rnHowip-GKyIXIVwM-tiNi8cKY719y2_cOXUs8qJlJz3Yp (date accessed: 10.03.2025).

Table 3

Amber's cost in products

No.	Product	Cost, \$/g	Feature
1	Balls	2,8–4,1	Honey color
2	Ball bead necklace	10–25	Honey color
3	Ball bead necklace	2,4–4,9	Cognac color
4	Cameos, figurines	17–24	Honey color
5	Intaglios	30–60	Cognac color, clear
6	Souvenir specimens	2,4–41,9	Natural drop shape
7	Samples with inclusions	12,1–205,8	Rare, unique inclusions
8	Healing necklace	0,28–0,73	Raw
9	Pebble Necklace	0,83–2,21	Lemon, cognac color

The aforementioned results demonstrate that each type of amber is evaluated comprehensively because it represents a specific future product.

Cracks are an essential quality criterion for amber because they significantly impact the manufacturing process and, consequently, the value of the final product.

Based on their origin, they are classified into three types: mechanical cracks, interlayer cracks, and stress cracks (umbrella cracks).

Mechanical cracks are formed as a result of dynamic geological processes (compression of layers, collapses, tectonic shifts), extraction, and enrichment. These cracks are divided into ancient and young. Cracks can be either open or tight-closed. Cracks formed by natural processes are most often filled and marked by mechanical material (dirt). Young cracks are not like those described above because they do not have any inclusions or craquelure.

Interlayer (interbond) cracks are essentially the boundary between two resin layers. They are often marked by foreign impurities. Such cracks penetrate the sample to a considerable depth, reducing its quality characteristics. This type of crack is charac-

terized by its sinuous shape. The deeper the cracks are, the more often they pinch out and turn into barely noticeable lines.

Mechanical and interlayer cracks in samples significantly reduce the quality and value of amber and negatively affect its cutting.

Stress cracks (also called *umbrella cracks*) are rounded formations that do not extend to the surface of the sample. Sometimes they are formed around foreign bodies (inclusions, organic substances) as a result of internal local stress of amber. Such “umbrellas” are to a certain extent decorative and in large quantities create the effect of sparkling amber, increasing the stone’s cost.

Thus, the presence or absence of cracks in amber samples affects the cost of the future product and determines its specific appearance. Nevertheless, the final outcome depends entirely on the artist’s imagination and skill.

Impurities in amber are organic substances which became trapped in the liquid resin at the moment it was exuded from the tree and during its subsequent accumulation¹⁸. Excessive number of organic impurities in amber makes it dark

18 Amber: A window to the past / Amber-fossils : web. URL: <https://www.amber-fossils.com> (date accessed: 10.03.2025).

gray, more often: black with a yellowish-green hue ¹⁹. In products such amber is called “meteorite”.

Gaseous impurities (depending on the size and quantity) result in stone cloudiness. Due to numerous microscopic impurities of fluid and amber gas, it becomes opaque and milky white.

Inclusions are whole insects, arthropods or shellfish or their fragments, as well as birds' feathers in amber ²⁰. Hence, following technical guidelines, amber's inclusion is foreign bodies (substances) that adversely affect the quality of raw materials. Meanwhile, the presence of inclusion in amber multiplies its cost several times ²¹.

Rare or unique inclusions are especially popular. Amber with such inclusions is considered a collector's item: it is sold as a rarity at special auctions and forums. Moreover, pyrite mineral inclusions form a kind of sparkling amber. This aesthetic (optical) effect is also in great demand among connoisseurs of exotic jewelry.

Let us pinpoint that inclusions in amber serve as a source of knowledge for scientists in many areas.

Considering the points discussed, it is clear that when examining amber, characteristics such as shape, color, clarity, size, and the presence of inclusions cannot be ignored, as these are the key criteria used to determine its market price (whether raw or processed).

Conclusions

This research has shown that consumer characteristics of raw amber (shape, color, clarity, impurities, cracks, inclusions) form an aesthetic and economic relationship with each type of product. These characteristics emphasize the advantages of a specific product and play a pivotal role in its perception. Qualitative characteristics of amber determine its cost in the market and become principal factors influencing its pricing.

The principle of inheritance dictates that consumer characteristics of amber not only affect the cost of finished products: they are crucial for the price of raw amber ²². This circumstance should be necessarily considered when assessing raw material costs.

Цінові аспекти бурштину: споживчі характеристики та їхнє значення для визначення вартості сировини

**Петро Баранов, Олена Сливна,
Людмила Черниш**

Мета статті — провести комплексний аналіз ринку бурштину та з'ясувати естетико-економічний зв'язок між характеристиками сировини (форма, колір, прозорість, включення, тріщини, інклюзи) і споживчими характеристиками виробів. Доцільність теми обумовлено

19 Sedawie R. Op. cit. URL: https://www.gemrockauctions.com/learn/a-z-of-gemstones/amber-information?srsId=AfmBOooJjM4rnHowip-GKyIXIVwM-tiNi8cKY7l9y2_cOXUs8qLjz3Yp (date accessed: 10.03.2025).

20 Amber Inclusions / Baltic Amber SOS : web. URL: https://ambersos.com/collections/amber-inclusions?srsId=AfmBOooenAN0nC_nQzR7ajQvoXZ9NOq2ZhFO_NFZER2uaRUve2DNnKL (date accessed: 10.03.2025).

21 What is the Price of Natural Amber / Phoenix Amber : web. URL: <https://www.phoenixamber.cz/en/blog/price-of-natural-amber/?srsId=AfmBOorPZliqDuYqhRyvAeOxJNuybICjQZy0QLGxASriWnfN73VJLSvS> (date accessed: 10.03.2025).

22 Amber Prices / Natural Baltic Amber : web. URL: <https://natural-baltic-amber.com/amber-prices/> (date accessed: 10.03.2025).

неврахуванням ціноутворювальних споживчих характеристик бурштину-сирцю під час експертних досліджень із визначення його вартості, унаслідок чого є ризик не дотримати основних принципів судової експертизи — об'єктивності й повноти досліджень. Розглянуто механізм визначення якості бурштину-сирцю та його вартості з урахуванням преїскурантів, що діють на території України, виявлено споживчі характеристики, що впливають на вартість виробів з бурштину. Достовірність отриманих результатів і висновків забезпечено застосуванням комплексу загальнонаукових та спеціальних методів дослідження. Виявлено наявні труднощі у визначенні вартості й особливості сучасних систем експертного оцінювання. Наукова новизна дослідження полягає в тому, що під час експериментальних робіт і теоретичних розрахунків з'ясовано, що характеристики бурштину створюють естетико-економічний зв'язок із кожним видом виробів та увиразнюють цінність кожного конкретного виробу. Якісні характеристики бурштину зумовлюють його вартість на ринку та стають основними чинниками, що впливають на ціноутворення.

Ключові слова: бурштин; сировина; виріб; споживчі характеристики; вартість; преїскурант; ринок.

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Participants

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and assume responsibility for its content and interpretation.

Declaration of Competing Interest

The authors declare no conflict of interest.

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Types and Specifics of Investigation of Traces of Unlawful Interference in the Activities of Public Authorities

Volodymyr Popov*

* PhD in Law, Doctoral Student of NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine, ORCID: <https://orcid.org/0009-0003-9020-9448>, e-mail: v.iu.popov@ukr.net

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The purpose of this research paper is to identify typical traces of criminal and illegal activities related to interference in the activities of representatives of state authorities, to outline their features and methods of research. Achievement of the set goal was facilitated by the use of general scientific (analysis, synthesis, abstraction, generalization), special and philosophical methods (dialectical, comparative law, system-structural, prognostic). The study of materials of criminal proceedings and judicial practice made it possible to identify typical sources (carriers) of trace information in criminal offenses related to interference in the activities of representatives of state authorities, among which the following are distinguished: 1) documents, in particular electronic ones (summonses, protocols of procedural actions, photographs, sound and video recordings of the event of a criminal offense or related to it); 2) digital traces displayed (stored) in messengers, information systems, e-mail servers and other information systems, video recordings, etc.; 3) other things of the material world that were discovered at the scene of criminal intent (at the scene of incident) and that retained traces of criminal illegal activity; 4) tools and/or means used by the perpetrators to carry out the criminal intent; 5) participants in relevant social relations who, by chance or in connection with their official activities, became participants in the event of a criminal offense

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related to interference in the activities of representatives of state authorities. Prospects for further research within the framework of researched issues are outlined.

Keywords: *criminal offense; interference in activities; State authority; traces of criminal offense; evidence; collection of evidence.*

Research Problem Formulation

In general, criminal procedural activity is carried out on the basis of fulfilling a number of strategic and tactical investigation tasks. One of the substantive components of such activity is evidence, which is traditionally identified with the determination of the set of circumstances provided for by the legislator in Art. 91 Criminal Procedural Code of Ukraine ¹.

Legally established mandatory list of circumstances that must be proven in criminal proceedings is detailed and expanded depending on the type of criminal offense, investigative situation and a number of other circumstances. A significant number of such circumstances concern traces of criminal illegal activity, which can be of various nature.

In criminalistics, the *crime traces* phrase is traditionally used. The concept of traces is based on philosophical principle according to which each phenomenon causes another, forming an inextricable cause-and-effect chain indicating interdependence of all processes, in particular criminal acts, which inevitably leave traces in the environment. In other words, it is an external informational reflection

of a criminal event. Detection, recording and study of traces of a crime makes it possible to reconstruct the method of its commission, obtain information about the identity of the offender, etc. This indicates existence of a stable connection between the act itself and its imprint in the environment. Analysis of traces of a crime contributes to understanding the circumstances of the event, and knowledge of nature and mechanism of criminal acts, in turn, helps to more effectively detect, localize and study the corresponding traces ². Therefore, while conducting criminal procedural activities, tasks arise to identify, record and study traces of a crime. At the same time, information as such can acquire the status of evidence only if it meets the criteria of relevance, admissibility and reliability in criminal proceedings. Information in a broad sense covers both factual data and knowledge about this data. However, only that part of it that is procedurally relevant and capable of confirming or disproving specific circumstances of criminal proceedings (criminal case during trial) is recognized as evidence ³.

Criminal offenses related to interference in the activities of representatives of state authorities are represented by those

1 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: 09.05.2025).

2 Пчеліна О. В. Типові сліди злочинів у сфері службової діяльності. *Форум права*. 2017. № 5. С. 342—348. DOI: 10.5281/zenodo.1204355 (date accessed: 05.05.2025).

3 Ткач О. В. Слідова картина як джерело доказової інформації при розслідуванні порушення недоторканності приватного життя. *Вісник кримінального судочинства*. 2015. № 4. С. 194. URL: https://vkslaw.knu.ua/images/verstka/4_2014_Tkach.pdf (date accessed: 09.05.2025).

crimes and criminal misdemeanors that provide for liability for intentional commission of acts that are:

- 1) activity obstruction;
- 2) interference in activities or in exercise of powers;
- 3) unlawful influence ⁴.

Thus, commission nature of these crimes is determined by the implementation of actions of an intellectual nature that are not always reflected in changes in the material situation. That is why, in the context of the studied group of criminal offenses, the importance of the figures of victims who have the appropriate professional position, that is, are representatives of state authorities and become the object of unlawful influence, increases. The victim is the main source of information about the event of a criminal offense. At the same time, other subjects and objects related to the criminal event interact with each other and accordingly influence each other, thereby determining formation of a certain trace picture.

Outlined signs of criminal offenses confirm that the issue of traces of criminal offenses related to interference in the activities of representatives of state authorities is complex and actualize the task of its in-depth study and development. Given that theory of legal science has not paid enough attention to the issue raised by us to date, we consider it necessary to investigate it within the limits of this scientific investigation.

Article Purpose

Identify typical traces of criminal and illegal activities related to interference in activities of representatives of State authori-

ties, outline their specifics and methods of investigation.

Research Methods

Methods of analysis and synthesis, abstraction and generalization were applied during analysis of theoretical developments of Ukrainian scientists devoted to the related to research topic, as well as the analysis of texts of court decisions, in order to identify typical traces of criminal and illegal activities associated with interference in activities of representatives of state authorities. Special and philosophical methods, including comparative legal, systemic and structural and prognostic made possible to build the architectonics of research paper, formulate conclusions and outline prospects for further research.

Analysis of Essential Researches and Publications

Criminal offenses aimed at interfering with the activities of public officials pose a serious threat to the stability of public administration and the implementation of the rule of law. They can take various forms: from intimidation and physical influence to bribery, illegal pressure or other actions that hinder effective exercise of official authority by public officials.

Investigation of such crimes and criminal offenses is extremely difficult, since they are often committed in secret, with the observance of secrecy, and the victims often do not contact law enforcement at all. Most often this is due to personal fears for their safety or influence of outsiders who exert pressure and create an atmosphere of fear. The issues of pre-trial

⁴ 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: 09.05.2025).

investigation of criminal offenses of this group remain poorly researched.

The issue of investigating interference in activities of a defense attorney and a person's representative ⁵, as well as in the activities of a forensic expert ⁶ and even in the activities of representatives of the justice system ⁷ is more elaborate. Textual analysis of the aforementioned studies makes possible to state the diverse nature of the trace pattern of these criminal offenses.

Thus, the following signs are characteristic of interference in activities of a defense attorney or representative of a person:

- 1) tangible ones, presented in the form of material evidence, documents or their reflections (statements, complaints, letters of refusal, etc.), which are detected in 100% of cases;
- 2) ideal ones preserved in the minds of participants in criminal proceedings (in particular, the victim, the suspect, witnesses, employees of institutions and organizations, etc.) and which are observed in 54.4% of cases;
- 3) electronic ones, stored by digital sources (electronic documents, websites, cloud storages, *IP telephony* systems, etc.) and occurring in 49.3% of cases ⁸.

Among characteristic material traces of illegal interference in the activities of

a forensic expert, electronic correspondence via instant messengers and e-mail are distinguished. This same category includes sound recordings, and sometimes video recordings, recorded by technical means or stored on electronic media. Another category is made up of ideal traces, these are informational reflections of the event of interference, stored in the memory of direct participants and/or eyewitnesses. Such traces take the form of written testimonies, explanations, interrogation protocols, which record the information perceived and stored in memory. These can be imaginary images in the memory of the victim (i.e. forensic expert himself), the suspect or the accused, as well as witnesses. They can contain data on the appearance of the person who exerted influence, on the nature and method of pressure, on the behavior of the expert himself and the specifics of his expert activity at the time of the event, etc. It should be emphasized that such crimes are often committed in the absence of eyewitnesses. That is why the carriers of ideal traces, in addition to direct witnesses (if any), are mostly relatives and close friends of the victim or suspect, colleagues of the expert, as well as other persons aware of the circumstances of the event ⁹. Thus, interference in legally protected activities is

5 Русанівська Д. Д. Розслідування втручання в діяльність захисника чи представника особи : дис. ... д-ра філос. зі спец. 081 "Право". Київ, 2023. 260 с. URL: <https://elar.navs.edu.ua/server/api/core/bitstreams/87c654d4-47e0-4e7b-ae7c-8ecfdc784aaf/content> (date accessed: 02.05.2025).

6 Посашков О. О. Методика розслідування втручань в діяльність судового експерта : дис. ... канд. юрид. наук. Харків, 2020. 200 с. URL: <https://uacademic.info/ua/document/0420U101202> (date accessed: 02.05.2025).

7 Бершов Г. Є. Кримінально-правова характеристика форм та способів втручання в діяльність судових органів. *Форум права*. 2013. № 1. С. 53–59. URL: http://nbuv.gov.ua/UJRN/FP_index.htm_2013_1_11 (date accessed: 25.04.2025).

8 Русанівська Д. Д. Знач. твір. С. 206. URL: <https://elar.navs.edu.ua/server/api/core/bitstreams/87c654d4-47e0-4e7b-ae7c-8ecfdc784aaf/content> (date accessed: 02.05.2025).

9 Посашков О. О. Знач. твір. С. 71–72. URL: <https://uacademic.info/ua/document/0420U101202> (date accessed: 02.05.2025).

characterized by a fairly significant number of traces. A systematic analysis of the specifics of traces of interference in the activities of representatives of state authorities has not been conducted to date, which indicates the relevance of this issue for the scientific community and practicing lawyers.

Main Content Presentation

Interference in the activities of representatives of the state apparatus, whose activities are the object of criminal law protection, always involves the interaction of at least two subjects. Nature of such interaction is associated with persuasion, blackmail, threats, requests, refusal to provide legitimate benefits or with the use of other illegal methods of influence. Usually, these actions are implemented in active forms of behavior and are embodied by the influence of one subject on another: on his consciousness, psyche and behavior.

For criminal offenses related to commission of activities, only an active form of behavior of the subject of a criminal offense is characteristic, which aims to prevent the victim from fulfilling his official duties or to force him to make an illegal decision.

In the scientific literature, traces of crime are considered in two main aspects, in narrow and broad. In a narrow sense, traces are considered material formations that reflect the external features of objects that interacted with each other. Such traces are kind of copies, capable of being both

three-dimensional and planar. In a broad sense, traces are any changes in the environment that have resulted from the commission of a crime ¹⁰.

Along with the concept of *crime traces* of a in the forensic literature, concept of *trace picture* is used. Thus, M. Saltevskiy proposes to define the trace picture as a combination of tangible and intangible (ideal) traces that cover the physical and mental reflections of the event, which store information about the criminal situation and the identity of the offender ¹¹.

Instead, V. Konovalova proposed to consider the trace picture as a new element of the forensic characterization. According to her, forensic characterization covers a set of traces reflecting both the course of the criminal event itself and the behavior of the subject at the crime scene. Thanks to this comprehensive analysis, it is possible to form the most likely versions of the mechanism of committing a crime ¹².

M. Pohoretskyi emphasizes that the source of traces is the socially dangerous behavior of the person who committed the crime. Such behavior – as active one action as inaction – interacts with the real environment, causing changes that are recorded in the form of traces. In other words, the crime event itself generates trace information ¹³.

Z. Toporetska notes that the following picture as a structural component of the forensic characteristic is essential, because its analysis makes it possible to find

10 Коваленко В. В. Типові способи, сліди й обстановка вчинення злочину як елементи криміналістичної характеристики торгівлі людьми. *Прикарпатський юридичний вісник*. 2020. Вип. 2 (31). С. 184. DOI: [10.32837/pyuv.v0i2\(31\).589](https://doi.org/10.32837/pyuv.v0i2(31).589) (date accessed: 02.05.2025).

11 Салтевський М. В. Криміналістика : підручник. У 2 ч. Ч. 1. Харків, 1999. С. 148–151.

12 Коновалова В. О. Вбивство: мистецтво розслідування : монографія. Харків, 2001. С. 25.

13 Погорецький М. А. Докази у кримінальному процесі: проблемні питання. *Часопис Національного університету "Острозька академія". Серія "Право"*. 2011. № 1 (3). С. 20. URL: <http://lj.oa.edu.ua/articles/2011/n1/11pmapp.pdf> (date accessed: 13.05.2025).

out the method of committing a crime, the mechanisms of its concealment and the identity of the offender (including cases of participation of organized groups), to identify the instrument of crime and other important circumstances. It can be the key to uncovering false testimony or locating hidden physical evidence¹⁴.

In addition, in forensic science, the concept of a typical trace picture is also used. As V. Konovalova notes in her research, a typical trace picture is a set of characteristic *“traces inherent in a particular type or variety of crime”*¹⁵.

In our opinion, currently it is worth talking about the traces of a criminal offense as a complex category that covers material, ideal and digital traces. Material traces, in turn, constitute the material basis of forensic information. These can be any objects of the physical world that have preserved information about the circumstances of a criminal offense and that can be used to prove it. Ideal traces are traces-images (images) stored in a person's memory¹⁶. Thus, ideal trace is the mental image. If everything is more or less obvious with the first two categories, since they are traditional categories of criminology, then digital traces are a category that has not been studied much.

Digital traces can be detected and stored on various electronic devices.

Such sources include personal computers of both individuals and representatives of legal entities; mobile phones, tablets, digital cameras and video cameras that are seized from persons involved in criminal proceedings; server equipment and other means of storing information in institutions and organizations; online services that provide voice and video communication via the Internet, including *Skype, WhatsApp, Viber, Telegram*, etc.; as well as banking systems, data from which can be stored on digital media (such as SD cards, flash drives, etc.). An equally important source is video surveillance systems installed in state and private structures, as well as other computing devices. All this digital information is a valuable source of both evidentiary and indicative data, which are of key importance for clarifying the circumstances of the crime, identifying the perpetrators and further proving their involvement. Content of digital traces can be extremely diverse: this is information about the movement of individuals, Internet activity, correspondence, files, electronic messages, e-mail records, etc. Such data can be contained in automated information systems, telecommunication networks and information and telecommunication structures that provide processing, transmission and storage of digital information¹⁷.

14 Топорецька З. М. Слідова картина як джерело первинної інформації про вчинення злочинів у сфері грального бізнесу. *Реформування національного та міжнародного права: перспективи та сьогодення* : мат-ли Міжнар. наук.-практ. конф. (Одеса, 29—30.09.2011). У 2 ч. Ч. 2. Одеса, 2011. С. 105—108.

15 Коновалова В., Панов М. Інтуїція: поняття і роль у судочинстві. *Вісник Академії правових наук України*. 1999. № 1 (16). С. 186. URI: <https://dspace.nlu.edu.ua/jspui/handle/123456789/4370> (date accessed: 13.05.2025).

16 Шепітько В. Ю. Криміналістика. Енциклопедичний словник (українсько-російський і російсько-український) / за ред. В. Я. Тація. Харків, 2001. С. 323.

17 Колеснікова І. А. Цифрові сліди та їх роль в доказуванні воєнних злочинів під час російської військової агресії проти України. *Сучасні реалії протидії воєнним злочинам: набутий досвід та погляд в майбутнє* : мат-ли пан. дискус. VII Харків. Міжнар. юрид. форуму (Київ, 25.09.2023). Київ, 2023. С. 51. URL: <https://surl.li/lnqyjc> (date accessed: 13.05.2025).

Rapid development of digital technologies has led to the fact that certain part of our activities is reflected in the digital space. A significant difference between digital traces and material ones is the lack of physical form, therefore, for their detection and research, it is necessary to apply appropriate technical support, from basic devices (such as computers and smartphones) to specialized software.

One of specifics of digital traces is their easy reproduction without loss of quality, as well as the ability to edit or destroy them. For example, digital photographs, video and electronic documents can be either exactly copied or changed using special programs. For editing video or graphic materials, programs such as *Adobe Premiere Pro*, *AVS Video Editor*, *Corel VideoStudio Pro*, etc. are widely used. In modern conditions, artificial intelligence technologies are becoming increasingly widespread, which not only allow you to change existing files (replacing faces, voices, facial expressions, backgrounds or objects in videos), but also create completely new, fictitious video materials that are almost indistinguishable from the real ones. Well-known tools for creating such fakes are *DeepFaceLab*, *Faceswap*, *Reface*, etc. Another feature of digital traces is the ability to edit or destroy them remotely. Such actions can have several purposes:

- 1) committing a criminal offense, for example, by introducing malicious software (viruses, Trojans) that helps to unauthorizedly interfere with systems with the subsequent destruction or falsification of data;
- 2) concealment of traces of a crime by changing information that law enforcement agencies can use as

evidence. For this purpose, adversaries often use remote device access tools, such as *Microsoft Remote Desktop*, *TeamViewer*, *Chrome Remote Desktop*, which allow you to control a computer or other device using the Internet or a local network without a physical presence next to it. Cloud storage services play an important role in digital traceability, facilitating the synchronization of information across multiple devices and accessing it from anywhere¹⁸.

As for typical trace picture of interference in the activities of representatives of state authorities, it is also quite wide. Analysis of the materials of criminal proceedings initiated on the grounds of interference in the activities of representatives of public authorities makes it possible to generalize that ideal and digital traces are more characteristic for them, and material traces are less common. That is why we consider it necessary to dwell more thoroughly on specifics of traces of interference in the activities of representatives of State apparatus.

Source of ideal traces is primarily the victim himself. He was involved in 98% of the criminal proceedings we analyzed and testified. Since the victim in the investigated category of criminal offenses is a special subject, which is primarily related to his professional status, obtaining testimony from him for the most part does not cause significant difficulties for investigators who conduct interrogation and an investigative experiment, when they reproduce criminal offense circumstances.

Typical sources of ideal traces include the suspect (accused). During the pre-trial investigation, the latter most often agrees

18 Демидова Є. Є. Цифрові сліди кримінального правопорушення: поняття та особливості. *Науковий вісник Ужгородського національного університету. Серія: Право*. 2024. Вип. 85. Ч. 4. С. 71–75. DOI: [10.24144/2307-3322.2024.85.4.10](https://doi.org/10.24144/2307-3322.2024.85.4.10) (date accessed: 13.05.2025).

to give evidence and admits his guilt in committing a criminal offense. This is proven by the consideration of cases in the courts. For example, the Boryspil City District Court of the Kyiv region found that the accused, being at a bus stop next to the “Турман” store, jointly resisted police officers who were performing their duties to protect public order, and used violence in the form of beatings and inflicting bodily harm. Later, during the detention of the offenders, citizen K., who was in a state of alcoholic intoxication and was aware that the police officers were performing their duties, decided to interfere with the activities of law enforcement officers and prevent them from placing the detainee in a service car. The court assessed the actions of the accused and noted that they consisted in influencing a law enforcement officer with the aim of preventing him from performing his official duties (interference in the activities of a law enforcement officer), i.e. the accused committed a criminal offense provided for in P. 1 of Art. 343 of the Criminal Code of Ukraine¹⁹. As a result of the examination of the evidence, the court concluded that the guilt of the accused is proven by his exculpatory testimony²⁰.

Another source of ideal traces are witnesses, that is, eyewitnesses to the commission of a criminal offense, or persons who give testimony from hearsay. Witnesses in this category of proceedings are usually: 1) employees of state authorities; 2) ordinary citizens who were at the scene and witnessed the implementation of the criminal intent by the subject of a criminal offense.

In accordance with the analysis of judicial practice, with the participation of witnesses who are not employees of public authorities, in addition to interrogations and investigative experiments, they conduct another presentation of a person for identification. Thus, during this procedural action, witnesses identify the ideal image of perception with a specific person, who is most often the suspect.

In particular, the Ratnivskyi District Court of the Volyn region (conducted an interrogation with the participation of a witness, an investigative experiment and presentation for identification) during the court session found that the accused exerted influence on law enforcement officers with the aim of preventing them from performing their official duties, as well as (in collusion with an accomplice with prior intent) arbitrariness, which caused significant harm to state interests under the following circumstances. The case collected and examined ideal traces, which were reflected in the testimony of a witness, who explained that she witnessed a conflict between five men unknown to her over an *AUDI A6* car, which, according to some citizens, was illegally in a customs warehouse. Later, the witness witnessed events in which one of the men entered the customs control zone using physical force, and another, making threats and using physical force, began to prevent law enforcement officers from performing their duties, as a result of which the accused tore off the padlock on the closed gates of the customs warehouse and arbitrarily left the customs warehouse in the aforementioned car. In accordance with the circum-

19 Кримінальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 09.05.2025).

20 Вирок Борисп. міськрай. суд. Київ. обл. від 25.05.2020 р. Справа № 359/3394/20. Провадж. № 1-кп/359/505/2020 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/89492361> (date accessed: 13.05.2025).

stances of the case, despite the defendant's failure to admit guilt, the court (based on the examination of the evidence) concluded that his actions constituted criminal offenses, for which he was charged ²¹. It should be noted that in addition to the perfect fingerprints, padlock with a chain was attached to the case file as evidence. Therefore, in some situations, material evidence is also attached to such cases.

As for material traces, their source can be various objects used by the perpetrator during the implementation of the criminal intent. Thus, in the case considered by the Solomianskyi District Court of Kyiv, a white powdery substance was recognized as material evidence, which the perpetrator used to prevent the judge of the Court of Appeal of Kyiv from performing his official duties. In accordance with the circumstances of the case, clarified during the open court session, the panel of judges refused the accused to satisfy his petition, so he threw a paper bag with a white powdery substance, which he had prepared in advance and held in his hand, at the presiding judge. The blow hit the left side of the judge's head and stunned her for some time. The bag burst from the blow, a white powdery substance poured out of it, getting on the judge's hair and clothes, and on the table with the case. Based on the trial of the case, the court concluded that by his intentional actions the accused violated the usual work

regime of judges, interfered with the activities of a judge with the aim of preventing her from performing her official duties ²².

Material traces can also be stored on physical evidence attached to the case. However, in this category of criminal proceedings, as we have already noted, the seizure of material objects during the inspection of the scene is atypical. Thus, out of 25 analyzed verdicts on the fact of interference in the activities of law enforcement officers, it was found that in only 2 of them were material objects (except for video recordings) seized, which acquired the status of physical evidence, however, no such object was subsequently subject to either inspection or expert examination. Out of 6 analyzed verdicts on the fact of interference in the activities of judicial bodies, in only one were material objects seized, and in another, a disk with a telephone message and a court summons dated 08/25/2022 to participate in a court session ²³. This once again demonstrates the atypical nature of the material traces for the mechanism of criminal illegal activity related to interference in the activities of representatives of state authorities.

At the same time, given the prevalence of recognition of video recordings as evidence by the courts (in 13 out of 25 analyzed verdicts on the fact of interfering with the activities of law enforcement officers) ²⁴, we consider it necessary to dwell

21 Вирок Ратнів. райсуд. Волин. обл. від 11.09.2020 р. Справа № 166/137/20. Провадж. № 1-кп/166/46/20 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/91466914> (date accessed: 13.05.2025).

22 Вирок Солом'ян. райсуд. м. Києва від 12.11.2019 р. Справа № 760/7663/18. Провадж. № 1 кп/760/789/19 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/85603512> (date accessed: 13.05.2025).

23 Вирок Роздільнян. райсуд. Одес. обл. від 18.02.2025 р. Справа № 496/4648/22. Провадж. № 1-кп/511/36/25 / Там само. URL: <https://reyestr.court.gov.ua/Review/125229647> (date accessed: 13.05.2025).

24 Вирок Володимир. райсуд. Рівнен. обл. від 22.01.2024 р. Справа № 556/95/24. Провадж. № 1-кп/556/90/2024 / Там само. URL: <https://reyestr.court.gov.ua/Review/116512173> (date accessed: 13.05.2025) ; Вирок Ленін. райсуд. м. Кіровограда від 18.09.2020 р.

on clarifying the essence of such objects in more detail. This, in particular, is due to the need to distinguish the video itself as an electronic document from its material carrier (on which it is stored and sent to the court for further research).

While analyzing the legal positions of the court on these issues, we found that the panel of judges of the First Trial Chamber of the Cassation Criminal Court of the Supreme Court in case № 756/8124/19 emphasized the key feature of the electronic document, which is the absence of a rigid dependence on a particular physical medium. The same digital file (for example, a video recording) can be stored simultaneously on different electronic media. All copies that completely coincide in content can be recognized as originals of an electronic document, and the difference between them lies solely in the date and time of their creation. Consequently, any objections to the recognition of discs and other media with video recordings, photographic images and their inspection protocols as admissible evidence should be refuted.

According to the position of the Supreme Court, P. 1 of Art. 99 of the Code of Criminal Procedure of Ukraine recognizes as a document in criminal proceedings

a material medium²⁵ specially created for storing information that can be used to establish certain facts and circumstances, and therefore, photo, video and sound recordings, in particular in electronic form, should be considered as belonging to such documents. The obligation of the party to provide the original of the document means that in the case of an electronic document, its reflection, to which the law gives the force of the original, is recognized as such an original. The court also referred to Art. 7 of the Law of Ukraine: *On Electronic Documents and Electronic Documents Circulation* according to which, if information is stored on several digital media, then each identical version of such an electronic document is considered as original²⁶. Thus, a physical medium in the form of a disk performs only the function of storage, and does not determine the authenticity of the electronic document. The same video file saved on a disk can be considered as an original if it meets the technical and content requirements²⁷. This approach is fully consistent with established judicial practice, in particular the legal position set out in the resolution of the Criminal Court of Cassation dated 22.10.2020 in case № 677/2040/16-к²⁸.

Справа № 405/2608/20. Провадж. № 1-кп/405/162/20 / Там само. URL: <https://reyestr.court.gov.ua/Review/91649655> (date accessed: 13.05.2025) ; Вирок Зарічн. райсуд. Рівнен. обл. від 28.01.2020 р. Справа № 561/1112/19. Провадж. № 1-кп/561/18/2020 / Там само. URL: <https://reyestr.court.gov.ua/Review/87195083> (date accessed: 13.05.2025) ; Вирок Борисп. міськрайсуд. Київ. обл. від 25.05.2020 р. ... / Там само. URL: <https://reyestr.court.gov.ua/Review/89492361> (date accessed: 13.05.2025).

25 Кримінальний процесуальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 09.05.2025).

26 Про електронні документи та електронний документообіг : Закон України від 22.05.2003 р. № 851-IV (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/851-15#Text> (date accessed: 09.05.2025).

27 Постанова Касац. кримін. суду у складі Верхов. Суду від 19.08.2021 р. Справа № 756/8124/19. Провадж. № 51-607км21 / ЄДРСР : вебсайт. URL: <https://reyestr.court.gov.ua/Review/99088529> (date accessed: 13.05.2025).

28 Постанова Касац. кримін. суду. у складі Верхов. Суду від 22.10.2020 р. Справа № 677/2040/16-к. Провадж. № 51-5738км19 / Там само. URL: <https://reyestr.court.gov.ua/Review/92458395> (date accessed: 13.05.2025).

Therefore, a video recording is a type of digital evidence in criminal proceedings²⁹, and the application of the concepts of *electronic* and *digital* in relation to traces and evidence, as rightly noted in the scientific literature is equivalent and has the same semantic load³⁰.

Thus, digital traces arise in the process of using electronic means of communication to interfere with the activities of representatives of public authorities, in particular in various messengers, mobile devices, video surveillance systems, body cameras, video recorders, during video recording to record the course of litigation using appropriate technical means, as well as in digital devices that carry out photographic recording. Such devices may retain visual representations of circumstances related to the commission of a criminal offense or images of persons who may be involved in its commission.

Conclusions

Based on the study of materials of criminal proceedings and judicial practice, we come to the conclusion that most often the carriers of trace information in criminal offenses related to interfering with the activities of representatives of public authorities are:

- 1) documents, including electronic ones (summonses, protocols of procedural actions, photographic materials, sound and video recordings of the event of a criminal offense or related to it);

- 2) digital traces displayed (saved) in messengers, information systems, e-mail servers and other information systems, video recordings, etc.;
- 3) other things of the material world that are found at the place of implementation of the criminal intent (at the scene) and that have retained traces of criminal illegal activity;
- 4) tools and/or means used by guilty persons to implement a criminal intent;
- 5) participants in relevant public relations who accidentally or in connection with official activities became participants in the event of a criminal offense related to interfering with the activities of representatives of public authorities.

Identification, recording and research of sources of information significant for the investigation shall be carried out in the manner and in the forms prescribed by law. The implementation of such forms is mostly the competence of the investigator and does not require the involvement of third parties in criminal proceedings. At the same time, individual traces can be filmed on material media: such objects (in accordance with the legal positions of national courts) should be considered originals.

We believe that further research should consist in clarifying the tactical features of investigative (search) actions aimed at recording the outlined traces of criminal illegal activity.

29 Лук'янчиков Б. Є., Грачова О. Ю. Відеозапис як вид цифрового доказу у кримінальному процесі: сучасний стан та перспектив. *Юридичний науковий електронний журнал*. 2023. № 2. С. 490—493. DOI: [10.32782/2524-0374/2023-2/115](https://doi.org/10.32782/2524-0374/2023-2/115) (date accessed: 13.05.2025).

30 Коваленко А. В. Поняття та сутність електронних (цифрових) слідів кримінального правопорушення. *Вісник Луганського державного університету внутрішніх справ імені Е. О. Дідоренка*. 2022. Вип. 4 (100). С. 229. DOI: [10.33766/2524-0323.100.226-236](https://doi.org/10.33766/2524-0323.100.226-236) (date accessed: 13.05.2025).

**Види й особливості дослідження
слідів протиправного втручання
в діяльність представників
органів державної влади**

Володимир Попов

Мета роботи — визначити типові сліди кримінально-протиправної діяльності, пов'язаної з утручанням у діяльність представників органів державної влади, окреслити їх особливості та способи дослідження. Досягненню поставленої мети сприяло застосування загальнонаукових (аналіз, синтез, абстрагування, узагальнення), спеціальних і філософських методів (діалектичний, порівняльно-правовий, системно-структурний, прогностичний). Вивчення матеріалів кримінальних проваджень і судової практики дало змогу визначити типові джерела (носії) слідової інформації у кримінальних правопорушеннях, пов'язаних із утручанням у діяльність представників органів державної влади, поміж яких виокремлено: 1) документи, зокрема електронні (повідстки про виклик, протоколи процесуальних дій, фотоматеріали, звуко- та відеозаписи події кримінального правопорушення або пов'язаної із нею); 2) цифрові сліди, відображені (збережені) у месенджерах, інформаційних системах, серверах електронної пошти й інших інформаційних системах, відеозаписах тощо; 3) інші речі матеріального світу, які виявлено на місці реалізації злочинного умислу (на місці події) і які зберегли на собі сліди кримінальної протиправної діяльності; 4) знаряддя і/або засоби, застосовані винними особами для реалізації злочинного умислу; 5) учасників відповідних суспільних відносин, які випадково або у зв'язку зі службовою діяльністю стали учасниками події кримінального правопорушення, пов'язаної зі втручанням у діяльність представників органів державної влади. Окреслено пер-

спективи подальших досліджень у межах аналізованої проблематики.

Ключові слова: кримінальне правопорушення; утручання в діяльність; орган державної влади; сліди кримінального правопорушення; докази; збирання доказів.

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**Declaration
of Competing Interest**

Author declares no conflict of interest.

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Guarantees of professional activity of defense attorney in criminal proceedings

Mykola Kolomoitsev*

* PhD in Law, Doctoral Student of NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine, ORCID: <https://orcid.org/0009-0005-8957-5509>, e-mail: kolomoitsev.mykola@ukr.net

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This article purpose is to determine legal status content of the defense attorney of the suspect (accused) in criminal proceedings, to characterize the guarantees of his professional activity. For implementing the set goal, a set of general scientific methods was applied (analysis and synthesis, generalization, logical-structural approach, etc.). It was investigated that the guarantees of the professional activity of the lawyer (defense attorney) in criminal proceedings are represented by a set of international legal and national provisions that determine his rights and obligations in the event of his defense of the suspect (accused / defendant / convicted). The sources of the aforementioned guarantees are the Constitution, the Criminal Procedure Code, the Law “Law of Ukraine: On the Bar and Legal Practice”, and subordinate regulatory legal acts of Ukraine. The outlined legal guarantees determine the powers of the defense attorney in ensuring the right to defense and fair justice, they are used when obtaining evidence, to substantiate the legal position, to appeal procedural decisions, etc. The system of legal guarantees of the defense attorney in criminal proceedings is presented in the form of: 1) constitutional and criminal law provisions that provide grounds for criminal liability for violation of the right to defense, as well as for any illegal influence on its activities (Articles 397-400 of the Criminal Code of Ukraine); 2) general guarantees stipulated by the Law of Ukraine “Law of Ukraine: On the Bar and Legal Practice”, international legal acts and the practice of the European Court of Human Rights;

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3) criminal procedural guarantees that give the defense attorney the right to represent the interests of the client, participate in procedural measures, submit motions, complaints, etc.; 4) special guarantees that determine the competence of the defense attorney in resolving narrowly defined issues (for example, initiating a forensic examination based on contractual relations).

Keywords: criminal proceedings; lawyer; legal aid; witness; right to defense; legal status.

Research Problem Formulation

Constitution of Ukraine stipulates that every person can independently choose defense attorney (and therefore a representative) of his rights¹. For implementing such goals and tasks, the State has ensured activities of the bar. It is this non-governmental institution that provides professional representation and protection of a person in court, state authorities, etc.

Under the legal regime of martial law, requests for legal aid have increased quantitatively. This is due to the purpose of obtaining consulting assistance and protection from criminal prosecution, as well as availability of requests from citizens for their representation as victims and witnesses in criminal proceedings, etc.

Professional activities of participants in legal relations are regulated by law, therefore, during its practical implementation, it is important to strictly adhere to certain legal principles. In order to implement the tasks assigned to the bar,

the State has developed and implemented a number of guarantees for professional activities of lawyers.

In a broad sense, a guarantee should be understood as a guarantee of something, a guarantee of something; conditions that ensure the success of something². In modern Ukrainian legal science, there is still no agreed-upon vision on the classification of guarantees for implementation of human and civil rights and freedoms. Researchers most often distinguish between general and special guarantees. By general guarantees, scientists usually understand a set of objective conditions and subjective factors that contribute to effective implementation of rights and freedoms, prevent their restriction or violation and ensure an appropriate level of protection. At the same time, special (legal) guarantees in the scientific literature are defined as a set of legal instruments that implement, protect and restore violated human rights. They contain procedural and material means that provide legal protection and eliminate violations³.

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2 Гарантія / Академічний тлумачний словник української мови. в 11 т. / за ред. І. К. Білодіда. Київ, 1970—1980. Т. 2 : Г—Ж ; ред. тому: П. П. Доценко, Л. А. Юрчук. 1971. С. 29. URL: <https://sum.in.ua/s/Gharantija> (date accessed: 24.04.2025).

3 Байрачна Л. К., Барабаш Ю. Г., Веніславський Ф. В. та ін. Конституційне право України : підручник / за ред. В. П. Колісника, Ю. Г. Барабаша. Харків, 2008. С. 132. URL: https://library.nlu.edu.ua/POLN_TEXT/KNIGI_2009_2/KONST_PR_2008.pdf (date accessed: 24.04.2025) ; Остапенко В. В. Гарантії суб'єктивних прав і свобод як елемент правового статусу

As for professional guarantees of activity, they are mostly outlined in special profile laws. For example, professional guarantees of lawyers are defined in the Law of Ukraine: *On the Bar and Legal Practice*⁴. At the same time, the question remains relevant as to whether the scope of procedural guarantees of a lawyer who has acquired the status of a defense attorney in criminal proceedings changes, and how, whether the general guarantees of a lawyer in criminal proceedings are limited, etc.

Such attention to the outlined issues is due to a significant shortcoming of the current criminal procedural legislation, which does not contain a separate norm that would define the rights and obligations of a defense attorney in criminal proceedings, guarantees of his participation in criminal proceedings.

We believe that in order to ensure a person's right to defense, provide legal assistance to a person who may potentially acquire the status of a suspect in criminal proceedings during the consideration of the case in court (consideration of criminal case on the merits) and represent the person in this regard in other State bodies in Ukraine, it is necessary to clarify the guarantees of a defense attorney in criminal proceedings.

Article Purpose

Determining content of the legal guarantees of activities of defense attorney of the

suspect (accused) in criminal proceedings as a component of the legal (procedural) status of this participant in criminal proceedings.

Research Methods

In order to achieve the goal, a set of general scientific methods was applied (analysis and synthesis, generalization, logical-structural approach, etc.). General scientific and special methods provided a consistent analysis of the guarantees of the professional activity of a lawyer (defense attorney) in criminal proceedings. The methods of analysis and synthesis made it possible to distinguish legal positions relating to different types of procedural guarantees (constitutional, criminal law, procedural, special), and logically combine them into a single systemic model of legal regulation of advocacy. Thanks to the generalization of the provisions of the current national legislation (Constitution, Criminal Procedural Code of Ukraine), Law of Ukraine: *On the Bar and Legal Practice*, other regulatory legal acts of Ukraine)⁵, as well as the norms of international law and the practice of the European Court of Human Rights (hereinafter referred to as ECtHR), a holistic vision of the legal status of a defense attorney in criminal proceedings was formed. The use of a systemic and structural approach contributed to the classification of guar-

людини і громадянина. *Теорія і практика правознавства*. 2018. Вип. 1 (13). С. 2. DOI: [10.21564/2225-6555.2018.13.127019](https://doi.org/10.21564/2225-6555.2018.13.127019) (date accessed: 24.04.2025).

- 4 Про адвокатуру та адвокатську діяльність : Закон України від 05.07.2012 р. № 5076-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).
- 5 Конституція України URL: <https://zakon.rada.gov.ua/laws/show/254%D0%BA/96-%D0%B2%D1%80#Text> (date accessed: 24.04.2025) ; 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: 02.05.2025) ; Про адвокатуру URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).

antees of defense attorney's activities by content, sources of regulation, and scope of implementation, which helped to clearly distinguish between general and special guarantees, as well as to clarify their significance for the implementation of the right to defense.

Dialectical method has come in handy in studying development of regulatory regulation of the institution of protection in criminal proceedings, analyzing the dynamics of legislative changes and their impact on law enforcement practice.

Methods of formal and logical analysis (deduction, induction, analogy) became the basis for the author's conclusions regarding the effectiveness of the existing guarantees and for substantiating the areas for their improvement. The combination of the methods applied made it possible to highlight in a structured manner the guarantees of the advocate's activities in criminal proceedings, to outline the main problems of exercising his/her powers and to identify promising areas for their regulatory improvement with due regard

for the rule of law and ensuring real equality of the parties.

Analysis of Essential Researches and Publications

Defense attorney in criminal proceedings is subject to all legal guarantees of the advocate provided by the law: *On the Bar and Legal Practice* ⁶. At the same time, the defense function in criminal proceedings is exercised taking into account a number of sectoral – criminal procedural – principles defined by the criminal procedure law. Therefore, scholars continue to study these issues: either on the basis of an interdisciplinary approach or taking into account the sectoral principle.

Thus, in a broad sense, the legal guarantees of the advocate's activity are analyzed in the works of V. Zaborovskiy⁷, V. Merkulova⁸, S. Savyska⁹ et al.

Criminal procedural guarantees of defense attorney are disclosed in research papers by A. Katkova¹⁰, V. Erokhin and O. Yukhno¹¹, A. Khytra and I. Tataryn¹²,

6 Про адвокатуру ... URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).

7 Заборовський В. В. Правовий статус адвоката в умовах становлення незалежної адвокатури України : монографія. Ужгород, 2017. 900 с. URI: <https://dspace.uzhnu.edu.ua/jspui/handle/lib/20342> (date accessed: 24.04.2025).

8 Меркулова В. О. Функції адвокатури та відновне правосуддя: проблеми співвідношення. *Південноукраїнський правничий часопис*. 2023. № 3. С. 96–101. DOI: 10.32850/sulj.2023.3.16 (date accessed: 24.04.2025).

9 Савицька С. Л. Кримінально-процесуальні гарантії діяльності адвоката : дис. ... канд. юрид. наук. Київ, 2013. 199 с.

10 Каткова А. Г. Гарантії здійснення адвокатської діяльності у кримінальному провадженні: проблемні питання. *Процесуальні та криміналістичні аспекти досудового розслідування* : мат.-ли Міжнар. наук.-практ. конф. (Одеса, 14.04.2016). Одеса, 2016. С. 63–65. URL: <https://surl.li/hgtftt> (date accessed: 24.04.2025).

11 Єрохін В. В., Юхно О. О. Захисник як учасник кримінального провадження : монографія / за заг. ред. О. О. Юхна. Харків, 2018. 240 с. URL: <https://core.ac.uk/reader/333963660> (date accessed: 24.04.2025).

12 Хитра А., Татарин І. Правові гарантії участі захисника у кримінальному провадженні. *Polish journal of science*. 2022. № 47. Vol. 2. С. 38–42. URL: <https://www.calameo.com/read/00598514271b5b1a06241> (date accessed: 24.04.2025).

O. Starenkyi¹³ and others. The authors focus their attention on various aspects of this issue. For example, V. Yusupov and K. Yusupova note that the liability for any illegal influence on the work of a defense attorney provided for in Articles 397-400 of the Criminal Code of Ukraine¹⁴ is a guarantee of the lawyer's activity. At the same time, scholars note the systematic closure of such proceedings and the lack of real practice of bringing guilty persons to criminal liability for illegal interference in legal practice. Therefore, the authors emphasize the importance of identifying all aspects of the subject of evidence by pre-trial investigation bodies in order to fully collect, analyze, and evaluate evidence, which will ultimately contribute to an effective, objective, and impartial investigation¹⁵.

V. Honcharenko chose the guarantees of professional activity of foreign lawyers in Ukraine as the subject of his research and noted the low popularity of the institute of foreign lawyer in Ukraine¹⁶. He explains this trend by a number of restrictions imposed on lawyers of foreign countries who plan to carry out professional activity in Ukraine. Given the limitations of foreign citizens in protecting their pro-

fessional rights, the scientist emphasizes that Art. 61 of the Law: *On the Bar and Legal Practice*¹⁷ needs to be supplemented with a provision of the following content: "Protection of professional rights and obligations of a lawyer of a foreign country, as well as ensuring guarantees of his legal activity is carried out by the bodies of self-government of lawyers within the limits of their competence on a par with lawyers of Ukraine"¹⁸.

It seems that correlation of the legal guarantees of a defense attorney as an attorney that are a component of the legal status of this participant in legal relations, should be correlated as general (professional guarantees of lawyer) and separate (guarantees of the defense attorney), but it should be clarified whether this correlation is observed in practical activities.

Textual analysis of research paper allows us to summarize several typical problematic issues that negatively affect the normalization of the legal status of defense attorneys in criminal proceedings. *Firstly*, this is inconsistency of national legal guarantees of defense attorney activities with international normative principles of activity. *Secondly*, this is the inconsistency of the professional status of foreign lawyers and national ones. *Thirdly*, this is the pres-

- 13 Старенький О. С. Щодо визначення поняття та видів кримінальних процесуальних гарантій захисника як суб'єкта доказування у досудовому розслідуванні. *Вісник кримінального судочинства*. 2016. № 4. С. 62–72. URL: https://vkslaw.knu.ua/images/verstka/4_2016_Starenkyi.pdf (date accessed: 24.04.2025).
- 14 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: 24.04.2025).
- 15 Юсупов В. В., Юсупова К. О. Гарантії професійної діяльності захисника як предмет злочинного посягання при вчиненні втручання в діяльність захисника чи представника особи. *Юридичний науковий електронний журнал*. 2023. № 8. С. 446–450. DOI: 10.32782/2524-0374/2023-8/104 (date accessed: 24.04.2025).
- 16 Гончаренко В. С. Гарантії професійної діяльності іноземних адвокатів в Україні. *Вісник кримінального судочинства*. 2018. № 4. С. 119–127. URL: <https://vkslaw.com.ua/index.php/journal/article/download/325/296/> (date accessed: 24.04.2025).
- 17 Про адвокатуру ... URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).
- 18 Гончаренко В. С. Зазнач. твір. С. 126. URL: <https://vkslaw.com.ua/index.php/journal/article/download/325/296/> (date accessed: 24.04.2025).

ence of conflicts in the provisions of the Criminal Procedural Code of Ukraine¹⁹ and the Law *on the Bar and Legal Practice*²⁰.

We are convinced that the issues raised are relevant and require resolution and regulation at the legislative level, because in criminal proceedings, due legal procedure should be applied to each participant in criminal proceedings and to each legal dispute, and only then will the principles of equality of parties, the rule of law, etc. be ensured.

Main Content Presentation

Professional independence, dignity and rights of a lawyer are protected at the level of the Constitution of Ukraine, special legislation, as well as other legal acts. At the same time, Art. 23 of Law of Ukraine: *On the Bar and Legal Practice* defines the following key guarantees of the legal status of a lawyer:

- 1) any interference with the professional activities of a lawyer is prohibited; authorities and other persons have no right to influence or interfere with the implementation of the legal functions of a lawyer;
- 2) information constituting professional secrecy is inviolable; it is prohibited to demand its disclosure from lawyers, their assistants, trainees or employees. These persons

cannot be questioned about confidential information without the written consent of the client. Importance of ensuring the confidentiality of the activities of a lawyer (in particular, a defense attorney) was also emphasized by the ECtHR in the case of *Niemietz v. Germany* (1992). In this decision, the ECtHR noted that a search of a lawyer's office, which leads to the disclosure of professional information to third parties (except for the lawyer and his client), violates Art. 8 of the European Convention on Human Rights (right to respect for private and family life, home and correspondence)²¹.

- 3) conducting procedural actions against a lawyer requires a special procedure, any operational-search or investigative (search) actions that can be conducted exclusively with the permission of the court, are carried out on the basis of a court decision initiated by high-ranking prosecutors;
- 4) documents related to professional activities of lawyer shall not be subject to inspection, seizure or disclosure, except in cases provided for by law;
- 5) lawyers have equal rights in legal proceedings that implies adherence to the principles of equality,

19 Кримінальний процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 02.05.2025).

20 Савицька С. Л. Зазнач. твір ; Каткова А. Г. Зазнач. твір. URL: <https://surl.li/hgtfft> (date accessed: 24.04.2025) ; Про адвокатуру URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).

21 European Convention on Human Rights. As amended by Protocols Nos. 11, 14 and 15. Supplemented by Protocols Nos. 1, 4, 6, 7, 12, 13 and 16. European Court of Human Rights ; Council of Europe. URL: https://www.echr.coe.int/documents/convention_eng.pdf (date accessed: 13.05.2025) ; Case of *Niemietz v. Germany*. Appl. No. 13710/88. Judgm. of 16 Dec 1992 / European Court of Human Rights. URL: <https://hudoc.echr.coe.int/eng?i=001-57887> (date accessed: 13.05.2025).

- adversarial proceedings, and freedom to prove a legal position;
- 6) life, health, reputation and property of lawyer and his family are protected by law, and any infringement entails the prescribed criminal or other legal liability;
 - 7) safety of lawyer during participation in criminal proceedings is guaranteed by law, in particular with the application of special protective measures;
 - 8) it is prohibited to involve a lawyer in secret cooperation with law enforcement agencies if such interaction can violate the principle of confidentiality or lead to the disclosure of attorney-client privilege;
 - 9) personal communication between a lawyer and a client is private, and any interference with it is unacceptable;
 - 10) legal positions expressed by an attorney cannot be the basis for a prosecutorial appeal, court decisions, or other response aimed at exerting pressure or influence on lawyer;
 - 11) lawyer's legal position is protected from third-party interference, even if it conflicts with the interests of prosecution or another opponent in the case;
 - 12) relevant regional bar council must be immediately informed of the detention of a lawyer or the imposition of a preventive measure against him/her;
 - 13) reporting of suspicion to a lawyer is possible only from certain categories of prosecutors, in particular the Prosecutor General or his deputies or the prosecutor of the Autonomous Republic of Crimea, the region, the city of Kyiv and the city of Sevastopol;
 - 14) holding a lawyer criminally or otherwise liable in connection with his professional activities is inadmissible, except in cases clearly defined by law;
 - 15) professional activities of a lawyer, including public statements or statements in the interests of a client, cannot be recognized as grounds for legal liability unless the lawyer's ethics are violated;
 - 16) it is prohibited to identify lawyer with the person he represents a lawyer is not responsible for the actions or beliefs of his client;
 - 17) disciplinary proceedings against a lawyer are carried out according to a specially defined procedure that guarantees compliance with his professional rights²².
- Despite thorough consolidation of general guarantees of the professional activity of lawyers, it is worth noting that criminal procedural activity is always characterized by a certain conflict of interests of the prosecution and the defense. In order to realize procedural curiosity, each of the parties resorts to implementation of procedural and non-procedural actions aimed at making a procedural decision that would correspond to its legal position and satisfy its procedural curiosity.
- In the context of studying the compliance of the guarantees of the procedural activities of a defense lawyer in criminal proceedings with international legal guarantees, we should note that the international community pays close attention to this issue. Thus, in accordance with the Basic Provisions on the Role of Lawyers,

22 Про адвокатуру ... URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).

adopted at the 8th UN Congress on Crime Prevention and Criminal Justice, lawyer has the right to:

- 1) timely and unhindered access to information, documents and case materials;
- 2) confidentiality in protecting the content of consultations and communications between the lawyer and the client;
- 3) protection, if there is a threat to the safety of the lawyer due to his professional activities, etc.;
- 4) freely move and consult clients within the state and abroad, etc.²³.

In addition, in 1990, International Bar Association adopted the standards of legal practice, the International Principles of Conduct for Lawyers, with the aim of ensuring the independence of the legal profession, protecting the rights of lawyers and creating universal standards of professional ethics²⁴. According to them, State authorities should guarantee to every lawyer:

- 1) independence from state bodies, political pressure or external influence, and interference in the professional activities of a lawyer by any party is unacceptable;
- 2) freedom in choosing clients (lawyer has the right to freely accept or refuse cases, except in cases where such refusal is contrary to the law or rules of professional ethics);

- 3) confidentiality (all information received by a lawyer in connection with the performance of his duties is a professional secret, and its violation is a gross violation of ethical norms);
- 4) loyalty to the client, i.e. the lawyer should act in the interests of the client, not contradict the law and moral principles, and the detection of a conflict of interest is grounds for refusing to participate in the case;
- 5) ensuring ethical standards (a lawyer is obliged to adhere to high moral and ethical principles regardless of the jurisdiction in which he practices);
- 6) self-government of bar institutions (activities of lawyers are ensured by independent bodies of bar self-government, which determine the rules of internal procedure and ensure their compliance);
- 7) protection from prosecution for actions committed within the scope of professional activity, if they do not contradict the law²⁵.

The principles outlined above are enshrined in Recommendation R (2000) 21 of the Committee of Ministers of the Council of Europe, and although this document is not binding, it defines the standards to which Council of Europe member states, including Ukraine should strive to guarantee the independence and effectiveness of legal profession²⁶.

23 Basic Principles on the Role of Lawyers : Ad. 07 Sept 1990 by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Havana, Cuba / United Nations Human Rights : web. URL: <https://www.ohchr.org/en/instruments-mechanisms/instruments/basic-principles-role-lawyers> (date accessed: 13.05.2025).

24 IBA Standards for the Independence of the Legal Profession. Ad. 1990. URL: <https://www.ibanet.org/MediaHandler?id=F68BBBA5-FD1F-426F-9AA5-48D26B5E72E7> (date accessed: 13.05.2025).

25 Ibid.

26 Рекомендація R (2000) 21 Комітету Міністрів державам-членам про свободу професійної діяльності адвокатів : ухвал. Ком. Мін-в Ради Європи на 727-му засід. заст. мін-в 25.10.2000 р. URL: https://supreme.court.gov.ua/userfiles/R_2000_21_2000_10_25.pdf (date accessed: 13.05.2025).

In context of criminal proceedings, the scientific literature proposes to define criminal procedural guarantees of the defense attorney's activities in criminal proceedings as a subject of evidence at the stage of pre-trial investigation and to group them into several groups. O. Starenkyi thoroughly approached this issue and proposed to classify the guarantees of defense attorney's activities according to the following criteria:

- 1) by source of legal regulation:
 - *international ones* provided for by international legal acts;
 - *national ones* enshrined in the legislation of Ukraine;
- 2) according to the content of legal status of defense attorney:
 - aimed at ensuring the implementation of the procedural rights of defense attorney as a participant in evidence;
 - that guarantee possibility of proper performance of procedural duties by the defense attorney within the limits of his powers of proof;
- 3) by stages of exercising the right to prove:
 - act during collection of evidence by defense attorney;
 - ensure use of collected evidence to form a legal position for the defense;
- 4) by the method of obtaining evidence:
 - used in the case of the participation of a defender in search and operational actions
 - act during his participation in covert investigative (search) actions;
 - regulate retrieval of documents;
 - relate to receiving things and documents;
- ensure that participants in proceedings or other persons are interviewed;
- implemented when forensic expert is involved at initiative of defense attorney;
- 5) by the intended purpose of the procedural action:
 - ensure that defense attorney collects evidence;
 - allow to verify the reliability of the evidence obtained
- 6) by nature of evidence with which the defense attorney works:
 - related to receipt and use of physical evidence;
 - related to documents;
 - regarding expert conclusions;
 - cover testimony of individuals;
- 7) by entity that ensures exercise of the right to evidence:
 - prosecutor;
 - head of the pre-trial investigation body;
 - investigator;
 - detective;
 - examining magistrate;
 - representative of the regional bar association ²⁷.

Regarding guarantees of the defense attorney's participation in in investigative actions and covert investigative actions during the pre-trial investigation, scientific literature identifies the following among them:

- 1) right of a lawyer to apply to examining magistrate with a request to conduct a (re)trial;
- 2) opportunity to provide the suspect with brief legal advice during such actions, both on his own initiative and at the request of the client;

27 Старенький О. С. Кримінальні процесуальні гарантії захисника як суб'єкта доказування у досудовому розслідуванні : автореф. дис. ... канд. юрид. наук. Київ, 2016. 20 с.

- 3) obligation of investigator or prosecutor to ensure the participation of a defense attorney if a search is conducted in a premises at the request of a person present there;
 - 4) clear requirements for execution of investigative actions protocol (indicating the date, start and end time, information about attachments, recording an explanation of the rights and obligations of participants in the action);
 - 5) inadmissibility of using as evidence materials obtained with significant violations of the procedure for conducting investigative actions;
 - 6) right of defense attorney to initiate the conduct of a (re)trial by submitting a corresponding motion to the examining magistrate;
 - 7) obligation of examining magistrate to obtain from the lawyer a written undertaking not to disclose the fact of conducting cover investigative actions, if the lawyer initiated these actions;
 - 8) guarantees regarding the lawyer's familiarization with the results of the cover investigative action carried out on his initiative;
 - 8) declassification of motions, procedural decisions, and other documents related to cover investigative actions upon completion of such actions or until the materials are disclosed to the other party.
- Regarding other procedural actions within the pre-trial investigation, the guarantees of the participation of defense attorney as a subject of evidence include:
- 1) right of an attorney to request documents (originals or certified copies), except for those containing state or official secrets, by submitting an attorney's request in accordance with the Law: *On the Bar and Legal Practice*;
 - 2) right to make a request not only to institutions and organizations, but to individuals;
 - 3) legal liability for unjustified refusal to respond to a lawyer's request;
 - 4) right of the defense attorney to draw up a report on the receipt of things and documents both with the consent of the participants in the proceedings or other persons and in cases of their direct discovery;
 - 5) legislative regulation of the procedure for storing material evidence by a lawyer;
 - 6) possibility of obtaining temporary access to things and documents, in particular those containing information that constitutes State secret;
 - 7) right to draw up a report on the seizure of documents and things during the implementation of temporary access and liability for unjustified failure to provide such access to the lawyer;
 - 8) regulatory recognition of the institution of private detective (investigation) activities as an additional method of collecting evidence;
 - 9) granting the status of evidence to explanations received by the lawyer from participants in the proceedings or other persons with their consent;
 - 10) establishing procedure for questioning by the defense attorney of participants in the proceedings or other persons, including the right to draw up a corresponding protocol;
 - 11) obligation of the investigator and prosecutor to notify the defense attorney about involvement of forensic expert;
 - 12) providing the lawyer with time to formulate questions to forensic expert;

- 13) obligation to provide the lawyer with a certified copy of the expert's conclusion no later than three days after its receipt;
- 14) right of defense attorney to receive samples for examination with the consent of the person or to identify them independently, with the mandatory preparation of a protocol;
- 15) legally established right to engage an expert to conduct an additional or repeated examination²⁸.

While highly appreciating the scientist's attempt to thoroughly detail activities of a defense attorney in criminal proceedings, we must emphasize a certain inconsistency of certain positions with current law enforcement practice. First of all, this concerns the procedure for appointing expert opinions and familiarizing oneself with them. Current Criminal Procedural Code of Ukraine does not provide for the obligation of the investigator and prosecutor to notify the defense attorney about the involvement of forensic expert, to provide the attorney with time to formulate expert tasks and a certified copy of the expert's conclusion. There is also no separate right for the defense attorney to involve forensic expert to conduct an additional or repeated expert examination. Defense attorney certainly has the right to initiate an expert examination, but he ex-

ercises it on the basis of his own initiative and in the order of contractual relations with a forensic institution or a forensic expert who is not an employee of a state forensic science institution.

To date, institution of private detective (investigative) activity as an additional method of collecting evidence has not been recognized by law. All actions initiated by defense attorney in the aspect of collecting evidence are carried out in accordance with the procedure stipulated in P. 2 of Art. 93 of Criminal Procedural Code of Ukraine²⁹ and the provisions of the Law: *On the Bar and Legal Practice*³⁰.

We consider the position on "legislative regulation of the procedure for storing material evidence by a lawyer" to be purely declarative, since in accordance with P. 2 of Art. 100 of the Criminal Procedural Code of Ukraine, although the parties to criminal proceedings are obliged to store the material evidence or documents provided to them in a condition suitable for use, legislator has only thoroughly approached the determination of the procedure for storing material evidence by the prosecution³¹.

It should be noted that all the outlined guarantees are a generalization of legal provisions scattered throughout the Criminal Procedural Code of Ukraine of Ukraine, as well as the result of a comparison of the legal principle according to which a de-

28 Старенький О. С. Кримінальні процесуальні гарантії ...

29 Кримінальний процесуальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 02.05.2025).

30 Савицька С. Л. Знач. твір ; Каткова А. Г. Знач. твір. URL: <https://surl.li/hgtfft> (date accessed: 24.04.2025) ; Про адвокатуру ... URL: <https://zakon.rada.gov.ua/laws/show/5076-17#Text> (date accessed: 24.04.2025).

31 Кримінальний процесуальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 02.05.2025) ; Порядок зберігання речових доказів стороною обвинувачення, їх реалізації, технологічної переробки, знищення, здійснення витрат, пов'язаних з їх зберіганням і пересиланням, схоронності тимчасово вилученого майна під час кримінального провадження : затв. постанов. КМУ від 19.11.2012 р. № 1104 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1104-2012-%D0%BF#n19> (date accessed: 13.05.2025).

fense attorney has the rights of the person he represents, with the exception of those that he can exercise personally (Art. 46 of Criminal Procedural Code of Ukraine ³²). At the same time, the procedural rights of defense attorney and his client are not identical, since the defense attorney acts as an independent participant in criminal proceedings, endowed with separate rights and obligations that determine the specifics of his legal status. These powers form separate procedural legal relations both with the client and with other participants in criminal procedure.

General principles of the participation of a defense attorney in criminal proceedings are outlined in Art. 46 of Criminal Procedural Code of Ukraine, which regulates his procedural functions ³³. At the same time, P. 1 of this same article somewhat limits the provision of legal aid: a lawyer does not have the right to represent a person if this contradicts the interests of the person to whom he provides or has previously provided assistance ³⁴. However, it is not specified what interests are meant, which leaves this issue open to interpretation in each specific case. In addition, the legal status of a defense attorney is based on the interests of the client, the implementation of which is the main purpose of his participation in criminal proceedings ³⁵.

Despite the fact that the legislator guaranteed the right of the defense attorney to participate in investigative actions with the participation of the suspect, it should be emphasized that this participant has procedural dependence. For example, the participation of the defense attorney in an

investigative experiment is often accompanied by a number of restrictions that reduce the effectiveness of the exercise of his procedural powers. One of the key restrictions is defense attorney's lack of the right to influence the method or procedure for conducting an investigative experiment, procedure for conducting experiments and tests. Authority to determine the methodology and sequence of such actions belongs entirely to the investigator that can lead to ignoring circumstances important to the defense. This, in turn, creates the risk of a one-sided interpretation of events that does not take into account the position of the suspect or accused. Another problem area is recording of the results of a crime scene reconstruction. In case of violation of the documentation procedure or due to technical errors, the content of obtained data can be distorted. Although the defense attorney has the right to be present during such investigative actions, he does not influence the recording process, as this is carried out exclusively by the pre-trial investigation body.

Often, defense attorney faces time constraints. Notification of an investigative experiment may be received late or within a reasonable time, which does not leave him or her enough time to familiarize himself or herself with the case materials, prepare a legal position, or submit motions. This significantly reduces the quality of the procedural representation of the client's interests. In addition, there is a risk of limiting the defense attorney's access to experts necessary to conduct an alternative analysis of the circumstances or the results

32 Кримінальний процесуальний кодекс ... URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 02.05.2025).

33 Там само.

34 Там само.

35 Хитра А., Татарин І. Знач. твір. URL: <https://www.calameo.com/read/00598514271b-5b1a06241> (date accessed: 24.04.2025).

of the experiment. The investigator may refuse to grant a motion to involve another expert, citing the fact that a corresponding study has already been conducted previously or that the available evidence is sufficient. This deprives the defense party of opportunity to substantiate its legal position through additional forensic research³⁶.

Thus, although the current criminal procedural legislation provides guarantees for the participation of a defense attorney in the conduct of the cover investigative actions, their implementation in the conditions of the above-mentioned restrictions is often formal or insufficient. Such circumstances require a critical rethinking of the current norms and the practice of their application (in order to strengthen the procedural balance between the prosecution and the defense).

Conclusions

Guarantees of professional activity of a lawyer (defense attorney) in criminal proceedings are represented by a set of international legal and national provisions that determine his rights and obligations in the event of his defense of a suspect (accused / defendant / convicted). The sources of the outlined guarantees are Constitution, Criminal Procedural Code of Ukraine, On the Bar and Legal Practice and subordinate regulatory legal acts of Ukraine. Outlined legal guarantees determine the powers of the defense attorney in ensuring the right to defense and fair justice, they are used when obtaining evidence, substantiate the legal position and appeal procedural decisions, etc.

System of legal guarantees for defense attorney in criminal proceedings is presented as follows:

- 1) constitutional and criminal law provisions that provide grounds for criminal liability for violation of the right to defense, as well as for any unlawful influence on its activities (Articles 397-400 of the Criminal Code of Ukraine);
- 2) general guarantees stipulated by the Law of Ukraine: *On the Bar and Legal Practice*, international legal acts and the practice of the ECtHR;
- 3) criminal procedural guarantees that give the defense attorney the right to represent the interests of the defendant, participate in procedural measures, submit petitions, complaints, etc.;
- 4) special guarantees that determine the competence of the defense attorney in resolving narrowly defined issues (for example, initiating a forensic examination based on contractual relations).

Taking into account a number of limitations in ensuring full protection of the suspect (accused/defendant/convicted), we believe that the prospects for further research should consist in identifying proven algorithms for improving both the system of legal provisions regulating relevant legal relations and law enforcement practice in general.

Гарантії професійної діяльності захисника у кримінальному провадженні

Микола Коломойцев

Мета статті — визначити зміст правового статусу захисника підозрюва-

36 Ухов В. Р. Правові гарантії та обмеження діяльності захисника на етапі проведення слідчих експериментів. *Теоретичні питання юриспруденції і проблеми правозастосування: виклики XXI століття: тези доп. учасн. VIII Всеукр. наук.-практ. конф.* (Харків, 24.11.2023). Харків, 2023. С. 153—154. URL: https://library.pp-ss.pro/index.php/ndippsn_20231124/article/view/ukhov/pdf (date accessed: 02.05.2025).

ного (обвинуваченого) у кримінальному провадженні, схарактеризувати гарантії його професійної діяльності. Для реалізації поставленої мети застосовано комплекс загальнонаукових методів (аналіз і синтез, узагальнення, логіко-структурний підхід тощо). Досліджено, що гарантії професійної діяльності адвоката (захисника) у кримінальному провадженні представлені комплексом міжнародно-правових і національних положень, що визначають його права й обов'язки в разі здійснення ним захисту підозрюваного (обвинуваченого / підсудного / засудженого). Джерелами згаданих гарантій є Конституція, Кримінальний процесуальний кодекс, Закон “Про адвокатуру та адвокатську діяльність”, підзаконні нормативно-правові акти України. Окреслені правові гарантії визначають повноваження захисника у забезпеченні права на захист і справедливе правосуддя, ними послугуються під час отримання доказів, для обґрунтування правової позиції, оскарження процесуальних рішень тощо. Систему правових гарантій захисника у кримінальному провадженні представлено у вигляді: 1) конституційних і кримінально-правових положень, що передбачають підстави для кримінальної відповідальності за порушення права на захист, а також за будь-який незаконний вплив на його діяльність (ст. 397–400 Кримінального кодексу України); 2) загальних гарантій, обумовлених Законом України “Про адвокатуру та адвокатську діяльність”, міжнародно-правовими актами і практикою Європейського суду з прав людини; 3) кримінальних процесуальних гарантій, що надають захисникові право представляти інтереси підзахисного, брати участь у процесуальних заходах, звертатися з клопотаннями, скаргами тощо; 4) спеціальних гарантій, що визначають компетенцію захисника у розв'язанні вузькогалузевих питань (наприклад, ініціюванні проведення судової

експертизи на підставі договірних відносин).

Ключові слова: кримінальне провадження; адвокат; правнича допомога; свідок; право на захист; правовий статус.

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Declaration of Competing Interest

Author declares no conflict of interest.

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Peculiarities of Forensic Examination During Pre-Trial Investigation of High Treason Cases

Inna Bosak*

* Post-graduate Student, National Academy of SSU, The Ukrainian Scientific and Research Institute of Special Equipment and Forensic Expertise (ISEE SSU), Kyiv, Ukraine, ORCID: <https://orcid.org/0009-0000-8282-1977>, e-mail: inna.bosak@ukr.net

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In the context of hybrid warfare and encroachment on Ukraine's sovereignty, the issue of regulatory and procedural support for pre-trial investigation of crimes against the foundations of national security, including high treason, is of paramount importance. Accordingly, the effective use of specific expertise in criminal proceedings, primarily in the form of forensic examinations, gains significance. The Article Purpose is to comprehensively examine the specific peculiarities of appointing and conducting forensic examinations as one of the procedural forms of applying specific expertise in the investigation of criminal offenses that may be qualified as high treason. The methodological foundation of the study relies on general scientific and special scientific methods. The paper delves into the procedural forms of applying specific expertise and concludes that conducting forensic examinations with the help of a forensic expert is the most effective one. It further analyzes and substantiates the appropriateness of appointing forensic examinations that are essential in revealing the truth in criminal proceedings concerning high treason. In particular, the article outlines the most relevant and commonly applied types of forensic examinations, such as computer, video and sound recording, linguistic (semantic-textual), forensic examinations involving state secrets, and forensic portrait examinations, which are typically appointed and conducted at the stage of pre-trial investigation of criminal offenses qualified as high treason. It is emphasized that this list of the most in-demand forensic examinations conducted during

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investigations of criminal offenses, outlined in Art. 111 of the Criminal Code of Ukraine, is not exhaustive.

Keywords: *specific expertise; forensic examination; procedural forms of specific expertise application; forensic expert; high treason; crimes against national security; pre-trial investigation; expert's opinion.*

Research Problem Formulation

The Constitution of Ukraine establishes Ukraine as a sovereign and independent state ¹. However, since 2014, the Russian Federation has launched a direct and indirect armed aggression against Ukraine, encroaching on its sovereignty, territorial integrity, and political independence. Russia has violated international law by annexing the Autonomous Republic of Crimea and effectively establishing control over parts of the Donetsk and Luhansk regions through the use of pseudo-state entities and illegal armed groups.

The escalation of aggression reached its peak on February 24, 2022, when the Russian Federation armed forces, using aviation, artillery, missile armament, and armored vehicles, launched a full-scale invasion against Ukraine. This act was followed by an armed attack on strategic state infrastructure, state authorities, Ukrainian Armed Forces units, and civilians, which resulted in massive casualties, destruction, and a humanitarian crisis.

Beyond military intervention, the Russian Federation systematically employs political, economic, informational, and psychological means to destabilize Ukraine's

internal political situation. In particular, it is about the manipulation of public opinion, the exertion of economic pressure, and energy blackmail, etc. The Russian special services pose a particular danger due to their intelligence and subversive activities. They aim to recruit Ukrainian citizens, infiltrate state authorities and the defense sector, and provoke and support separatist movements in different regions of the country. Moreover, as part of the so-called "hybrid warfare", the aggressor country is actively recruiting organized criminal groups, marginalized segments of the population, and collaborators to engage in sabotage activities and information attacks that undermine Ukraine's state sovereignty.

Pt. 1 of Art. 111 of the Criminal Code of Ukraine (hereinafter referred to as the CC of Ukraine) defines high treason as "*an act willfully committed by a citizen of Ukraine to the detriment of sovereignty, territorial integrity and inviolability, defense capability, and state, economic or information security of Ukraine*"².

According to the statistical reports of the Prosecutor General's Office of Ukraine ³, there has been a steady increase in the number of criminal proceed-

1 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: 19.04.2025).

2 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: 19.04.2025).

3 Про зареєстровані кримінальні правопорушення та результати їх досудового розслідування / Офіс Генерального прокурора України : офіц. сайт. URL: <https://gp.gov.ua/ua/posts/pro-zareyestrovani-kriminalni-pravoporushennya-ta-rezultati-yih-dosudovogo-rozsliduvannya-2> (date accessed: 21.04.2025).

ings initiated on grounds of high treason over the last five years. A notable rise in the number of such proceedings was recorded in 2022, following the Russian Federation’s full-scale armed aggression against Ukraine (see *Table*).

Table

**Statistics on criminal offenses registered under Article 111
of the Criminal Code of Ukraine along with the results
of their pre-trial investigations**

Indicators	2020	2021	2022	2023	2024
Criminal offenses recorded during the reporting period	145	208	1957	1169	1109
Criminal offenses for which individuals have received a notice of suspicion	45	64	609	469	588
Criminal offenses in proceedings where the pre-trial investigation has been suspended under Article 280 of the Criminal Procedure Code of Ukraine	6	16	227	70	52
Criminal offenses where proceedings have been referred to court	39	46	309	328	441
Criminal offenses where proceedings have been terminated	14	9	89	37	21
Criminal offenses for which no decision to close or suspend proceedings had been made by the end of the reporting period	100	146	1409	770	614

These indicators demonstrate an increasing number of proceedings, validate the need to strengthen the means of proof, particularly through the active application of specific expertise. The analysis of practices for investigating high treason has revealed that investigators and operatives of the Security Service of Ukraine (hereinafter referred to as the *SSU*) frequently require specific expertise, specifically through forensic examinations, to solve and investigate this category of criminal offenses.

Article Purpose

Comprehensively study the peculiarities of appointing and conducting forensic examinations as one of the forms of specific expertise application in the course of investigation of criminal offenses falling under the *high treason* definition.

Research Methods

To fulfill the goal, both general scientific (dialectical, analysis, synthesis, induction, deduction) and special scientific methods (in particular, formal-logical, logical-legal, and system-structural) have been employed. These have contributed to a thorough interpretation of the scientific results and conclusions presented in the article.

**Analysis of Essential Researches
and Publications**

The issue of using specific expertise in the course of criminal proceedings holds an important place in the legal scientific literature; research papers by L. Arotsker, V. Honcharenko, A. Ishchenko, N. Klymenko, V. Lysychenko, I. Pyrih, M. Shcherbakovskyi, as well as by many

other renowned researchers, discuss this issue. Today, both the national scientific community and representatives from practical fields are actively exploring various areas of specific expertise application in criminal proceedings, specifically in the context of appointing and conducting forensic examinations during the investigation of crimes against national security.

The monograph by T. Budko addresses relevant issues of forensic-linguistic semantic-textual examination in terms of the actual conduct of this forensic examination, its methodological support, and categorical and conceptual apparatus. The study also covers the appointment, evaluation, and use of its findings in the course of criminal proceedings, particularly those outlined in Section One of the Special Part of the CC of Ukraine ⁴.

The textbook by I. Hora and V. Kolesnyk ⁵ covers the theoretical and practical aspects of forensic activities; among other details, it presents the classification of forensic examinations, information on research methods, and peculiarities of interaction between investigators and forensic experts. Moreover, these scholars con-

sider the challenges of providing forensic support for the pre-trial investigation of crimes against the state's information security ⁶.

Particular attention is paid to V. Khodanovych's research paper which discusses the feasibility of conducting certain types of forensic examinations when investigating crimes against Ukraine's national security ⁷.

O. Herasymiv and O. Riashko stress the need for forensic examinations in the course of investigating high treason ⁸. N. Luhina and S. Dem'ianenko provide a representative list of forensic examinations that are appointed during the investigation of criminal offenses under Art. 111 of the CC of Ukraine (forensic linguistic, phonoscopic, and computer examinations) ⁹.

The *Fundamentals of the Methodology for Investigating High Treason* dissertation by Yu. Kononenko analyzed the provisions on the current opportunities for conducting forensic examinations (specifically, computer, software examination, sound and video recording, telecommunications systems and means, semantic and textual examination) as a key procedural form of applying specific expertise in investigating

- 4 Будко Т. В. Проблемні питання судово-лінгвістичної семантико-текстуальної експертизи мовлення та рекомендації щодо їх вирішення (на матеріалах кримінальних проваджень) : монографія. Київ, 2017. 88 с.
- 5 Гора І. В., Колесник В. А. Криміналістичні експертизи та дослідження, що проводяться у системі правоохоронних органів України : наук.-практ. посіб. Київ, 1999. 80 с.
- 6 Їх же. Актуальні питання криміналістичного забезпечення досудового розслідування злочинів проти інформаційної безпеки держави. *Криміналістика і судова експертиза*. 2024. Вип. 69. С. 20–34. DOI: [10.33994/kndise.2024.69.02](https://doi.org/10.33994/kndise.2024.69.02) (date accessed: 21.04.2025).
- 7 Ходанович В. О. Роль судово-авторознавчої та психолінгвістичної експертизи в доказуванні у кримінальних провадженнях про злочини екстремістської спрямованості. *Актуальні проблеми доказування у кримінальному провадженні* : мат-ли Всеукр. наук.-практ. інт.-конф (Одеса, 27.11.2013). Одеса, 2013. С. 363–369.
- 8 Герасимів О., Ряшко О. Проблеми розслідування державної зради в умовах воєнного стану. *Omul, criminologia, știința* : conferința științifică internațională. Chișinău, 24.03.2023. Chișinău, 2023. Ed. Ediția a 2-a. Vol. 1. Pp. 382–384. URL: https://ibn.idsi.md/sites/default/files/imag_file/382-384_0.pdf (date accessed: 21.04.2025).
- 9 Лугіна Н. А., Дем'яненко С. В. Особливості тактики слідчих (розшукових) дій у провадженнях про державну зраду. *Ірпінський юридичний часопис*. 2023. Вип. 3 (12). С. 260–268. DOI: [10.33244/2617-4154-3\(12\)-2023-260-268](https://doi.org/10.33244/2617-4154-3(12)-2023-260-268) (date accessed: 21.04.2025).

criminal offenses set forth in Art. 111 of the CC of Ukraine¹⁰.

Yet, despite certain advancements, the issues surrounding expert support for pre-trial investigations in high treason cases remain understudied. The scientific discourse lacks an integrated analysis of the specifics of the appointment and conduct of forensic examinations during the investigation of criminal offenses outlined in Art. 111 of the CC of Ukraine. This makes the chosen research topic relevant and underscores the need for further in-depth study.

Main Content Presentation

High treason is one of the gravest crimes that directly threatens the state's national security, sovereignty, and territorial integrity. The legislation of Ukraine clearly defines high treason as a criminal act that carries serious consequences for the state and its people. The CC of Ukraine envisages several forms of committing this criminal offense, each of which has specific features.

The first form of high treason is switching sides to join the enemy during martial law or an armed conflict. It encompasses two main types of actions: 1) intellectual transition that assists the aggressor or other hostile party with which Ukraine is at war by providing important information or other support; 2) physical transition to the side of the enemy means a person who leaves Ukraine and supports the aggressor's actions has changed their loyalty.

The second form of high treason is espionage. This involves providing information on state secrets or collecting such information in order to provide it to a foreign state, a foreign organization, or their representatives. Such information is defined in the Law of Ukraine: *On State Secrets* and covers a wide range of data on defense, foreign policy, economic security, and other important aspects.

The third form of high treason is providing assistance to a foreign state, foreign organization, or their representatives in conducting subversive activities against Ukraine. This category is extensive and includes any assistance provided to these subjects in carrying out such activities. I. Sliusarchuk and N. Varenia¹¹ give particular attention to Yu. Aleksandrov's opinion. Aleksandrov notes that subversive activities should be viewed as an attempt to illegally change the system of higher state authorities; interfere with foreign or domestic policy; attempt to seize territory; or reduce Ukraine's defense capability, etc.¹².

These acts inflict significant damage to the internal order and international reputation of the state, emphasizing the need for a full and comprehensive investigation of such criminal offenses. An effective investigation of high treason requires investigative (search) and covert investigative (search) actions, as well as modern methods and approaches. In this process, specific expertise plays a crucial role.

Many researchers have studied the *specific expertise* concept. In the view of

10 Кононенко Ю. С. Основи методики розслідування державної зради : дис. ... д-ра філос. в галузі права. Одеса, 2024. 309 с. URL: https://oduvs.edu.ua/uploads/Kononenko_disertacziya_281fe3077c.pdf (date accessed: 21.04.2025).

11 Слюсарчук І., Вареня Н. Сутність підривної діяльності. *Підприємництво, господарство і право*. 2019. № 9. С. 221–226. DOI: 10.32849/2663-5313/2019.9.37 (date accessed: 21.04.2025).

12 Александров Ю. В., Дудоров О. О., Клименко В. А., Мельник М. І. та ін. Кримінальне право України. Особлива частина : підручник / за ред. М. І. Мельника, В. А. Клименка. 3-тє вид., перероб. та допов. Київ, 2009. 744 с. URL: <https://surl.li/ypzlkf> (date accessed: 21.04.2025).

Y. Komar, specific expertise is “*professional expertise, skills, and abilities in science, technology, art, craft, etc., that are necessary to resolve issues arising during the pre-trial investigation of criminal proceedings and the consideration of related materials in court*”¹³. In addition, the author emphasizes that specific expertise cannot be widespread and generally known, and emphasizes that this knowledge can be acquired as a result of professional training and practical experience.

V. Kuzmichov and I. Pyrih point out that “*specific expertise is a set of theoretical knowledge and practical skills in science, technology, art or craft, gained through special theoretical training or professional experience and used for the purpose of detection, investigation, and prevention of crimes*”¹⁴.

M. Shcherbakovskyi has provided an in-depth formulation for the specific expertise concept, emphasizing the following: “*Specific expertise is systematic information from various fields of theoretical and practical activity, excluding law. It is acquired through professional or independent learning and experience in a particular specialty. It is employed through skills and abilities manifested in procedural or non-procedural forms to collect, form, research, and verify evidence. It establishes the grounds for authorized persons to make procedural, organizational, and tactical decisions in court proceedings*”¹⁵. To support the above, we must highlight that specific expertise is knowledge and skills gained in

a particular field based on a combination of theory and practice. Such knowledge is not widely known. It requires professional training and an in-depth understanding of a specific field of science.

Attempts to somehow structure the immensity of specific expertise that can be used in the investigation of criminal offenses take various forms.

V. Kuzmichov and I. Pyrih support the position of grouping specific expertise forms into procedural and non-procedural ones. The concept proposed by the authors stipulates that “*the main procedural forms of specific expertise application should include: direct use by the investigator, prosecutor, court; participation of a specialist in conducting investigative actions; and conducting forensic examinations*”. According to the researchers, “*Non-procedural forms of employing specific expertise are as follows: audits, consultations with specialists on matters requiring the use of specific expertise, reference assistance, departmental investigations carried out by employees of various agencies and inspectorates (e.g., technical condition inspections), preliminary research of objects before the criminal case, providing qualified assistance in preparing technical means, performing labor-intensive work, and using well-versed persons’ assistance in conducting operative-search actions*”¹⁶.

M. Kryvonos and V. Bondar identify procedural and auxiliary forms of spe-

13 Комар Ю. М. Визначення поняття “спеціальні знання” та їх використання у кримінальному провадженні. *Теорія та практика судово-експертної діяльності* : мат-ли VIII міжвідомч. наук.-практ. конф. (Київ, 27.11.2019 р.). Київ, 2019. С. 213–216. URI: <https://elar.navs.edu.ua/server/api/core/bitstreams/7d622e08-974f-42ed-8139-c273dbd99567/content> (date accessed: 21.04.2025).

14 Кузьмічов В. С., Пиріг І. В. Використання спеціальних знань при розслідуванні розкравдань вантажів на залізничному транспорті: монографія. Дніпропетровськ, 2008. 168 с. URI: <https://er.dduvs.edu.ua/handle/123456789/2359> (date accessed: 21.04.2025).

15 Щербаківський М. Г. Сутність, структура та цілі використання спеціальних знань у судочинстві. *Теорія та практика судової експертизи і криміналістики*. 2018. Вип. 18. С. 184–193. DOI: 10.32353/khrife.2018.20 (date accessed: 21.04.2025).

16 Кузьмічов В. С., Пиріг І. В. Зазнач. твір. С. 27–28. URI: <https://er.dduvs.edu.ua/handle/123456789/2359> (date accessed: 21.04.2025).

cific expertise. The procedural ones encompass: “1) *The use of specific expertise of a person who is involved as a forensic expert to conduct a forensic examination <...>*; 2) *The use of specific expertise of a person who is involved to provide advice and direct technical assistance as a specialist <...>*”¹⁷. Researchers classify the following types of expertise as auxiliary forms: “1) *participation of an interpreter (sign language interpreter) in investigative (search), covert investigative (search), and judicial actions <...>*; 2) *participation of a teacher in investigative (search) and judicial actions <...>*; 3) *participation of a psychologist in investigative (search) and judicial actions <...>*; 4) *participation of a doctor in investigative (search) and judicial actions <...>*”¹⁸.

Certain researchers attempted to directly classify procedural forms of applying specific expertise based on the criterion of “subjects authorized for their application”. They identify three groups: 1) forms used by investigators; 2) forms used by a specialist; 3) forms used by forensic experts¹⁹.

We share the opinion of L. Medynska²⁰. She singles out only two procedural forms of applying specific expertise: forensic examination and participation of a specialist in investigative (judicial)

actions. We believe that involving a forensic expert in forensic examinations is the most common and efficient form to apply specific expertise, compared to other forms used in high treason investigations.

That is why SSU investigators who, within the jurisdiction established by Article 216 of the Criminal Procedure Code of Ukraine²¹ (hereinafter referred to as the *CPC of Ukraine*), are authorized to conduct pre-trial investigations of criminal offenses set forth in Art. 111 of the CC of Ukraine²², apply to forensic institutions to conduct forensic examinations. After all, only a forensic expert—a person possessing the corresponding education and qualifications—can disclose information important to the investigation in disputed materials.

Interaction between the investigator and the forensic expert during forensic examinations may be either procedural or organizational (non-procedural). The procedural form of such interaction is consolidated within the regulatory framework of criminal procedural legislation and is implemented through an official order for forensic examination (by issuing a resolution). Non-procedural interaction typically occurs within the context of administrative or interdepartmental regulations and,

17 Кривонос М. В., Бондар В. С. Теорія та практика використання спеціальних знань в розслідуванні злочинів у сфері обігу наркотичних засобів, психотропних речовин, їх аналогів та прекурсорів: монографія. Северодонецьк, 2017. С. 44–46. URL: <https://rep.dnuvs.ukr.education/server/api/core/bitstreams/5e9497a0-fbdf-4d12-95a9-72d3d1259735/content> (date accessed: 21.04.2025).

18 Там само.

19 Гончаренко В., Курдюков В., Легких К. Спеціальні знання: генезис, предмет, рівні, форми використання в доказуванні. *Вісник академії адвокатури України*. 2007. Вип. 9. С. 22–34. URL: http://nbuv.gov.ua/UJRN/vaau_2007_2_5 (date accessed: 21.04.2025).

20 Медінська Л. В. Використання спеціальних знань у кримінальному провадженні України. *Прикарпатський юридичний вісник*. 2014. № 2 (5). С. 278–286. URL: http://www.pjv.nu-oua.od.ua/v2_2014/27.pdf (date accessed: 21.04.2025).

21 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: 20.04.2025).

22 Кримінальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 19.04.2025).

sometimes, based on law enforcement practices established by the relevant authorities. In fact, the appointment and conduct of a forensic examination is a common form of an expert's procedural involvement in criminal proceedings.

In scientific literature, forensic examination is defined as *"a procedural action that consists of physical evidence and other materials being studied by a forensic expert, upon instruction from an investigator or a judge, in order for factual data and circumstances relevant to the correct resolution of a case to be established"*²³.

The legislative definition of forensic examination is envisaged in Art. 1 of the Law of Ukraine: *On Forensic Examination: "Research stemming from a particular expertise in science, technology, art, crafts, etc., on objects, phenomena, and processes for the purpose of providing a conclusion on issues that are or will be the subject of trial"*²⁴.

Analyzing investigative and judicial practices for investigating criminal offenses involving high treason helps identify the most common types of forensic examinations appointed in criminal proceedings initiated under Art. 111 of the CC of Ukraine.

Forensic computer examination

Computer forensics is an essential instrument for collecting evidence during the investigation of high treason, as modern means of communication and electronic devices are often employed to transmit and store information that may be of use to the investigation. Forensic computer

examination assists in establishing facts important for the pre-trial investigation and in identifying digital evidence (computer data) that confirms the unlawful acts revealed in the case of high treason.

B. Stetsyk and S. Marko pinpoint that forensic computer examination is *"a separate, strictly regulated procedural action carried out in the course of investigating criminal offenses. It is the main procedural form of using specific expertise in computer technology, and its results may constitute the most important part of evidentiary basis in a particular criminal proceeding"*²⁵.

The objects of forensic computer examination encompass computer equipment, peripheral devices, network hardware, various storage media, software, as well as data stored on media or in the device memory. The objects also include organizers, pagers, mobile phones, and other devices that use personal computer technology, software, their components, as well as analytical reports, technical documentation, etc.

In the case of criminal proceedings involving high treason, forensic computer examination is frequently appointed to search and examine user information on computer devices. As observed by I. Hora, in this case, *"the forensic expert is asked to make a decision regarding the following: the presence of files (graphic, text, video, or audio) on the user's computer device, including deleted files; the possibility of restoring them and clarifying any modifications; installing files that contain certain keywords on the object*

23 Шепітько В. Ю., Коновалова В. О., Журавель В. А. та ін. Криміналістика : підручник. Вид. 4-е, перероб. і допов. / за ред. проф. В. Ю. Шепітька. Харків, 2008. 464 с. URL: <https://law.sspu.edu.ua/files/documents/books/library/17/shepitko.pdf> (date accessed: 20.04.2025).

24 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: 20.04.2025).

25 Стецик Б. В., Марко С. І. Методика проведення комп'ютерно-технічної експертизи. Юридичний науковий електронний журнал. 2022. № 1. С. 296–299. DOI: [10.32782/2524-0374/2022-1/74](https://doi.org/10.32782/2524-0374/2022-1/74) (date accessed: 20.04.2025).

under study; fulfillment of requests for Internet access or network activity; clarification of the sites accessed from a particular device and the IP addresses used; analyzing browser history; resolving the issue related to downloading or transferring files. Investigators might additionally address the following questions: whether the object submitted for a forensic examination is operational; whether the object has certain software, such as remote access programs; whether the object can be used for a specific purpose (to access the Internet, use certain information systems or databases); what user data is contained on the object (accounts, logins, passwords, etc.)”²⁶.

Within the scope of the investigation into high treason, forensic computer examination is significant because it enables a forensic expert to identify the facts of information dissemination regarding the deployment of Ukrainian Armed Forces units, build connections with foreign (particularly Russian ones) special services, and provide foreign states with assistance in conducting subversive activities against Ukraine (including through Internet messengers and other communication platforms), etc.

Forensic examination of video and sound recording

Conducting a forensic examination of video and sound recordings is an essential step in the investigation of high treason. This forensic examination delves into acoustic and linguistic analysis of oral speech. The linguistic analysis is aimed

at studying oral speech as a reflection of the individual's personal characteristics, while the acoustic analysis evaluates the person's characteristics shaped by anatomical, physiological, and psychophysiological aspects. The purpose of video and sound recording examination is to identify a person by spoken language, as well as to verify the authenticity of audio or video. A technical study of storage media and recording equipment is not the sole purpose of this forensic examination. Rather, it is a means of assessing the accuracy of the recording and identifying possible signs of installation, third-party intervention, or distortion of acoustic information.

When examining video and sound recordings, we study research objects such as signal-flow graphs: “*phonograms (recording of sound signals), videograms (recording of image signals), videophonograms recorded on physical media, as well as physical media themselves, means of recording and reproducing audio and video information*”²⁷.

The central focus of this forensic examination is to determine whether a voice recorded on a conversation phonogram belongs to a particular person by comparing voices, identifying possible attempts to edit, trim, or assemble a recording, decoding possible hidden meanings, ciphers, or special expressions, and estimating the number of people who participated in the conversation recorded on the phonogram.

26 Гора І. В. Використання спеціальних знань в галузі судової комп'ютерно-технічної експертизи в досудовому розслідуванні злочинів проти основ національної безпеки України. *Інформаційна безпека людини, суспільства, держави*. 2022. № 1–3 (31–33). С. 111–124. URL: <https://journals.urau.ua/ispss/article/view/260272> (date accessed: 20.04.2025).

27 Гора І. В., Колесник В. А., Попович І. І. Використання спеціальних знань при дослідженні відеозаписів дорожньо-транспортних подій, які отримані за допомогою пристроїв цифрової фіксації. *Науковий вісник Міжнародного гуманітарного університету. Серія: Юриспруденція*. 2024. № 67. С. 62–66. DOI: [10.32782/2307-1745.2024.67.12](https://doi.org/10.32782/2307-1745.2024.67.12) (date accessed: 20.04.2025).

Forensic linguistic (semantic-textual) examination

Forensic linguistic (semantic and textual) examination plays a pivotal role in investigating criminal offenses against national security, including high treason. This is because establishing whether materials under investigation contain signs of a national security violation in the information field requires understanding the meaning of a statement and the context in which it was used. This can be challenging for someone without specific linguistic expertise.

T. Budko points out that forensic semantic-textual examination studies the semantic diversity of speech acts in the context of issues arising in the course of criminal proceedings. The author emphasizes that, at its current stage of development, semantic-textual examination encompasses knowledge of the elements of a crime, including its objective and subjective aspects and qualifying features. However, it does not provide a legal qualification for the objective content of the information contained in a statement²⁸.

The objects of speech linguistic (semantic and textual) examination, which aims to identify linguistic signs of violations of national security in the information field, are products of speech activity (ranging from single words to entire texts), recorded in written and oral forms. In the context of investigating

criminal offenses involving high treason, materials such as interviews from magazines, newspapers, and electronic publications, articles, and oral statements with their textual reproductions are most often submitted for a forensic examination alongside the decision to appoint a forensic linguistic (semantic-textual) examination.

The main capabilities of a forensic linguistic examination (both semantic and textual) in the investigation of high treason are to identify the speaker's (speakers') communicative intentions, which provided information reveals through a set of features: bias and prejudice; discrediting nature (creating a negative image and its impact on the object); signs of inciting national (or other) hatred; the presence of linguistic signs of propaganda and/or communication acts of a call to action that may pose a threat to national security in the information field, etc. Let us point out that this list of a forensic linguist's capabilities is not exhaustive, as there are cases involving other linguistic signs of national security violations in the information field.

As set forth in Annex 3 of the Instructions on the Appointment and Conduct of Forensic Examinations and Expert Research in the Security Service of Ukraine²⁹, the range of issues to be resolved by forensic linguists is indicative, and other related issues may be addressed during this type of forensic examination.

28 Будко Т. В. Судово-лінгвістична експертиза: об'єктивна необхідність та суб'єктивні фактори гальмування її розвитку. *Судово-експертна діяльність: сучасний стан та перспективи розвитку*: мат-ли круглого столу (Київ, 23.04.2015 р.). Київ, 2015. URL: <https://elar.naiu.kiev.ua/server/api/core/bitstreams/bf952a6c-674c-449a-9224-7ed3cabd83c3/content> (date accessed: 20.04.2025); Її ж. Загальна методика судово-лінгвістичної семантико-текстуальної експертизи. Київ, 2020. 55 с.

29 Інструкція про призначення та проведення судових експертиз та експертних досліджень в системі Служби безпеки України : затв. наказ. Центрального управління СБУ від 29.05.2015 р. № 371 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/z0738-15#Text> (date accessed: 28.04.2025).

Forensic examination of state secrets

As part of the pre-trial investigation into criminal offenses related to high treason through espionage, a forensic examination of state secrets must be conducted to determine if information transmitted to a third party constitutes a state secret. This type of forensic examination was initiated due to the availability of data indicating the possible disclosure of information constituting a state secret, as well as to prove this fact procedurally as part of the incriminated act.

The principal tasks of this forensic examination are:

- assessing whether certain information is a state secret following the current legislation;
- determining the level of confidentiality for particular information or documents;
- establishing the scope and possible consequences of disclosure of information containing state secrets;
- estimating possible damages to national security if the information was disclosed to third parties or organizations.

Forensic examination of state secrets is conducted by specialized forensic experts who have access to state secrets and relevant powers. The conclusions of this examination are an essential source of evidence in criminal proceedings, particularly those initiated on the grounds of committing a criminal offense provided for in Art. 111 of the CC of Ukraine.

Forensic portrait examination

During the investigation of high treason, a forensic portrait examination is appointed and conducted in order to identify

a person from photographs, video recordings, or other materials.

“Forensic portrait examination is a separate type of identification research, which consists in a separate and comparative analysis of a person’s external features reflected in photographic images, using special methods of comparison, combination, graphic modeling, and calculations of the relative position of facial features” ³⁰.

The objects of forensic portrait examination in criminal proceedings concerning acts stipulated in Art. 111 of the CC of Ukraine are most often video recordings from hostile internet sources involving individuals recording their unlawful activities. Less frequently, they are photographs posted on the Internet and Telegram channels.

The primary purpose of forensic portrait analysis is to identify individuals depicted in photographs or video recordings, as well as to recreate their appearances. This type of expert analysis involves a detailed and comparative study of an individual’s external features, using specialized methods such as comparison, overlay, graphic reconstruction, and calculation of the spatial location of facial features. These materials may include official identification photographs (such as passport photos or ID photos) and amateur or professional images provided by eyewitnesses or seized during investigative (search) actions. Images obtained from video surveillance systems, technical security equipment, and monitoring cameras installed in public or office spaces are also being used more frequently.

Conclusions

High treason investigation is a complex and multifaceted process requiring the appointment of different types of forensic

30 Бойченко С. Б., Бояров В. І., Будко Т. В., Варфоломеева Т. В. та ін. Експертизи у судочинстві України : наук.-практ. посіб. / за заг. ред. В. Г. Гончаренка, І. В. Гори. Київ, 2015. 504 с.

examinations that help to identify and prove criminal acts. In the course of pre-trial investigation of criminal proceedings on high treason, the most relevant and widespread forensic examinations are: computer, video and sound recording, linguistic (semantic-textual), examination of state secrets, and portrait. This list of examinations is not exhaustive. The type of forensic examination chosen in each case is determined by the nature of the information received, the manner in which the criminal offence was committed, the trace pattern, suspect's identity, and the location where unlawful actions were committed.

Furthermore, given that the aforementioned criminal offense results in an increased level of public danger, emphasis should be placed on the promptness of forensic examinations and compliance with the procedural order of their appointment. It is also crucial to prevent the leakage of information that may constitute a state secret or pose a threat to national security.

Особливості проведення судових експертиз під час досудового розслідування державної зради

Інна Босак

В умовах гібридної війни й посягання на суверенітет України особливо актуально постає питання нормативного та процесуального забезпечення досудового розслідування злочинів проти основ національної безпеки, зокрема державної зради. У зв'язку із цим особливого значення набуває ефективне застосування спеціальних знань у кримінальному провадженні, насамперед — у формі судових експертиз. Мета статті — комплексно дослідити особливості призначення та проведення судових експертиз як однієї з форм застосування спеціальних знань під час розслідування кримінальних правопорушень, які можна кваліфікувати як державну зраду.

Методологічним підґрунтям дослідження є загальнонаукові та спеціальні наукові методи. Схарактеризовано процесуальні форми застосування спеціальних знань і визначено, що залучення експерта до проведення судових експертиз є найефективнішою процесуальною формою. Розглянуто й обґрунтовано доцільність призначення та проведення судових експертиз, які мають провідне значення для з'ясування істини у кримінальних провадженнях про державну зраду. Зокрема, наведено перелік найбільш актуальних і поширених судових експертиз (комп'ютерно-технічна; відео-, звукозапису; лінгвістична (семантико-текстуальна); з питань державної таємниці; портретна), які призначають і проводять на стадії досудового розслідування кримінальних правопорушень, кваліфікованих як державна зрада. Акцентовано, що наведений перелік найбільш затребуваних видів судових експертиз під час розслідування кримінальних правопорушень, передбачених ст. 111 Кримінального кодексу України, не є вичерпним.

Ключові слова: спеціальні знання; судова експертиза; процесуальні форми застосування спеціальних знань; експерт; державна зрада; злочини проти основ національної безпеки; досудове розслідування; висновок експерта.

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Declaration of Competing Interest

The author declares no conflict of interest.

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Activity Nature of Counteracting Investigation of Criminal Offenses

Oleksandr Tarkan *

* PhD in Law, Doctoral Student of NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine,
ORCID: <https://orcid.org/0009-0006-4083-6103>, e-mail: oleksandrtarkan7@gmail.com

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This article purpose is to determine components of activity that consists in counteracting the investigation of criminal offenses. The goal was achieved through the application of a complex of general scientific, special and philosophical research methods, in particular dialectical one, modeling method, system-structural and comparative analysis, etc. It was determined that counteracting investigation is a complex, dynamic and multifaceted phenomenon that is formed in the conditions of a criminal conflict and manifests itself through the purposeful behavior of persons interested in concealing the actual circumstances of a criminal offense. Its active side consists in committing real (sometimes inactive) acts of influence on the course and results of the pre-trial investigation. It was found that the activities of the subjects of counteraction are implemented not chaotically, but within the limits of a certain mechanism, which consists of the stages: preparation for counteraction; active implementation of influence on sources of evidentiary information; concealment of traces of committed actions. It was determined that the mechanism of counteraction to the investigation is variable, depends on the stage of criminal proceedings, chosen tactics and the presence of corrupt, organizational and social ties. It was substantiated that the structural components of forensic characteristic of counteraction are: 1) subjects of counteraction, their motives and objects of influence; 2) typical forms and methods, their impact on sources of evidence; 3) signs of use of specific methods that are man-

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ifested both in objective environment and in the behavior of subjects. The need to study the external manifestations of counteraction (material, digital, ideal traces) as a key source for modeling mechanisms of criminal counteraction and creating effective tactical solutions is proven. It was found that counteracting investigation has a conflicting nature, in which opposing goals of the parties to the criminal proceedings collide. This is not only a conflict between the investigator and the suspect, but also interaction with other participants in the process: prosecutor, witnesses, witnesses, experts, etc. Such interaction creates a tense investigative environment that requires a high level of professional adaptability of the investigator. It has been established that modern opposition to pre-trial investigation is especially threatening in conditions of organized criminal activity. It has a high level of organization, internal structure, financial, technical and personnel support. It is substantiated that the forensic characteristic of opposition to investigation should be integrated as a separate component into the structure of investigation methodology for those criminal offenses that are characterized by active opposition. It should be built on the basis of: 1) analysis of typical methods and mechanisms of opposition; 2) research on the subject-role structure of opposition; 3) study of changes in the investigative complex caused by targeted influence on evidence.

Keywords: *pre-trial investigation; counteracting investigation; investigative activities; overcoming counteracting investigation; components of counteracting investigation.*

Research Problem Formulation

The spread of criminal behavior and complication of its main characteristics create the need for the formation of effective approaches both for the practice of law enforcement and for research. This involves introducing the latest methods of work in the field of security and defense, improving the activities of law enforcement agencies and developing recommendations for forensic support in investigation of criminal offenses.

Activity of investigating criminal offenses is always related to the conflict, because it aims to restore the violated rights of the victim and bring to justice his opponent, the subject who implemented the

criminal intent related to the commission of criminal illegal activities. At the same time, awareness of the possibility of bringing to legal responsibility, applying criminal law measures to a person actualizes in the consciousness of a person the search for alternative ways to prevent the fulfillment of the tasks of criminal proceedings.

Sometimes, while planning a crime, a person decides what actions he or she will take to conceal the signs of his or her criminal activity, but this is not always the case. In some situations, counteraction actions are taken after criminal proceedings have been initiated. Counteraction to criminal procedural activities is defined as a complex and multidimensional phenomenon that covers a wide range of

influences on the pre-trial investigation procedure. According to scholars, this complexity is the reason for variety of scientific approaches to understanding its essence. Despite continued scientific attention to this issue by experts in the field of forensic science, a number of issues have not yet been unambiguously resolved.

In research papers of various scholars, analysis of counteracting investigation is carried out taking into account a variety of aspects: forms of detection, methods of implementation, circumstances of occurrence, factors that determine it, subjective component, time parameters, as well as its qualitative characteristics. The vast majority of authors focus primarily on the classification of manifestations of counteraction according to various criteria and on the description of its individual forms. At the same time, the complex components of the activity nature of counteraction to the investigation have not yet been investigated.

Article Purpose

For determining specifics and directions of knowledge of such a phenomenon as counteraction to investigation, in the context of formation of a separate forensic doctrine on counteracting investigation and its neutralization (overcoming).

Research Methods

In order to achieve this goal, a set of general scientific and special research methods was used, which made it possible to comprehensively reveal essence and structure of this forensic phenomenon. First of all, dialectical method provided a theoretical basis for considering counteraction to the investigation as a dynamic and contro-

versial process developing in interaction with other elements of criminal proceedings. Thanks to this method, it was possible to explore the internal logic of changes occurring within the conflict between the law enforcement system and persons resisting establishment of the truth.

The use of system-structural analysis made possible to identify the main elements of counteraction, determine their functions, relationships and impact on the course and results of the pre-trial investigation. This approach made possible to substantiate the structure of forensic characteristic of counteraction including subjects, methods, motives, objects of influence and effective counteraction traces.

Functional-activity approach made it possible to interpret counteraction to the investigation as a purposeful activity with a certain logic, phasing and purpose. This made possible to characterize active nature of counteraction as a system of real or potential actions (sometimes inaction) aimed at preventing establishment of circumstances of criminal offense. Significant role was played by the modeling method by which imaginary constructions of countermeasures mechanisms, typical situations of its implementation and structures of interaction of subjects resisting the investigation were created. Simulation made possible to simulate changes in the trial complex under influence of counteraction and to predict possible tactical solutions to its overcoming.

At the stage of theoretical understanding, a content analysis of the scientific literature was used, which made it possible to establish differences in terminology, identify the lack of established definitions of the concepts of *counteracting investigation*, *forensic characteristic of counteraction* and to find out current scientific approaches to understanding this phenomenon.

Comparative legal method provided an analysis of various forms of counteraction depending on the type of criminal offense, its procedural status, degree of organization of criminal activity and the presence of a system of relations between its participants. The research uses an empirical approach, in particular, the analysis of materials of criminal proceedings, the results of interrogations, protocols of investigative (search) actions, as well as interviews or questionnaires of practicing investigators and prosecutors. This made possible to fill the research with specific content, identify typical manifestations of counteraction and their impact on the evidence base.

Use of logical analysis and synthesis contributed to the combination of the obtained results into a single system of theoretical provisions. Logical substantiation of the forensic characteristics of counteraction was carried out, its place in the structure of investigation methods was determined. The forms, methods, subjects and signs of counteraction as a holistic phenomenon are generalized. In general, the use of these methods made it possible not only to identify the structure and content of the active side of counteraction to the investigation, but also to formulate oriented conclusions on the need to take it into account while developing methodological recommendations for the investigation of certain types of criminal offenses.

Analysis of Essential Researches and Publications

The problem of countering investigation has been in the focus of attention of Ukrainian scientists and lawyers for a long time. Despite repeated attempts by

the legislator to establish responsibility for certain manifestations of socially dangerous behavior aimed at counteracting investigation, current doctrine of criminal law is not so perfect as to satisfy requests of law enforcement and judicial authorities. This is confirmed by the investigators of the National Police of Ukraine, and even judges of the High Anti-Corruption Court. In other words, counteraction to criminal procedural activity takes place at all levels and this is not due to a specific form of criminal illegal activity or a certain category of cases.

Scientists, for their part, pay attention to the plurality of those forms that are still available in law enforcement practice and remain outside the system of legal means of influence, that is, they are generally not recognized as a proper basis for legal liability. In the second half of the twentieth century, the following scientists made a significant contribution to the research on the problem of countering investigation: V. Bakhin, V. Bernaz, V. Honcharenko, A. Ishchenko, N. Karpov, V. Konovalova, V. Korzh, V. Kuzmichov, V. Lysychenko, F. Sokyran, V. Tertyshnik, M. Shumylo, et al. Their research papers became the basis for a deeper theoretical understanding of the phenomenon of counteraction to investigative actions, outlining its most common manifestations and determining effective ways to their overcoming.

Since the 2000s, scientists have taken measures to study counteraction to the investigation as a phenomenon, laid the foundation for the formation of conceptual approaches to the essential understanding of counteraction, determined typical forms of counteraction, certain specific signs of counteraction caused by a certain type or group of criminal offenses, etc. In this context, it is worth mentioning

the monographs by O. Oleksandrenko ¹, V. Vartsaba ², I. Hrytsiuk ³, K. Gutnik ⁴, R. Mudretskyi ⁵, V. Piddubnyi ⁶, V. Pletenets ⁷, O. Romtsiv ⁸, V. Trepak ⁹, M. Chesakov ¹⁰, R. Shekhavtsov ¹¹, B. Shchur, ¹² et al. Despite thoroughness of best practices of Ukrainian forensic scientists, the question remains as to what the internal content of the activity nature of counteracting investigation.

Main Content Presentation

Currently forensic science is striking in the number of different forensic doctrines. The formation and deepening of the concept of counteraction to pre-trial investigation not only expands the theoretical basis in this area, but opens up new prospects for its practical implementation. This vector of scientific development

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necessitates continuous improvement of means and methods of neutralizing counteraction that makes possible to respond effectively to it by applying modern approaches to preventing, detecting and overcoming such actions. In this regard, the formation of the theoretical foundations of forensic support for the process of overcoming counteraction to pre-trial investigation is a key stage in modernization of the methodology of criminal investigation. Implementation of this theory in practice will help to increase the ability of law enforcement agencies to effectively counteract unlawful influence on the course of investigation at all stages that is of fundamental importance for the fight against crime in general¹³.

Theoretical content of any forensic science depends on the specifics of the criminal procedural activity that has become its research object. Developed doctrine should explain certain phenomena, system of their signs, etc. Therefore, the focus of forensic doctrine of counteraction to an investigation should be on the phenomenon of counteraction itself with the system of subjects involved in such activities by all means used to implement its components, correlations between these elements, etc.

A person who has committed a crime or a criminal offense, realizing the inevitability of testimony, makes every effort to avoid criminal liability or punishment, using various means and techniques. The actions of such a person are often supported by their inner circle, and sometimes by corrupt connections, which only increases the scale and complexity of the counteraction. This is the reason for the wide range of forms, means and subjects involved in countering the investigation. Af-

ter the opening of criminal proceedings, prosecution representative tries to identify deliberately concealed facts and circumstances, overcome artificial obstacles and bring the investigation to an objective path. This opposition of interests between the opposing party and the law enforcement officer creates a conflict situation, in which the pre-trial investigation usually takes place. As rightly noted in scientific literature, investigative activities are characterized by constant overcoming of resistance from persons not interested in an effective pre-trial investigation.

Most conflict situations at the stage of pre-trial investigation arise not only in the interaction between the investigator and the defense, but in the relationship between the investigator and other participants in the criminal proceedings (in particular, between the investigator and the prosecutor, the head of the pre-trial investigation body, colleagues, the victim or his representative, witnesses, experts, specialists, interpreters and other persons involved in the conduct of investigative (search) actions). It is important to emphasize that such conflicts are not personal in nature, but are manifestations of a forensic nature, since they directly relate to the performance of the investigator's main function: implementation of the tasks of criminal proceedings.

Modern crime is increasingly characterized by a high level of organization, thoughtfulness and duration of preparation of illegal acts. The resources obtained as a result of criminal activity not only ensure its continuation, but are invested, transformed into development of new forms and mechanisms. Criminals introduce innovative methods of committing crimes, as well as improve the means of

13 Плетенець В. М. Знач. твір. URL: <https://er.dduvs.edu.ua/handle/123456789/6404> (date accessed: 11.05.2025).

counteracting their detection, documentation and investigation. At the same time, the number of persons involved in creating artificial obstacles to law enforcement activities is growing.

If previously the main counteraction subjects were suspects and accused, now witnesses, victims, other participants in criminal proceedings, as well as third parties, often not directly related to the crime or its perpetrators, including government officials, law enforcement officials and the court, who, due to corrupt connections, contribute to evasion of responsibility, cover up criminals, or deliberately slow down the investigation are taking an increasingly active part in this procedure.

Significant complication of the operational and investigative activities of law enforcement officers is explained by the fact that the former spontaneous, fragmented crime was finally transformed into an organized system. Counteraction by such criminal structures has become more technological, purposeful and aggressive. Modern organized criminal groups have highly qualified personnel, access to the latest technical means, a serious material base, weapons, as well as an extensive network of corruption contacts. Taking advantage of these opportunities, they not only skillfully disguise their illegal activities, but actively oppose their exposure at every stage of criminal proceedings.

Moreover, criminal groups, in order to ensure their own safety and stable functioning, implement a set of special measures to counter the investigation. They develop strategies and tactics for counteraction, establish systems of in-

ternal conspiracy, create structures that perform the functions of intelligence and counterintelligence, form financial funds to bribe officials and support persons who are in prison or have just left prison. In addition, criminal organizations actively use international channels to commit crimes, legalize funds or flee abroad in order to avoid criminal prosecution and take other measures.

In scientific literature, analysis of counteracting investigation is carried out taking into account its various aspects: forms of detection, methods of implementation, typical situations, factors of determination, subjective side, chronological aspect, as well as qualitative characteristics. Most researchers focus on classification of forms and manifestations of counteraction, making a division according to different criteria and describing individual elements of this phenomenon.

Currently, the terms *forensic counteraction characteristics* of and *general counteraction characteristics* are actively used in scientific circulation¹⁴. At the same time, these publications do not clearly define the content of the terms themselves that creates a certain theoretical uncertainty.

The analysis of the content of the outlined researches gives grounds to distinguish two main components, which the authors usually consider to be elements of the forensic counteraction characteristics:

- 1) forms and methods of counteraction to the investigation;
- 2) counteracting actors.

These components are basic in all scientific works, regardless of whether they apply the concept of *forensic characteri-*

14 Ромців О. І. Зазнач. твір. URL: <https://uacademic.info/ua/document/0416U003853> (date accessed: 11.05.2025) ; Богданюк Р. І. Подолання протидії виявленню та розслідуванню кримінальних правопорушень у сфері господарської діяльності : дис. ... д-ра філос. в галузі права. Харків, 2025. 237 с. URL: <https://www.uacademic.info/ua/document/0825U001351> (date accessed: 11.05.2025).

zation. Within first component, the main task is to classify forms of counteraction as specific manifestations, as well as to disclose their specifics through the analysis of behavioral acts in which these forms are implemented. The second component focuses on identification of the types of subjects who counteract, the study of the motivational basis of their actions and their impact on the course and results of the pre-trial investigation.

Despite the unconditional scientific value of such developments, it should be recognized that limiting research only to classification of forms, methods and subjects does not provide full information support for investigative activities to identify and overcome counteraction. One of the significant shortcomings of this approach is the lack of analysis of external manifestations of the results of the use of specific countermeasures, i.e., material, digital and ideal traces that reflect the fact of counteraction. Without studying these traces, it is impossible to build full-fledged models of counteraction mechanism, to describe the consequences of its implementation, and therefore to develop effective tactical algorithms of actions for pre-trial investigators.

It is on the basis of such models that it is possible to determine the structure of the investigator's search and cognitive activity, focused on identifying a trace complex, set of reflections that arise as a result of person's actions aimed at committing crime, concealing it, as well as obstructing its investigation. This complex includes not only the actions of stakeholders, but influence of other procedure participants, even those who are not formally interested in the results of investigation. Only through an integrated approach that covers both behavioral mechanisms, trace formation, and search tactics, it is possible to provide high-quality forensic support for the inves-

tigation of certain types of criminal offenses. This approach is recognized in modern scientific doctrine.

Forensic characteristic of counteracting investigation should contain a number of key structural elements that ensure its application, in particular for development of algorithms for investigating certain types of criminal offenses. These elements include:

- 1) typical subjects of counteraction, their motivation and traditional objects of influence;
- 2) forms and methods of counteraction, as well as their impact on the sources of factual information about the circumstances of criminal offense;
- 3) use signs of specific counteraction methods.

It is important not only to provide a list of these elements, but to disclose them in a meaningful way in order to avoid transformation of the forensic characterization into a theoretical abstraction. For this purpose, we propose the following approach:

1. *Characteristics of counteraction subjects.* For each type of counteracting entity, it is necessary to define:
 - their potential to influence the course and outcome of the investigation;
 - conditions under which these persons may be involved in counteraction;
 - motivational basis for their actions;
 - nature of the relationship with the person who committed the criminal offense;
 - if it is a group of persons, then assess the level of connections between them.
2. *Forms and methods of counteraction.* During their research, it is necessary to:

- classify and describe the main forms and methods of counteraction;
 - trace their connection with the type of criminal offense, its characteristic sources of evidentiary information, as well as the peculiarities of collecting evidence;
 - determine the conditions under which a certain method of counteraction is chosen;
 - analyze the factors that affect effectiveness or ineffectiveness of specific methods.
3. *Counteraction signs.* Evaluate the mechanism for applying countermeasures, which should include:
- analysis of both material traces (reflections in the subject environment) and behavioral manifestations of persons trying to hide information significant for criminal proceedings;
 - comparing the actual trace complex with the one that would have been formed without the intervention of countermeasure;
 - detection of changes in the structure and characteristics of traces under the influence of counteraction. Such an analysis makes possible not only to state the fact of the use of counteraction, but identify its mechanisms, consequences and directions for overcoming.

Therefore, forensic characteristic of counteraction to the investigation of a particular type of criminal offense can be considered as an independent element in the structure of the relevant investigation methods, if it is characteristic of investigated group of criminal offenses. At the same time, it partially intersects with the forensic characteristics of the criminal offense itself, primarily in cases of inten-

tional crimes, which are preceded by careful planning (preparation), where counteraction can be an element of the method or mechanism of its commission.

Thereby, we agree with the approach according to which during research on essence (activity component) of counteracting investigation it is necessary to investigate:

- 1) forensic characteristics of the offense;
- 2) forensic characteristics of counteraction to its investigation;
- 3) based on these generalized data, typical investigative situations and recommendations for the organization of the investigation at various stages are formulated. This approach provides categorical clarity, terminological consistency, and contributes to a deeper understanding of both the patterns of criminal activity and its investigation.

It should be noted that criminal prosecution, both real and imaginary, should be considered as a general object of counteraction in its dynamic, complex dimension. This phenomenon varies depending on the stage of prosecution and the nature of the influence of the opposing entity. The direct object of counteraction is a criminal conflict, i.e. the result of a clash between two types of legal relations that are opposite in nature: on the one hand, criminal prosecution, and on the other hand, counteraction to this process. At its core, a criminal conflict reflects the interaction between participants in criminal proceedings, including persons involved by both procedural and non-procedural means, around the protection or opposition to the rights and interests arising from the commission of a criminal offense. In contrast to this dynamic approach that takes into account development and variability

of the object under the influence of external factors, the vast majority of scientific positions are dominated by a static understanding of the object. Only a single aspect of criminal proceedings is considered as the object of counteraction, without taking into account the changing conditions of its functioning, transformation or termination. This approach seems to be limited and does not reflect the real functioning of the criminal process in the context of counteraction¹⁵.

The analysis of the practice of investigating crimes in the presence of counteraction, as well as the relevant theoretical developments has indicated that structure of counteracting investigation is most fully revealed through the elements of its general characteristics, which include:

- subject of counteracting investigation;
- purpose and motives of counteraction;
- object of counteraction;
- time, place and conditions in which the counteraction is carried out;
- method of counteraction implementation and its reflection in the traces;
- consequences of the counteraction.

The purpose of concealment within the method of committing criminal offense is to facilitate its implementation, to obtain additional time for escape or to prevent the fixation of the fact of a crime (detection of its signs) by law enforcement agencies. However, as practice demonstrates, during such actions, offenders often leave additional traces that have even higher evidentiary value than the main ones.

The purpose of concealment within the method of committing crime is the

desire of its subjects to facilitate the implementation of the criminal intention, or, if possible, not to allow the fact of committing a criminal offense to be revealed by other persons, in particular, law enforcement officers. At the same time, as practice shows, criminals simultaneously leave additional traces, which often have even higher evidentiary value.

Duration of counteracting investigation depends on a number of factors: the duration of the pre-trial investigation (the longer the investigation lasts, the more people are involved in the system of criminalized connections and become subjects of counteraction); the volume, significance and evidence reliability; the professional level of the investigators who carry out the investigation in the face of active counteraction, etc.

Locations of counteraction implementation can be conditionally combined into two main groups:

- 1) locations of investigative (search) and other procedural actions;
- 2) locations of sources or carriers of evidentiary information, as well as documents in which it is recorded.

Counteraction as a typical way of implementing a criminal intent consists of three stages:

- 1) preparation for counteraction;
- 2) direct actions aimed at counteraction;
- 3) concealment of counteraction itself.

Each of these stages has its own specific content, which varies depending on the specific investigative situation, for example, the presence of the suspect (accused), preventive measure chosen against him, etc. Within each stage, specific tasks are formed, goals, performers are determined,

15 Патрелюк Д. Об'єкт протидії кримінальному переслідуванню. *National Law Journal: Theory and Practice*. 2017. № 12. С. 141—144. URL: http://www.jurnaluljuridic.in.ua/archive/2017/6/part_2/31.pdf (date accessed: 11.05.2025).

as well as means and methods for implementing actions. Direct counteraction is usually manifested in the targeted impact on the sources of forensically significant information.

Counteraction result can be assessed in two aspects:

- 1) from the standpoint of the interests of the entire criminal group (preservation of its main structure, ensuring the continuity of illegal activities);
- 2) in the context of interests of individual participants (for example, avoidance of punishment). Depending on effectiveness, result can be positive, partially positive or negative for the criminal environment.

Mechanism of counteraction to the investigation is based on a system of deliberate actions (in certain cases, by inaction), their interrelations and is implemented through a number of externally detected actions, which may vary depending on:

- initiatives of a particular counteraction entity;
- chosen methods and their combinations;
- stages of criminal procedural activity.

At the same time, the general structure of the mechanism provides for the participation of a number of persons, both direct participants in the criminal event and third parties involved “from the outside” (for example, witnesses or corrupt connections).

Characteristics of situation when counteracting investigation is implemented should take into account relationship of the person with the individual stages of criminal proceedings. These stages include, but are not limited to:

- 1) priority investigative (search) and procedural actions;

- 2) stage from the moment of opening of criminal proceedings;
- 3) period from the raising of suspicion to opening of the materials of criminal proceedings and familiarization of the parties with the materials of criminal proceedings;
- 4) stage from the beginning of familiarization to the transfer of the indictment to the court;
- 5) period after indictment is sent to the court for trial on the merits.

Conclusions

Counteracting investigation is a complex, dynamic and multifaceted phenomenon that is formed in the context of a criminal conflict and is externally expressed in the purposeful behavior of persons interested in concealing the actual circumstances of a criminal offense. Its active side consists in the commission of active (sometimes inactive) acts of influence on the course and results of the pre-trial investigation.

Activities of the subjects of counteraction are implemented not chaotically, but within a certain mechanism, which consists of the following stages: 1) preparation for counteraction; 2) active implementation of influence on the sources of evidence; 3) concealment of traces of the actions committed. The mechanism of counteracting to investigation is variable, depends on the stage of criminal proceedings, the chosen tactics and the presence of corruption, organizational and social ties of the subject (subjects) of counteraction.

Structural components of forensic characteristics of counteraction are the subjects of counteraction, their motives and objects of influence; typical forms and methods, their influence on the sources of evidence; signs of the use of specific meth-

ods that are manifested both in the subject environment and in the behavior of the subjects.

Modern counteraction to pre-trial investigation is especially threatening in the context of organized criminal activity. It has a high level of organization, internal structure, financial, technical and personnel support. Counteraction becomes an element of the strategy of criminal groups, which systematically plan it at all stages – from concealing the crime to influencing the court. While studying counteracting investigation, it is theoretically appropriate to talk about the forensic characteristic of counteracting investigation that should be integrated as a separate component into the structure of the investigation methodology for those criminal offenses that are characterized by active counteraction. It should be built on the basis of: 1) analysis of typical methods and mechanisms of counteraction; 2) research on subject-role structure of counteraction; 3) study of changes in investigative complex caused by targeted influence on evidence.

Діяльнісна природа протидії розслідуванню кримінальних правопорушень

Олександр Таркан

Мета статті — визначити складові діяльності, що полягає у протидії розслідуванню кримінальних правопорушень. Поставлену мету досягнуто завдяки застосуванню комплексу загальнонаукових, спеціальних і філософських методів дослідження, зокрема діалектичному, моделювання, системно-структурному та порівняльному аналізу тощо. Визначено, що протидія розслідуванню є складним, динамічним і багатоаспектним явищем, яке формується в умовах кримінального конфлікту та виявляється через цілеспрямовану поведінку осіб, зацікавлених у приховуванні фактичних обставин кримінального правопорушення. Її діяльнісна сторона по-

лягає у вчиненні реальних (іноді — бездіяльних) актів впливу на перебіг і результати досудового розслідування. З'ясовано, що таку діяльність суб'єкти протидії реалізують не хаотично, а в межах певного механізму, який містить такі етапи: підготовка до протидії; активна реалізація впливу на джерела доказової інформації; приховування слідів учинених дій. Визначено, що механізм протидії розслідуванню варіативний, залежить від стадії кримінального провадження, обраних тактик та наявності корупційних, організаційних і соціальних зв'язків. Обґрунтовано, що структурними компонентами криміналістичної характеристики протидії є: 1) суб'єкти протидії, їхні мотиви й об'єкти впливу; 2) типові форми та способи, їхній вплив на джерела доказів; 3) ознаки застосування конкретних способів, що виявляються як у предметному середовищі, так і в поведінці суб'єктів. Доведено необхідність вивчення саме зовнішніх виявів протидії (матеріальних, цифрових, ідеальних слідів) як ключового джерела для моделювання механізмів злочинної протидії та створення ефективних тактичних рішень. З'ясовано, що протидія розслідуванню має конфліктну природу, у якій стикаються протилежні цілі сторін кримінального провадження. Це не лише конфлікт між слідчим і підозрюваним, а й взаємодія з іншими учасниками процесу: прокурором, свідками, понятими, експертами та ін. Така взаємодія створює напружене слідче середовище, що потребує високого рівня професійної адаптивності слідчого. Зазначено, що сучасна протидія досудовому розслідуванню особливо загрозлива в умовах організованої злочинної діяльності. Вона має високий рівень організації, внутрішньої структури, фінансової, технічної та кадрової підтримки. Обґрунтовано, що криміналістична характеристика протидії розслідуванню має бути інтегрована як окремий компонент до структури методики розслідування тих кримінальних правопорушень, для яких характерна активна протидія. Її слід будувати на основі: 1) аналізу типових способів і механізмів протидії; 2) дослідження суб'єктно-рольової структури протидії; 3) вивчення змін у слідovому

комплексі, зумовлених цілеспрямованим впливом на докази.

Ключові слова: досудове розслідування; протидія розслідуванню; слідча діяльність; подолання протидії розслідуванню; складові протидії розслідуванню.

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Art Forensics in Investigating and Proving Smuggling of Cultural Property

Yurii Kovalov *

* PhD in Law, Doctoral Student of NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine, ORCID: <https://orcid.org/0009-0003-9159-4499>, e-mail: koval.98819@gmail.com

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The purpose of this article is to determine the specifics of appointment of art forensics during investigation of the smuggling of cultural values, to reveal the significance of the expert's conclusion for the process of proof. For achieving this goal, such general scientific methods as analysis and synthesis, the method of system analysis, logical-structural, generalization, etc. were used. It was found that art historical expertise is a rather rare phenomenon for law enforcement activities, but it is mandatory for appointment during investigation of smuggling of cultural values, because certifying the fact that a specific object has artistic, historical, ethnographic and scientific significance, which is the basis for its further preservation, reproduction and protection, is exclusively within the competence of specialists with the appropriate status. It was established that during the investigation, investigators quite often address the question of whether an object belongs to the category of cultural values to forensic expert, however, the solution of this issue is already the competence of lawyers. The competence of forensic expert consists in determining artistic level, historical significance, cultural value and condition of the work. In view of this, it is emphasized that before making a decision to appoint an art expert, it is advisable to consult with a specialist in the field of art history; this allows to properly formulate expert tasks, clarify the research topic of and ensure quality of subsequent conclusion and the collected evidence. It was found that the assessment of the expert's conclusion during the pre-trial

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investigation involves finding out whether all the tasks assigned to the expert have been solved, for what reasons some of them cannot be solved or what influenced the impossibility of solving them, and whether it is advisable to appoint an additional examination. At the assessment stage, it is important to pay attention to whether the conclusion reflects information about the expert's qualifications and competence in the relevant field of knowledge. During the trial, at the stage of evaluating the expert's conclusion, his interrogation may be conducted. Although the law does not directly determine the subject of the expert's interrogation at the stage of pre-trial investigation, in accordance with the legal nature of forensic examination, interrogation should concern only those circumstances that became known to the expert in connection with the performance of forensic research or those that are important for the proper assessment of the conclusion. It is justified that during investigation of the smuggling of cultural values, it is prudent to appoint an art historical examination, and not to resort to other forms of specific expertise application, because only the conduct of the examination will guarantee the receipt of evidence that meets the criteria of admissibility, relevance and reliability and therefore can be used as the basis for proof.

Keywords: criminal offense; crime; specific expertise; examination; art forensics; evidence evaluation.

Research Problem Formulation

Specific expertise is important for the investigation of criminal offenses related to smuggling. Trial is impossible without their application, since a number of issues that need to be resolved are beyond professional competence of the prosecution. First of all, these questions concern the clarification of nature and essence of the object that the person tried to move outside the customs control or with concealment from such control.

Availability in the actions of a person of signs of smuggling of cultural values, which are understood as objects of material and spiritual culture that have artistic,

“historical, ethnographic and scientific significance and are subject to preservation, reproduction and protection”¹, responsibility for which is provided for in Art. 201 of the Criminal Code of Ukraine², is established on the basis of specific expertise use by specialists and experts.

Unlike ordinary movable property, cultural values have a number of specifics distinguishing them from other objects of material world. Therefore, while determining whether a certain object moving across the customs border of Ukraine belongs to the category of cultural or historical values, it is necessary to take into account the time of its creation (era, century), the method of manufacture (manual

1 Митний кодекс України від 13.03.2012 р. № 4495-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/4495-17> (date accessed: 10.05.2025).

2 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: 10.05.2025).

or mechanized labor), degree of preservation, integrity, rarity, artistic value and originality of the work. Therefore, leading expert tasks in such a situation include finding out whether the object of research is endowed with the significant significance that is characteristic of cultural value. However, in practice, representatives of pre-trial investigation bodies quite often issue tasks, the solution of which is the competence of lawyers. In addition, it is in these studies that experts are quite often objectively unable to solve the tasks assigned to them. This complicates the procedure of evaluating the expert's conclusion and actualizes the task of finding alternative sources of evidence of those circumstances that constitute a mandatory subject of proof in criminal proceedings. Considering that representatives of scientific community have so far approached these issues indirectly, we consider it necessary to resolve them within the limits of this research paper.

Article Purpose

For determining specifics of appointment of art forensics examination during investigation of smuggling of cultural property, to reveal significance of forensic expert conclusion for the proof procedure.

Research Methods

For achieving this goal, such general scientific methods as analysis and synthesis, dialectical method, system analysis method, logical-structural, generalization, etc. were used. The dialectical method provided a holistic understanding of essence of art forensics as a legal and cul-

tural phenomenon, its place in the system of judicial evidence, the relationship between competence of forensic expert and the powers of lawyers. The system-structural method made possible: 1) distinguish functional elements of art forensics examination (subject, tasks, stages of appointment); 2) determine its role in structure of criminal proceedings (especially at the stage of evaluating evidence); 3) systematize investigator functions, expert, prosecutor and court while appointing and evaluating forensic expert conclusion.

Formal logical methods (analysis, synthesis, induction, deduction) were used to determine and describe components of examination appointment procedure (collecting materials, asking questions, selecting forensic expert, etc.), the synthesis provided a generalization of the results obtained, induction was used to formulate general provisions based on the analysis of isolated examples from practice, deduction, formulate conclusions on admissibility and relevance of evidence.

Comparative legal method was used to compare the legal regulation of various forms of specific expertise application (consultation, participation of a specialist, examination), the delimitation of the competence of forensic expert and investigator, the court in resolving certain issues and assessing the expert's conclusion.

Analysis of Essential Researches and Publications

Theoretical and methodological aspects of art forensics were investigated and continue to be studied by V. Bitayev with co-authors ³, P. Bilenchuk and O. Shul-

3 Бітаєв В. А., Шульгіна В. Д., Шман С. Ю. Методичні засади експертного дослідження культурних цінностей: навч.-метод. посіб. Київ, 2010. 128с. URL: http://library.nakkkim.edu.ua:8080/libdoc/knugu/knygy2/mystectvoznavci/bitayev_metod_zasady.pdf (date accessed: 10.05.2025).

ha ⁴, I. Hora ⁵, O. Dibikov ⁶, A. Doluda and O. Puklich ⁷, O. Kalashnikova ⁸, N. Karpinska ⁹, M. Kurko et al. ¹⁰, N. Revonok ¹¹, M. Romanov and E. Yefremian ¹², I. Khodchenko ¹³ and many others. An analytical review of the scientific works of Ukrainian theorists and practitioners makes it possible to state that this issue covers a wide range of issues, because the study of various objects (painting, musical creativity, old printed books, objects of numismatics and faleristics, etc.) is

characterized by its subtleties and problematic issues.

O. Shulha took a comprehensive approach to determining the essence and significance of the results of art forensics examination in the system of procedural activities of pre-trial investigation and court authorities in the investigation of criminal offenses related to encroachments on cultural and historical values ¹⁴.

Peculiarities of appointment of art forensics examinations in criminal

- 4 Біленчук П. Д., Шульга О. О. Консолідований порівняльно-аналітичний аналіз мистецтвознавчих досліджень в Україні: правове і науково-методичне забезпечення. *Порівняльно-аналітичне право*. 2016. № 4. С. 180—183. URL: https://pap-journal.in.ua/wp-content/uploads/2020/08/4_2016.pdf (date accessed: 10.05.2025).
- 5 Гора І. В. Проблеми судово-мистецтвознавчої експертизи в судочинстві України. *Часопис Академії адвокатури України*. 2015. Т. 8. № 4 (29). С. 42—49. URL: http://nbuv.gov.ua/UJRN/Chauu_2015_8_4_4 (date accessed: 10.05.2025).
- 6 Дібіков О. О. Судова мистецтвознавча експертиза. *Молодий вчений*. 2024. № 6 (130). С. 25—31. DOI: 10.32839/2304-5809/2024-6-130-5 (date accessed: 10.05.2025).
- 7 Долуда А. О., Пукліч О. С. Класифікація об'єктів судової мистецтвознавчої експертизи. *Теорія та практика судової експертизи і криміналістики*. 2016. Вип. 16. С. 399—405. URL: http://nbuv.gov.ua/UJRN/Tpsek_2016_16_55 (date accessed: 10.05.2025).
- 8 Калашникова О. Л. Основи мистецтвознавчої експертизи та вартісної оцінки культурних цінностей : підручник. Київ, 2006. 479 с. URL: <https://surl.li/dcfqao> (date accessed: 10.05.2025).
- 9 Карпінська Н. Проблемні аспекти судової мистецтвознавчої експертизи. *Історико-правовий часопис*. 2017. № 2 (10). С. 124—129. URL: http://nbuv.gov.ua/UJRN/ipch_2017_2_27 (date accessed: 10.05.2025).
- 10 Курко М. Н., Біленчук П. Д., Шульга О. О. Правове і наукове забезпечення мистецтвознавчих досліджень в Україні: системний аналіз. *Європейські перспективи*. 2014. № 3. С. 123—131. URL: http://nbuv.gov.ua/UJRN/evpe_2014_3_21 (date accessed: 10.05.2025).
- 11 Ревенок Н. М. Сучасні методи мистецтвознавчої та технологічної експертизи виробів з порцеляни та фаянсу. *Вісник Національної академії керівних кадрів культури і мистецтв*. 2015. № 2. С. 154—158. URL: http://nbuv.gov.ua/UJRN/vdakkkm_2015_2_35 (date accessed: 10.05.2025).
- 12 Романов М., Єфреман Е. Теоретичні питання та загальні методичні положення судово-трасологічного дослідження контактної взаємодії об'єктів. *Вісник Академії правових наук України*. 1999. № 2 (17). С. 147—155. URI: <https://dspace.nlu.edu.ua/jspui/handle/123456789/4235> (date accessed: 10.05.2025).
- 13 Ходченко І. Л. Теоретичні аспекти судової мистецтвознавчої експертизи. *Криміналістика і судова експертиза*. 2017. Вип. 62. С. 460—465. URL: http://nbuv.gov.ua/UJRN/krise_2017_62_57 (date accessed: 10.05.2025).
- 14 Шульга О. О. Судово-мистецтвознавча експертиза у кримінальному судочинстві України : дис. ... д-ра філос. у галузі права. Київ, 2020. 273 с. URL: <https://elar.navy.edu.ua/server/api/core/bitstreams/fcbf0619-4a2a-4fae-b698-c923a28bc157/content> (date accessed: 10.05.2025).

proceedings were investigated in their works by representatives of the Kharkiv National University of Internal Affairs ¹⁵, O. Shulha and T. Lelyuk ¹⁶ and some others. Until the issues are resolved, various aspects of appointment of art forensics examination in the context of the current investigative situation and the assessment of findings remain unresolved, so these issues are the basis of our research.

Main Content Presentation

Art forensics is a separate area of forensic expert activity that combines elements of art history and legal science. Its subject matter is the study and evaluation of art objects within criminal proceedings and their trial.

Objects that can be submitted for art historical expert examination include antiques, works of monumental and easel painting, graphics, decorative and applied arts, as well as architectural monuments, sculptural compositions, small forms of plastic, musical instruments, and sheet music. In addition, objects of numismatics, phaleristics, heraldry and vexillology (in particular, coats of arms and flags), as well as printed materials, audio and video

recordings, photographs are subject to re-search ¹⁷.

The main tasks of art historical expertise include, in particular, establishing the authenticity and identity of artworks, determining their artistic, historical and cultural value, as well as participation in resolving legal issues related to the division of property or investigation of the facts of illegal movement or trafficking of cultural objects ¹⁸.

Specialists in the field of art history combine knowledge of history and theory of art with the methods of forensic examination, allowing to formulate balanced, reasoned conclusions necessary for making informed decisions in cases involving art objects. In addition, it is quite reasonable and necessary for art historical examination to formulate questions not only about the identification of an object and its belonging to cultural property, but also about determining the nature, causes and time of deterioration of its condition, calculating the cost of work to repair damage caused by smuggling, or establishing the value of a destroyed object. In addition, the need to clarify circumstances that can indicate non-pecuniary damage to the owner of the cultural property as individual and as legal entity is not excluded ¹⁹.

- 15 Бугайчук К. Л., Корнієнко Д. М., Стреляний В. І. та ін. Особливості призначення і проведення експертизи щодо визначення розміру матеріальних збитків, шкоди немайнового характеру, шкоди довкіллю, заподіяної кримінальним правопорушенням : наук.-метод. рек. Харків, 2015. 63 с. URL: <https://dspace.univd.edu.ua/server/api/core/bitstreams/bea43b05-e24c-4252-9f87-e6560334535a/content> (date accessed: 10.05.2025).
- 16 Шульга О., Лелюк Т. Організаційні й тактико-психологічні засади проведення судово-мистецтвознавчих експертиз у кримінальному провадженні. *Юридична психологія*. 2023. № 1 (32). С. 68—78. DOI: [10.33270/03233201.68](https://doi.org/10.33270/03233201.68) (date accessed: 10.05.2025).
- 17 Інструкція про призначення та проведення судових експертиз та експертних досліджень ; Науково-методичні рекомендації з питань підготовки та призначення судових експертиз та експертних досліджень : затв. наказ. 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: 10.05.2025).
- 18 Інструкція ... ; Науково-методичні рекомендації URL: <https://zakon.rada.gov.ua/laws/show/z0705-98#Text> (date accessed: 10.05.2025).
- 19 Костін М. І. Контрабанда. Доказування обставини вчинення злочину на досудовому слідстві : монографія. Київ, 2003. С. 75.

In the context of clarifying the specifics of the leading tasks of art expertise, it should be noted that the authenticity of a work of art lies in proving its authenticity and confirming the fact that it was created by a particular author or comes from a certain historical period. This is an extremely important aspect, given that the art market often faces copies and fakes. For determining authenticity, multidisciplinary research is carried out:

- 1) stylistic specifics and technique: assessing whether the work is consistent with the characteristic style of the author to whom the work is attributed;
- 2) materials: paints, canvas, frames and other materials are analyzed, which makes possible to establish approximate time of object creation;
- 3) history of origin (provenance): documents, archival sources, expert opinions confirming the chain of owners of the work are studied ²⁰.

Attribution (or authorship) involves identifying a specific author of an art object. For this purpose, experts: a) examine signatures, monograms; b) study historical materials and archives; c) apply technical methods, such as X-ray, ultraviolet light analysis, etc., which allow them to identify hidden signatures, records, or traces of alterations ²¹.

Another typical task is the assessment of market value, which involves determining the value of a work of art. This is important in litigation, in particular in cases of: a) division of property; b) insurance claims; c) assessment of losses caused by

damage to an object. For example, in the case of the Yampil District Court of Sumy Region, the value of 14 antiquities was established, in particular: a ring with a round flat shield of the III–IV centuries BC, made of an alloy of gold, copper, iron, palladium and silver, weighing 2.53 g; a three-bead temple ring of the XII–XIV centuries, made of an alloy of gold, copper, iron, palladium and silver, weighing 4.11 g; a wire earring belonging to the jewelry of the Chernyakhiv culture, made of an alloy of gold, copper, palladium and silver, weighing 0.84 g; a bucket-shaped scent pendant belonging to the jewelry of the Chernyakhiv culture, made of an alloy of gold, copper, palladium and silver, weighing 1.26 g; a horn-shaped scent pendant belonging to the jewelry of the Chernyakhiv culture, made of an alloy of gold, copper, palladium and silver, weighing 0.70 g. According to the conclusion of the forensic art examination № CE-19/111-21/12621-M3 dated on 26.04.2021, these collectible antique items belong to cultural values, the estimated value is UAH 15,414 ²².

Assessment of the state of preservation of damaged works is to determine the amount of damage caused and the need for restoration. The solution of this task involves conducting: a) visual assessment of the object; b) technical research, that can include infrared imaging, X-rays, microscopic analysis of paint layers and materials used to create the object.

Determination of cultural and historical significance is one of the typical tasks of art historical examination, which is appointed during the investigation of crimes of the type we study. This is relevant, for

20 Дібіков О. О. Зазнач. твір. DOI: 10.32839/2304-5809/2024-6-130-5 (date accessed: 10.05.2025).

21 Там само.

22 Вирок Ямп. райсуду Сум. обл. від 11.01.2024 р. Справа № 576/3518/23. Провадж. 1-кп/590/71/24 / ЄДРСП : вебсайт. URL: <https://reyestr.court.gov.ua/Review/96157122> (date accessed: 13.05.2025).

example, for: a) archaeological artifacts; b) works of ancient art that are important for history, national heritage or international cultural exchange ²³.

Within the class of art historical expertise, there are two main kinds:

- 1) *art forensics examination* of works of art aimed at studying objects to determine their historical, scientific or cultural value. The objects of such examination include paintings, graphics, sculpture, decorative and applied arts, architecture, etc.;
- 2) *forensic psychological and art forensics* that specializes in analyzing audiovisual, printed and digital materials (film, video, printing, multimedia, etc.) in order to determine whether they are pornographic or promote the cult of violence and cruelty.

These areas are of great importance in the context of criminal proceedings for the protection of public morality, national cultural heritage and legal assessment of art objects and media content ²⁴.

While conducting such examinations, art historian usually performs a variety of researches, that include: a) analysis of the materials from which the artwork was made; b) research on the author's signature or stamp; c) research on manner of writing (artistic style); d) detection of signs of interference (damage, restoration or later alterations).

In view of this, two main stages are usually distinguished in a multidisciplinary art forensics examination:

- 1) *technical and technological research* aimed at analyzing the material structure of the object and establi-

shing its authenticity, i.e. determining whether the object is an original work or only an imitation or copy;

- 2) *artistic research* includes: a) formal and stylistic analysis (study of elements of artistic style); b) historical and art historical research (determination of the time and place of creation of the object, its school or authorship, plot, functional purpose) ²⁵.

Diagnostic examinations in the field of art history are conventionally divided into simple and complex: simple ones are aimed at establishing individual properties or states of art objects without the need for a deep comprehensive analysis; complex ones are more detailed in nature and, while maintaining an art history basis, at the same time contain elements of forensic analysis. Such examinations can be used in cases involving the illegal circulation of cultural values, smuggling, forgery of works of art, etc.

It is worth noting that not all objects can be diagnosed or categorized by an expert. For example, in a case considered by the Oktyabsky District Court of Poltava, an art historical examination was ordered, for which three fragments of ancient clothing and fifty-three Scythian arrowheads were sent. According to the conclusion of the forensic art examination, the 53 arrowheads seized from the international mail item constitute an archaeological collection of Scythian arrowheads of the 7th century BC – 4th century AD and belong to cultural property of artistic, historical, ethnographic and sci-

23 Дібіков О. О. Зазнач. твір. DOI: 10.32839/2304-5809/2024-6-130-5 (date accessed: 10.05.2025).

24 Фурман Я. В. Основи методики розслідування контрабанди культурних цінностей : дис. ... канд. юрид. наук. Київ, 2009. 235 с. URL: <https://uacademic.info/ua/document/0410U001200> (дата звернення: 10.05.2025).

25 Там само.

entific significance. It was not possible to establish the belonging of three fragments of household items, similar to fragments of a belt set or horse harness and a button, probably made in the VII-XIX centuries, to cultural property of artistic, historical, ethnographic and scientific significance, because these objects are only fragments of household items and their location (archaeological find) has not been determined ²⁶. This practice actualizes the need to identify alternative ways to search for and collect evidence in similar investigative situations, because, presumably, if all the fragments of the seized objects were available and provided to experts, it would still be possible to find out their origin and perform other tasks.

Art forensics performs not only a cultural and artistic, but also a law enforcement task, focusing on both artistic analysis and certification (proving) the circumstances of a criminal offense.

Appointment of art forensics examination in criminal proceedings is a complex, structured process that includes a number of sequential stages that are implemented by authorized persons: investigator, prosecutor or judge. This procedure involves:

- a) awareness of the need to conduct an art forensics examination;
- b) optimal moment choice for its appointment within the investigation framework;
- c) collecting and preparing relevant materials to be provided to forensic expert;
- d) formulation of expert tasks, i.e. range of questions to be answered by forensic expert;

- e) determination of forensic science institution or concert expert who will be entrusted with the examination;
- f) issuance of a relevant resolution on appointment of forensic examination (if initiated by an investigator or prosecutor) or a court order (in case of court proceedings).

Art forensic examination has the status of a procedural action that is carried out within the framework of proof and is an independent source of evidence. Its peculiarity lies in the fact that art forensics expert, relying on his or her specialized knowledge, experience and skills, independently establishes new facts of evidentiary importance to the case. This distinguishes the examination from other forms of specific expertise application, for example, participation of a specialist during the inspection or seizure of items.

In investigative practice, it is important to consider that conducting forensics art examination by experts who are not employees of State specialized institutions should be complementary in nature, and not replace official expert activities of State institutions.

Procedural decision to order an art forensics examination, if initiated by the prosecution, is drawn up in the form of a resolution of the investigator or prosecutor in accordance with requirements of the Criminal Procedural Code of Ukraine of Ukraine ²⁷. Before making such a decision, it is advisable to consult with a specialist in the field of art history, which allows you to properly formulate expert tasks, clarify the research topic and ensure quality of further procedural actions.

26 Вирок Октябр. райсуду м. Полтави від 09.04.2021 р. Справа № 554/5955/19. Провадж. № 1-кп/554/153/21 / ЄДРСП : вебсайт. URL: <https://reyestr.court.gov.ua/Review/96157122> (date accessed: 10.05.2025).

27 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: 10.05.2025).

It should be noted that the clarification and verification of the professional competence of a forensic expert remains a rather controversial issue in law enforcement. Thus, in the previously mentioned court case (regarding Scythian arrowheads), the defense attorney denied the possibility of recognizing a forensic expert who had previously conducted research as one who meets the requirements of the Law of Ukraine: *On Judicial Examination*. In order to verify or refute the defense attorney's arguments, the court interrogated the expert. During interrogation, it was established that the said forensic expert has a higher art education, educational and qualification level of *Specialist*, qualification of forensic expert majoring in 15.1 *Art forensics*, 3rd qualification class of a forensic expert, and experience of expert work since 2008. The interrogated expert confirmed her conclusion, noting the literature and scientific sources that she used and indicated in the expert's conclusion. Examining 53 items submitted to her for examination, namely arrowheads, she concluded that they are in a satisfactory state of preservation with traces of natural patina. While comparing them with samples of Scythian arrowheads from the archaeological dictionary of W. Bray, it was established that by their external features and shape they belong to objects from the times of the Scythian culture (VII century BCE – IV century CE). The studied arrowheads are authentic, belong to the so-called "small pond"; as evidenced by the natural patina and state of preservation²⁸.

Based on evaluation results of this evidence, the court recognized the expert's conclusion as proper and admissible ev-

idence, and also rejected the defense's arguments that the antiquities submitted for examination could not be examined because they were not found during archaeological excavations and are not a collection.

Regarding evaluation of forensic expert conclusion, scientists emphasize that it occurs in two consecutive stages. The first involves an analysis of the procedural component of appointment and performance of the examination, and the second is an assessment of its scientific and factual validity. Within the framework of this assessment, it should be clarified: first, whether the opinion contains information that confirms the expert's qualification in the relevant field of knowledge; second, whether the profile of this knowledge corresponds to the questions posed to forensic expert; third, whether the solution of such questions really requires specific expertise; fourth, whether the methods used by forensic expert to perform the tasks assigned correspond to his specialization and level of competence. At the same time, it is important to find out whether the expert has exceeded the limits of his professional competence. One of the ways to verify the validity of forensic expert conclusion in pre-trial proceedings is to interrogate the expert. Although the law does not directly determine the subject of the expert's interrogation at the stage of pre-trial investigation, in accordance with the legal nature of the examination, the interrogation should concern only those circumstances that became known to the expert in connection with the performance of the expert study, or those that are important for the proper conclusion assessment²⁹.

28 Вирок Октябр. райсуду м. Полтави Справа № 554/5955/19 URL: <https://reyestr.court.gov.ua/Review/96157122> (date accessed: 10.05.2025).

29 Шульга О., Лелюк Т. Зазнач. твір. С. 74–75. DOI: [10.33270/03233201.68](https://doi.org/10.33270/03233201.68) (date accessed: 10.05.2025).

Circumstances that may be clarified during the interrogation include, in particular, information about the expert's education, his professional experience, practical experience in conducting research of the relevant profile; methods used during the examination; explanation of the essence of the experiments conducted and their significance for forming conclusions. Thus, in the aforementioned case, the court referred to the fact that during the examination, the expert proceeded from the presence of traces of patina on the objects under examination and data obtained by comparison with samples of Scythian arrowheads from the archaeological dictionary substantiated in the descriptive part of the examination with reference to relevant scientific sources. The court had no doubts about the competence of the expert, who was warned of criminal liability for a knowingly false expert conclusion and refusal of the duties assigned to ³⁰.

At the same time, if during interrogation the investigator or prosecutor tries to obtain from the expert answers to questions that are not related to the conducted research, but belong to the sphere of his knowledge, such actions go beyond the permissible subject of interrogation. In this case, we are no longer talking about interrogation as a procedural action, but about an advisory form of specific expertise application. Providing consultations by forensic expert, although provided for by the possibilities of criminal proceedings, cannot be carried out in the form of interrogation, since the latter has a clearly defined procedural nature ³¹.

Conclusions

Art forensics is a rather rare phenomenon for law enforcement activities, but it is mandatory when investigating the smuggling of cultural values, because certifying the fact that a specific object has artistic, historical, ethnographic and scientific significance that is the basis for its preservation, reproduction and protection, is exclusively within the competence of specialists with the appropriate status.

Question of whether an object belongs to the category of cultural values is quite often put to the expert by investigators, but its solution is already the competence of lawyers. The competence of the expert is to determine the artistic level, historical significance, cultural value and condition of the work. Therefore, before making a decision to order an art expert examination, it is advisable to consult with a specialist in the field of art history in advance, which allows you to properly formulate the expert tasks, clarify research topic and ensure the quality of the collected evidence and the subsequent conclusion.

Evaluation of forensic expert's conclusion during a pre-trial investigation involves finding out whether all the tasks set for the expert have been solved, for what reasons some of them cannot be solved or what influenced the possibility of their solution, and whether it is advisable to order an additional examination. It is also important at the evaluation stage to pay attention to whether the opinion reflects information about the expert's qualifications and competence in the relevant field

30 Вирок Октябр. райсуду м. Полтави Справа № 554/5955/19 URL: <https://reyestr.court.gov.ua/Review/96157122> (date accessed: 10.05.2025).

31 Колесник Ю. В. Слідчі та негласні слідчі (розшукові) дії як криміналістичні засоби діяльності слідчого в досудовому розслідуванні : дис. ... канд. юрид. наук. Київ, 2016. 198 с. ; Шульга О., Лелюк Т. Зазнач. твір. С. 68—78. DOI: 10.33270/03233201.68 (date accessed: 10.05.2025).

of knowledge. During a trial, at the stage of evaluating an expert's opinion, his interrogation may be conducted. Although the law does not directly determine the subject of interrogation of an expert at the stage of a pre-trial investigation, in accordance with the legal nature of the examination, the interrogation should concern only those circumstances that became known to the expert in connection with his performance of the expert study, or those that are important for a proper conclusion evaluation.

It should be noted that when investigating the smuggling of cultural property, it is important to order an art history examination, and not to resort to other forms of application of specialized knowledge, because only conducting an examination will guarantee obtaining evidence that meets the criteria of admissibility, appropriateness, and reliability, and therefore can serve as a basis for proof.

**Мистецтвознавча експертиза
в розслідуванні та доказуванні
контрабанди культурних цінностей**
Юрій Ковальов

Мета статті — визначити особливості призначення мистецтвознавчої експертизи під час розслідування контрабанди культурних цінностей, розкрити значення висновку експерта для процесу доказування. Для реалізації цієї мети застосовано такі загальнонаукові методи, як аналіз і синтез, метод системного аналізу, логіко-структурний, узагальнення та ін. З'ясовано, що мистецтвознавча експертиза — доволі рідкісне явище для правозастосовної діяльності, однак є обов'язковою для призначення під час розслідування контрабанди культурних цінностей, оскільки засвідчення художнього, історичного, етнографічного та наукового значення конкретного об'єкта є під-

ставою для його подальшого збереження, відтворення й охорони та належить винятково до компетенції спеціалістів із відповідним статусом. Зазначено, що під час розслідування запитання про те, чи належить об'єкт до категорії культурних цінностей, слідчі доволі часто адресують експертів, однак відповідь саме на це питання вже є компетенцією правників. Компетенція експерта полягає у визначенні художнього рівня, історичного значення, культурної цінності та стану твору. З огляду на це наголошено, що перед прийняттям рішення про призначення мистецтвознавчої експертизи доцільним є попереднє консультування зі спеціалістом у галузі мистецтвознавства; це дає змогу належно сформулювати експертні завдання, уточнити предмет дослідження й забезпечити якість подальшого висновку та зібраних доказів. З'ясовано, що оцінювання висновку експерта під час досудового розслідування передбачає з'ясування того, чи виконано всі завдання, покладені на експерта, через що окремі з них не виконано або що вплинуло на неможливість їх виконати і чи доцільно призначати додаткову експертизу. На етапі оцінювання також важливо звернути увагу на те, чи відображено у висновку відомості про кваліфікацію та компетенцію експерта у відповідній царині знань. Під час судового розгляду (на етапі оцінювання висновку експерта) його можуть допитати. Хоча закон прямо не визначає предмета допиту експерта на стадії досудового розслідування, відповідно до правової природи експертизи допит має стосуватися лише тих обставин, які стали відомими експертів у зв'язку з виконанням експертного дослідження, або тих, які мають значення для належного оцінювання висновку. Обґрунтовано, що під час розслідування контрабанди культурних цінностей важливо призначати мистецтвознавчу експертизу, а не звер-

татися до інших форм застосування спеціальних знань, оскільки лише проведення експертизи гарантуватиме отримання доказу, який відповідатиме ознакам допустимості, належності й достовірності, а тому може бути покладений в основу доказування.

Ключові слова: кримінальне правопорушення; злочин; спеціальні знання; експертиза; мистецтвознавча експертиза; оцінювання доказу.

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Declaration of Competing Interest

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Proving Property Damage in Economic Criminal Offenses

Vitalii Usatii *

* PhD in Law, Doctoral student at NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine, ORCID: <https://orcid.org/0009-0004-3325-4530>, e-mail: usatii.v.o@gmail.com

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The primary concerns of this paper are to define peculiarities of proving property damage in the course of pre-trial investigation into economic criminal offenses. It is demonstrated that proving property damage in economic criminal offenses is an obligatory component of criminal procedure. According to these types of criminal offenses, evidence collection falls within the investigator's competency. However, certain studies are the exclusive domain of forensic experts, specialists, auditors, etc. The damage resulting from a criminal offense should be proven in criminal proceedings. It is also vital to introduce a set of compensation (indemnification) measures both at the pre-trial stage and during the criminal trial. Under the general rule, tangible and intangible benefits shall be indemnified or compensated for in criminal proceedings. During the pre-trial investigation stage, documents are collected, witnesses, victims, and suspects are interrogated, and forensic examinations are initiated to verify the occurrence of property damage. The choice of a particular measure depends on the stage of criminal proceedings, peculiarities of the investigative situation, and realization that the planned measure's purpose can be fulfilled under these conditions. The author outlines some aspects of proving property damage in economic criminal offenses, for most of which it is of decisive importance in the context of criminal law assessment. Our subsequent research will focus on the legal, organizational, and tactical principles involved in collecting evidence of property damage during the pre-trial investigation of economic crimes.

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Keywords: *criminal offense; economic activity; proving; evidence; property damage; procedural action; forensic examination.*

Research Problem Formulation

Protection of human and citizen's rights and freedoms is a primary task of the State, towards the fulfillment of which the activities of all its institutions must be directed. Restoration of violated rights should naturally follow a dispute resolution process that has negatively impacted a person's property status. Socially dangerous consequences of committing a crime, such as property damage, are the basis for enforcing a number of criminal procedural measures to compensate a victim for this damage.

Criminal offenses in economic activity involve a variety of encroachments on social relations (which, in turn, are associated with introduction and maintenance of the circulation of funds and securities), the legal system of taxation, budgetary and currency regulation procedures, the procedure for moving goods across the customs border as well as on conducting business activities stipulated by the legislator ¹. This group of criminal offenses is quite numerous, and they share common features. One of these features is inflicting harm on a person, society, or the State. Stemming from the above, scientists differentiate between independent types of crimes and criminal offenses within the category of economic criminal offenses, such as:

- 1) committed during activities related to circulation of money, securities, and other documents;
- 2) involving a violation of the procedure for moving items across the customs border of Ukraine, as stipulated by the customs rules;
- 3) committed in the course of privatization of state and municipal property;
- 4) related to unlawful acts in taxation and compulsory state social insurance;
- 5) committed in the context of ensuring fair competition;
- 6) encroaching on public relations in stock market operations;
- 7) committed in the field of ensuring the procedure for engaging in entrepreneurial or other economic activities;
- 8) committed in the budgetary sphere;
- 9) related to securing creditors' rights ².

The mechanism of committing the majority of criminal offenses presupposes implementation of a set of actions that include transactions, financial transactions, etc., that inevitably cause property damage. Thus, for specific criminal offenders, the legislator has established causing damage as a qualifying circumstance. Specifically, Pt. 3 of Art. 206 of the Criminal Code of Ukraine (*CC of Ukraine*) envisages

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- 1 Дудоров О. О. Злочини у сфері господарської діяльності: особливості кримінальної відповідальності. *Вісник Асоціації кримінального права України*. 2014. № 1 (2). С. 169—175. URL: <http://dudorov.com.ua/images/download/stattya-zlochiny-u-sferi-gospodarskoji-diyalnosti.pdf> (date accessed: 30.04.2025).
 - 2 Винник А. О., Мармура О. З., Пасека О. Ф. Кримінальні правопорушення у сфері господарської діяльності (в схемах) : навч. посіб. / за ред. О. Ф. Пасеки. Львів, 2023. С. 6. URL: <https://dspace.lvduvs.edu.ua/bitstream/1234567890/5342/1/gospprav.pdf> (date accessed: 13.04.2025).

responsibility for obstructing legitimate economic activity, which caused heavy damage ³. Illegal seizure of property of an enterprise, institution or organisation (Art. 206-2 of the CC of Ukraine) by the subject leads to the use of these material objects for his/her own benefit or for the benefit of third parties. It lays the groundwork for the free disposal of this property ⁴.

Legalisation (laundering) of property proceeding from crime or terrorist financing (Arts. 209 and 258-5 of the Criminal Code of Ukraine) significantly harms individuals' rights and freedoms, along with the interests of the State, public, and legal entities protected by law ⁵.

Evasion of taxes, duties or other compulsory payments under Art. 212 of the CC of Ukraine results in significant budget or state trust fund losses. Criminal liability for evasion of payment of unified contribution for compulsory state social insurance and contributions for compulsory state pension insurance under Article 212-1 of the CC of Ukraine is triggered by the failure to transfer significant amounts of assets to the relevant funds ⁶.

Inflicting substantial material harm to the State or a creditor is the basis for imposing liability. Sustained financial insolvency (bankruptcy) takes place in the event of causing a business entity to go bankrupt, resulting in substantial material damage to the State or a creditor.

Pt. 4 of Art. 220-1 of the CC of Ukraine sets forth liability for violation of the pro-

cedure for maintaining a database of depositors or the procedure for reporting. This has led to an illegal increase in the Deposit Guarantee Fund's expenses related to a bank's withdrawal from the market ⁷. Numerous material consequences occur due to manipulation in organized markets. These include causing significant damage to the rights, freedoms, and interests of individuals protected by law, or to the State or public interests, or to the interests of legal entities. They also include obtaining significant profits by individuals or third parties and preventing major losses by such persons ⁸. Similar consequences are mandatory in case of Illegal use of insider information (Art. 232-1 of the CC of Ukraine) ⁹.

The same applies to the illegal use of insider information regarding wholesale energy products (Art. 232-3 of the Criminal Code of Ukraine), as this act entails the following consequences:

- 1) obtaining unjustified and substantial financial gain by a person who committed relevant actions or by other persons;
- 2) avoiding significant financial losses by the wholesale energy market participant or third parties;
- 3) inflicting significant harm to the rights, freedoms, or legitimate interests of individuals, as well as to state, public, or corporate interests protected by law ¹⁰.

Causing a considerable material harm is the basis for qualifying the actions of a person according to:

3 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: 13.04.2025).

4 Там само.

5 Там само.

6 Там само.

7 Там само.

8 Там само.

9 Там само.

10 Там само.

- 1) signs of forgery of documents submitted for registration of securities;
- 2) concealment of information regarding an issuer's activities (Art. 232-2 of the CC of Ukraine);
- 3) tasks of substantial material damage¹¹.

Substantial damage to an economic entity constitutes a component of the objective element in the following criminal offenses:

- 1) Illegal Collection for the Purpose of Use or Use of Information That Constitutes Banking or Trade Secrets (Art. 231 of the CC of Ukraine);
- 2) Disclosure of Commercial, Banking, or Professional Secrets in Capital and Organized Commodity Markets (Art. 232 of the CC of Ukraine)¹², etc.

Many crimes involving economic activity are characterized by socially dangerous consequences, such as property damage (in particular, losses, loss of profits, etc.)¹³. This makes the task of proving this fact relevant and, undoubtedly, requires collecting relevant evidence, and this, obviously, is impossible without competent support from individuals well-versed in economics, finance, accounting, etc., and criminal procedural activity of the accused's representatives.

Article Purpose

Define peculiarities of property damage proving during the pre-trial investigation of criminal offenses related to economic activity.

Research Methods

The study's methodological basis general scientific, special, and philosophical methods of scientific cognition, which collectively have provided a comprehensive, consistent, and sound coverage of issues associated with property damage proving in criminal proceedings involving economic activity.

The system-structural approach helped consider evidence as an integral part of criminal process, determine its components, and identify how they are interrelated during the pre-trial investigation and trial.

The dialectical method enabled the study of legal phenomena as they develop and interrelate. This is especially important for considering changes in approaches to proving harm in economic criminal offenses.

The systemic-functional method made it possible to assess the functional purpose of certain procedural institutions (e.g., a civil action in criminal proceedings) in the context of fulfilling the goal of compensation for harm.

Formal logic methods—analysis, synthesis, induction, deduction, analogy, modeling—were used to form reasoned judgments, formulate logically consistent conclusions, and create classification approaches to forms and methods of evidence collection.

The legal and dogmatic method was applied to analyze the legal regulations governing the procedure for determining and proving property damage, as well as defining the powers of investigators, prosecutors, and judges in this area.

The interpretive method clarified the meaning of legal provisions concerning the right to compensation for damages in

11 Кримінальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/2341-14#Text> (date accessed: 13.04.2025).

12 Там само.

13 Винник А. О., Мармура О. З., Пасека О. Ф. Зазнач. твір. 160 с. URL: <https://dspace.lvduvs.edu.ua/bitstream/1234567890/5342/1/gospprav.pdf> (date accessed: 13.04.2025).

criminal proceedings by considering case law and doctrinal interpretations.

Analysis of Essential Researches and Publications

Monographs by V. Didenko¹⁴, H. Dondyk¹⁵, N. Dondyk¹⁶, Yu. Kovalov¹⁷, I. Petrova¹⁸, I. Pyrih¹⁹, O. Semeniuk²⁰, E. Simakova-Yefremian²¹, O. Shevchenko²², O. Shramko²³, M. Shcherbakovskiy²⁴, et al., have covered various aspects of applying specific expertise in criminal proceedings, which are typical for guaranteeing the implementation of proving in economic criminal of-

fenses. The majority of the aforementioned authors aimed to develop the regulatory and legal principles of using procedural and non-procedural forms of applying specific expertise during the pretrial investigation of certain types of crimes involving economic activity. The authors have formulated the *specific expertise* concept with due regard for its sectoral distribution, outlined the legal, tactical, and organizational forms of its application during the pre-trial investigation of certain types and groups of criminal offenses, and described the functions and main areas of specialists' activities, considering their specialization.

- 14 Діденко В. Л. Використання спеціальних знань при розслідуванні кримінальних правопорушень у бюджетній сфері : дис. ... канд. юрид. наук. Дніпро, 2024. 238 с. URL: https://dduvs.edu.ua/wp-content/uploads/files/Structure/science/rada/new_d0872702/2024/1/1/d.pdf (date accessed: 20.04.2025).
- 15 Дондик Г. П. Використання спеціальних бухгалтерських знань при розслідуванні злочинів у сфері сільськогосподарського виробництва : дис. ... канд. юрид. наук. Дніпропетровськ, 2011. 256 с.
- 16 Дондик Н. Я. Використання спеціальних бухгалтерських знань при розслідуванні економічних злочинів : дис. ... канд. юрид. наук. Харків, 2006. 208 с.
- 17 Ковальов Ю. Ю. Використання спеціальних знань під час розслідування корупційних злочинів : дис. ... д-ра філос. у галузі права. Харків, 2021. 251 с. URL: <https://uacademic.info/ua/document/0821U100819> (date accessed: 20.04.2025).
- 18 Петрова І. А. Теоретико-правові та організаційно-методологічні засади регулювання судово-товарознавчих експертиз споживчих товарів : дис. ... д-ра юрид. наук. Харків, 2012. 541 с. URL: <https://uacademic.info/ua/document/0512U000231> (date accessed: 01.05.2025).
- 19 Пиріг І. В. Теоретико-прикладні проблеми експертного забезпечення досудового розслідування : монографія. Дніпропетровськ, 2015. 368 с. URL: <https://dduvs.edu.ua/wp-content/uploads/files/Structure/library/student/monogr.pdf> (date accessed: 01.05.2025).
- 20 Семенюк О. А. Використання спеціальних знань під час розслідування привласнення, розтрати майна або заволодіння ним шляхом зловживання службовим становищем : дис. ... д-ра філос. у галузі права. Київ, 2024. 253 с. URI: <https://elar.navs.edu.ua/handle/123456789/29848> (date accessed: 01.05.2025).
- 21 Сімакова-Єфреман Е. Б. Теоретико-правові та методологічні засади комплексних судово-експертних досліджень : дис. ... д-ра юрид. наук. Харків, 2017. 392 с. URL: <https://uacademic.info/ua/document/0517U000760> (date accessed: 01.05.2025).
- 22 Шевченко О. В. Використання спеціальних товарознавчих знань під час досудового розслідування : дис. ... канд. юрид. наук. Київ, 2017. 317 с.
- 23 Шрамко О. М. Використання спеціальних знань під час розслідування корупційних кримінальних правопорушень : дис. ... д-ра філос. у галузі права. Київ, 2021. 269 с. URL: <https://uacademic.info/ua/document/0821U102258> (date accessed: 01.05.2025).
- 24 Щербаківський М. Г. Теоретико-методологічні та праксеологічні засади судових експертиз у кримінальному процесі : автореф. дис. ... д-ра юрид. наук. Харків, 2016. 40 с. URI: <http://dspace.univd.edu.ua/xmlui/handle/123456789/2582> (date accessed: 01.05.2025).

Certain aspects of investigating and proving criminal offenses related to economic activity are discussed in research papers by: T. Barabash ²⁵, A. Volobuiev ²⁶, V. Husieva and V. Kikinchuk ²⁷, O. Kurman ²⁸, H. Mudretska ²⁹, R. Stepaniuk ³⁰, S. Tiulieniev ³¹, S. Trach ³², etc.

Furthermore, the issue of assessing harm inflicted on the injured party by a criminal offense is analyzed in criminal procedure studies, specifically in monographs by V. Vasyliiev ³³, I. Vorobiov ³⁴, D. Liubeznikov ³⁵, R. Koriakin ³⁶, A. Stiebielev ³⁷, I. Tataryn ³⁸, et al.

- 25 Барабаш Т. М. Предмет доказування у кримінальних справах про ухилення від сплати податків, зборів, інших обов'язкових платежів : дис. ... канд. юрид. наук. Київ, 2003. 215 с.
- 26 Волобуєв А. Ф. Наукові основи комплексної методики розслідування корисливих злочинів у сфері підприємництва : дис. ... д-ра юрид. наук. Харків, 2001. 407 с. URL: <https://uacademic.info/ua/document/0502U000216> (date accessed: 01.05.2025).
- 27 Кікінчук В. В. Методика розслідування злочинів, пов'язаних з використанням бюджетних коштів в агропромисловому комплексі : автореф. дис. ... канд. юрид. наук. Дніпропетровськ, 2014. 21 с. URL: https://dspace.nlu.edu.ua/bitstream/123456789/14147/1/Kikinchuk_2014.pdf (date accessed: 01.05.2025) ; Кікінчук В. В., Гусева В. О. Особливості розслідування кримінальних правопорушень, пов'язаних з протиправним поглинанням та захопленням підприємств, сільськогосподарських земель, порушенням прав їх законних власників (рейдерство) : наук.-метод. рек. Харків, 2020. 58 с. URL: <http://dspace.univd.edu.ua/xmlui/handle/123456789/9813> (date accessed: 01.05.2025).
- 28 Курман О. В. Методика розслідування шахрайства з фінансовими ресурсами : дис. ... канд. юрид. наук. Харків, 2002. 218 с. URL: <https://uacademic.info/ua/document/0402U002349> (date accessed: 01.05.2025).
- 29 Мудрецька Г. В. Методика розслідування викрадень бюджетних коштів : автореф. дис. ... канд. юрид. наук. Ірпінь, 2011. 17 с.
- 30 Степанюк Р. Л. Теоретичні засади методики розслідування злочинів, вчинених у бюджетній сфері України : дис. ... д-ра юрид. наук. Харків, 2012. 475 с.
- 31 Тюленев С. А. Можливості почеркознавчої експертизи у розслідуванні рейдерства. *Вісник Одеського науково-дослідного інституту судових експертиз Міністерства юстиції України*. 2023. Вип. 14. С. 29—41. DOI: [10.32782/2522-9656/2024-14-3](https://doi.org/10.32782/2522-9656/2024-14-3) (date accessed: 05.05.2025) ; Його ж. Призначення судових експертиз під час розслідування кримінальних правопорушень, пов'язаних із рейдерством. *Право і безпека*. 2024. № 1 (92). С. 112—122. DOI: [10.32631/pb.2024.1.10](https://doi.org/10.32631/pb.2024.1.10) (date accessed: 05.05.2025).
- 32 Трач С. С. Криміналістична методика розслідування кримінальних правопорушень у сфері господарської діяльності в Україні : монографія. Одеса, 2023. 452 с.
- 33 Васильєв В. В. Правове регулювання відшкодування шкоди, завданої злочином : автореф. дис. ... канд. юрид. наук. Харків, 2016. 20 с. URL: <https://dspace.nlu.edu.ua/handle/123456789/9997> (date accessed: 01.05.2025).
- 34 Воробйова І. А. Забезпечення та вирішення цивільного позову в кримінальному провадженні : автореф. дис. ... канд. юрид. наук. Запоріжжя, 2016. 20 с.
- 35 Любезніков Д. О. Досудове відшкодування заподіяної шкоди кримінальним правопорушенням : дис. ... д-ра філос. у галузі права. Ірпінь, 2024. 243 с. URL: <https://surl.li/dpqxab> (date accessed: 01.05.2025).
- 36 Корякін Р. В. Реституція у сучасному кримінальному процесі України : автореф. дис. ... канд. юрид. наук. Київ, 2006. 20 с.
- 37 Стебелев А. М. Правове регулювання відшкодування (компенсації) шкоди у кримінальному процесі України : дис. ... канд. юрид. наук. Харків, 2016. 204 с. URL: <https://ekhnui.karazin.ua/handle/123456789/12500> (date accessed: 01.05.2025).
- 38 Татарин І. І. Забезпечення відшкодування шкоди, заподіяної кримінальним правопорушенням, на досудовому розслідуванні : дис. ... канд. юрид. наук. Львів, 2015.

Despite the notable work of scholars, we must admit that property damage proving in the context of pre-trial investigation of crimes related to economic activity has not yet been covered in the scientific field. Therefore, research on this issue and in this specific area should be further enhanced.

Main Content Presentation

As set forth in the provisions of the Criminal Procedure Code of Ukraine, the law guarantees the right to compensation for damages to the victim and the civil plaintiff as one of the legal safeguards it stipulates. The civil plaintiff enjoys the same rights and responsibilities as the victim, but only in matters concerning the initiation and review of the civil action: he/she is within his/her rights to support his/her request for compensation and to refuse it until the court retires to the deliberation room to render a decision. Therefore, in criminal proceedings, the civil plaintiff—similar to the victim—has the right to demand compensation for harm inflicted as a result of a criminal offense³⁹. The development of legal approaches to the practical resolution of these issues in the application of law took place over a long period of time. This is confirmed by the provisions of the Resolutions of the Plenum of the Supreme

Court of Ukraine from 1989 to 1995: *The Practice of Ukrainian Courts in Applying Legislation on Compensation for Material Damage Caused by a Crime and Confiscation of Unjustly Acquired Property*⁴⁰; *On Practice of Considering Civil Cases Concerning Actions on Compensation for Damage*⁴¹; *On Court Practice in Cases of Compensation for Moral (Non-Pecuniary) Damage*⁴², etc. These documents play a pivotal role in the formation of a single judicial practice and a legal approach to the consideration of issues involving compensation for material and immaterial damage resulting from a crime, but most of these provisions are outdated and do not clearly define the procedures for proving property damage from economic criminal offenses.

Generally speaking, tangible and intangible benefits shall be indemnified or compensated for in criminal proceedings. According to legal literature, compensation should encompass the following components: damages, physical and mental suffering (if a criminal offense was committed against an individual); lost opportunities (lost profits). There are action-based and non-action-based forms of compensation for damage. When it comes to compensation mechanisms, it is important to note that each one, whether it is voluntary compensation by a person who caused damage, compensation by

220 с. URL: <https://uacademic.info/ua/document/0416U001222> (date accessed: 01.05.2025).

39 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: 01.05.2025).

40 Про практику застосування судами України законодавства про відшкодування матеріальної шкоди, заподіяної злочиним, і стягнення безпідставно нажитого майна : постанова Пленуму ВСУ від 31.03.1989 р. № 3 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/v0003700-89#Text> (date accessed: 01.05.2025).

41 Про практику розгляду судами цивільних справ за позовами про відшкодування шкоди : постанова Пленуму ВСУ від 27.03.1992 р. № 6 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/v0006700-92#Text> (date accessed: 01.05.2025).

42 Про судову практику в справах про відшкодування моральної (немайнової) шкоди : постанова Пленуму ВСУ від 31.03.1995 р. № 4 (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/v0004700-95#Text> (date accessed: 01.05.2025).

third parties on his/her behalf, applicability of restitution, or introduction of the civil action institution, should aim to fully and equitably restore all types of damage resulting from a crime.

In criminal proceedings, the damage caused by a criminal offense must be proven. Within the framework of criminal proceedings, a set of required measures for indemnification (compensation) must be implemented both at the pre-trial investigation stage and during the criminal trial ⁴³.

Proving the fact that property damage has been inflicted on an individual or legal entity as a result of an economic criminal offense is a mandatory circumstance of investigation, as this damage is crucial for a person to acquire the status of a victim in criminal proceedings. This fact is confirmed by various pieces of evidence: legislation only provides a mechanism for clarifying some of these facts. Particularly, assessing the volume of material damage resulting from a criminal offense is an obligatory circumstance for the appointment of a forensic examination only if a victim cannot assess it and has not provided a document confirming the amount of such damage ⁴⁴.

At the stage of receiving an application on the commission of one of economic criminal offenses or a certain group of crimes and criminal offenses (before and during the entry of information into the Unified Register of Pre-trial Investigations ⁴⁵), the inquiring officer, detective, investigator, or head of the pre-trial investigation authority are entitled to perform the following actions (in order to determine the amount and nature of property damage resulting from a criminal offense):

- 1) to direct requests to competent authorities, as well as officials of enterprises, institutions and organizations in order to obtain information necessary for determining the type, volume, and nature of the damage inflicted;
- 2) to receive explanations disclosing circumstances of an event (in which information about the size and nature of the loss should be detailed to the greatest extent possible), to receive and attach to the request concerning the commission of a criminal offense documents and other sources of information confirming circumstances outlined in the application.

Interrogation (takes place after the opening of criminal proceedings) of a victim or a victim's representative, if it is a legal entity, is aimed at revealing information about:

- damage inflicted;
- the owner (holder) of the assets in respect of whom the encroachment was committed;
- all owners (co-owners) of such assets;
- name, quantity, individual, and total cost of stolen goods;
- characteristic features of assets that will allow for their further identification;
- property ownership form: whether it belongs directly to the victim, another individual, a legal entity, a state or communal institution, a public association, a joint-stock company, a bank, etc. This approach provides

43 Любезніков Д. О. Зазнач. твір. С. 38. URL: <https://surl.li/dpqxab> (date accessed: 01.05.2025).

44 Кримінальний процесуальний кодекс URL: <https://zakon.rada.gov.ua/laws/show/4651-17#Text> (date accessed: 01.05.2025).

45 Єдиний реєстр досудових розслідувань : вебсайт. URL: <https://erdr.gp.gov.ua/erdr/erdr.web.system.LoginPage.cls> (date accessed: 01.05.2025).

qualitative documentation of material damage at the early stage of investigation and lays the groundwork for subsequent civil action or compensation for the damage caused.

At the initial stage of investigating an economic criminal offense, representatives of the pre-trial investigation authority possess the right to add the results of inspections conducted by authorized persons to criminal case files. These may include supplements, financial and accounting documents indicating the specific amounts of property damage caused as a result of criminal offense, audit reports, expert and specialist opinions, documents showing the amount of damage, etc.

The prosecution may obtain temporary access to certain information that constitutes a legally protected secret on the basis of a relevant ruling. Furthermore, when all the necessary information is lacking, additional documents and items containing information about specific volumes of property damage can be requested by the investigator from officials.

The prosecution party's representative possesses the right to appoint a forensic examination, to participate in its conduct, and to obtain the expert's opinion. Accordingly, in proceedings on economic criminal offenses, a forensic economic examination is appointed to accomplish the subsequent tasks:

- justifying shortages or large amounts of excess cash and inventory items at enterprises, institutions, and organizations, as well as identifying the duration of these events using primary documents;
- analyzing transactions related to the receipt, storage, production, sale of

inventory, cash resources, fixed assets, and provision of services in terms of complying with documentation requirements;

- verifying the legitimacy and accuracy of disclosing information about business transactions involving fixed assets, tangible assets, cash, securities, and other resources in the course of accounting;
- assessing the correctness of accounting for accruals and payments, including salaries and other types of payments;
- evaluating the documentary justification of the corporate income tax base declared by the taxpayer and verifying the accuracy of the tax obligation amount determined according to tax control data for a particular reporting period;
- verifying the accuracy of calculations for tax obligations and input value-added tax (VAT) credit, determining VAT payable and VAT claimed for budget reimbursement;
- documentary assessment of specific elements of tax obligations and fees determined by the taxpayer in submitted declarations, reports, or calculations.

Let us pinpoint that a comprehensive audit of financial and economic activities conducted at enterprises, organizations, and institutions by forensic economists (to identify breaches of legislation, including tax legislation, and those responsible for such violations) does not fall within the competence of forensic economic examination. Such actions are within the powers of the state financial and tax control authorities ⁴⁶.

46 Інструкція про призначення та проведення судових експертиз та експертних досліджень : затв. наказ. 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: 10.04.2025).

The objects of forensic economic (forensic accounting) examination are categorized as follows:

- 1) primary accounting documents confirming business transactions;
- 2) accounting registers in which economic processes are recorded (e.g., books, journal vouchers, turnovers, accounting records, etc.);
- 3) electronically stored information (in particular, accounting data that is processed or stored using computer equipment);
- 4) financial statements, including cashier reports, advance reports, commodity reports of materially liable persons, etc.;
- 5) enterprise's financial statements submitted in the prescribed formats;
- 6) inventory records (specifically, property inventories, reconciliation statements, minutes of meetings of inventory commissions, explanations of materially liable persons);
- 7) audit certificates issued by controlling authorities;
- 8) other official documents (including: orders for hiring or dismissal, employment agreements and contracts, liability agreements, bank correspondence, certificates, etc.);
- 9) protocols of investigative (search) actions: interrogations of the accused and witnesses, protocols of confrontations, inspection, and seizure of documents;
- 10) unofficial documents that (although unofficial) are relevant to the expert research;
- 11) conclusions of specialists in different forensic disciplines (commodity, construction, technical, etc.);

- 12) other documents that govern the economic entity's activities and may have evidentiary or auxiliary value in the course of forensic examination⁴⁷.

It is essential to highlight that the mechanism of compensation for property damage involves attachment of property, filing a civil action, and restitution. Furthermore, with voluntary consent, the suspect may transfer equivalent property to the victim and provide other services that are of value for the victim.

Conclusions

Property damage proving in economic criminal offenses is a mandatory component of criminal procedure. The investigator is responsible for evidence collection in this type of offense, while certain studies are the exclusive domain of forensic experts, specialists, auditors, etc. The damage resulting from a criminal offense must be proven in criminal proceedings. It is also vital to introduce a set of compensation (indemnification) measures both at the pre-trial stage and during the criminal trial.

Generally speaking, tangible and intangible benefits shall be indemnified or compensated for in criminal proceedings. During the pre-trial investigation stage, documents are collected, witnesses, victims, and suspects are interrogated, and forensic examinations are initiated to verify the occurrence of property damage. The choice of a particular measure depends on the stage of criminal proceedings, peculiarities of the investigative situation, and realization that the planned measure's purpose can be fulfilled under these conditions.

47 Волкова І. А. Судово-бухгалтерська експертиза : навч. посіб. Київ, 2009. С. 18.

The author outlines some aspects of proving property damage in economic criminal offenses, for most of which it is of decisive importance in the context of criminal law assessment. Our subsequent research will focus on the legal, organizational, and tactical principles involved in collecting evidence of property damage during the pre-trial investigation of crimes in economic activity.

**Доказування майнової шкоди
в господарських кримінальних
правопорушеннях**

Віталій Усатий

Мета статті — з'ясувати особливості доказування майнової шкоди під час досудового розслідування кримінальних правопорушень у сфері господарської діяльності. З'ясовано, що завдання із доказування майнової шкоди у господарських кримінальних правопорушеннях є обов'язковою складовою кримінальної процесуальної діяльності. За цими видами кримінальних правопорушень збирання доказів є компетенцією слідчого, а окремі дослідження — судових експертів, спеціалістів, ревізорів та ін. Завдану кримінальним правопорушенням шкоду потрібно довести саме у кримінальному провадженні. Важливо також реалізувати комплекс заходів із відшкодування (компенсації) як на стадії досудового провадження, так і під час судового розгляду кримінального провадження (справи). За загальним правилом, у кримінальному провадженні підлягають відшкодуванню або компенсації матеріальні й нематеріальні блага. На стадії досудового розслідування збирають документи, допитують свідків, потерпілих і підозрюваних, ініціюють проведення судових експертиз із метою засвідчити факт завдання майнової шкоди. Обрання кон-

кретного заходу зумовлюють стадія кримінального провадження, особливості слідчої ситуації, а також усвідомлення того, що мети запланованого заходу можна досягти за цих умов. Окремі окремі аспекти доказування майнової шкоди у господарських кримінальних правопорушеннях, для більшості з яких вона має вирішальне значення у кримінально-правовому контексті. Правові, організаційні й тактичні засади реалізації способів збирання доказів на підтвердження майнової шкоди під час досудового розслідування кримінальних правопорушень у сфері господарської діяльності стануть предметом наших подальших досліджень.

Ключові слова: кримінальне правопорушення; господарська діяльність; доказування; доказ; майнова шкода; процесуальна дія; судова експертиза.

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Declaration of Competing Interest

The author declares no conflict of interest.

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Corruption in environment field: problems and ways to their solving

Vadym Babakin ^{* a}, Jozef Zatko ^{** b}

* Doctor of Law, Docent, National Scientific Center “Hon. Prof. M. S. Bokarius Forensic Science Institute” of the Ministry of Justice of Ukraine, Kharkiv, Ukraine, ORCID: <https://orcid.org/0000-0002-7157-0241>, e-mail: vadon7373@gmail.com

** Full Dr. in Law, Full Dr. in Philos., Honor. Dr., Honor. Prof., LL.M/MBA, European institute of further education, Podhájska, Slovak Republic, ORCID: <https://orcid.org/0000-0003-2422-0131>, e-mail: eeda@eeda.sk

^a Writing – original draft, project administration, supervision.

^b Validation, formal analysis.

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This research paper purpose is to investigate corruption state in environmental field, analyze the main problems that arise as a result of such corruption, and propose ways to solve them. The goal was achieved through comprehensive application of general scientific (analysis, synthesis, generalization), dialectical, comparative legal, systemic and structural and prognostic methods. The main mechanisms of corruption on the environment state are considered. Particular attention is paid to finding effective ways to overcome corruption, improving legislation, strengthening control by officials and increasing transparency, openness and publicity in the decision-making procedure in this area. The problems that arise due to corruption in environmental field are analyzed, in particular, illegal use of natural resources, environmental pollution, destruction of ecosystems, etc. It is stated that corruption in the environmental field is one of the most serious problems of modern society. It is proved that close cooperation of the state with international organizations studying this problem should become the basis for improving national legislation and practice of its implementation. Ways of solving problems of minimizing the impact of corruption in environmental field are proposed (strengthening control over

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compliance with environmental legislation, increasing transparency of decision-making in the environmental field and ensuring inevitability of punishment for corruption offenses, etc.). It is proposed to raise environmental awareness of citizens and involve them in active participation in monitoring compliance by authorities with environmental legislation and other issues that is an important aspect of combating corruption in environmental field. Prospects for further research within the framework of raised issues are outlined.

Keywords: corruption; environment; pollution; environmental responsibility; public control; criminal proceedings.

Research Problem Formulation

Corruption is one of the most acute problems of modern society which negatively affects all fields of State activity, including environment state. Illegal use of natural resources, failure to comply with environmental norms and standards, as well as evasion of responsibility for destruction or damage to environment are direct consequences of corrupt actions. In addition, corruption undermines effectiveness of State institutions responsible for environmental protection and reduces public trust in them. Given the scale and complexity of the problem under research, finding ways to minimize the impact of corruption in environmental field is an extremely urgent task. Corruption often leads to inefficient allocation of resources, decrease in the country investment attractiveness and a slowdown in economic development. As a result, such sectors of the economy as healthcare, education and social services suffer.

At the same time, it is necessary to develop a decision on development of a comprehensive strategy to combat corruption in environmental field, that would include strengthening control over compliance with the environmental legislation of Ukraine increasing principles of openness, transparency and accountability in the work of relevant bodies. It is

necessary to actively involve public in the decision-making procedure. Only if the efforts of State and society are consolidated, it is possible to achieve positive changes in combating corruption and ensuring sustainable environment development.

Article Purpose

Investigate corruption state in environmental sector; analyze the main problems that arise as a result of corruption and propose ways to their solving.

Research Methods

General scientific methods (analysis, synthesis, generalization) are used to analyze research papers on issues under consideration; comparative legal while comparing legislative regulation of corruption problem of in environment field in Ukraine and other states; system-structural, consider impact problem of corruption in the field of the environment in a broad and narrow sense, to substantiate expediency of using terminological construction: *corruption in the field of environmental protection*; predictive; in order to determine the prospects for further scientific research on the issues under research and to develop recommendations for improving legislation to combat corruption in the field of environmental protection.

Analysis of Essential Researches and Publications

Some problems of corruption in environmental field were studied by Ukrainian

scientists H. Baliuk ¹, Yu. Vlasenko ², I. Hyrenko ta Yu. Makarenko ³, I. Horodetska ⁴, N. Zolotarova ⁵, V. Kostytskyi ⁶, Yu. Leheza ⁷, I. Lebid and O. Piddubnyi ⁸, K. Riabets ⁹, O. Surilova ¹⁰, A. Shulha ¹¹

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et al. This issue does not leave the pages of mass media and feeds of websites and social media messages¹². Given the scale and complexity of the problem, finding ways to minimize the impact of corruption in the environment is extremely important, especially under martial law in Ukraine. Thereby our research is an attempt to take a comprehensive approach to studying the problem of corruption in the field of environment and developing practical recommendations for improving legislation in this field.

Main Content Presentation

Environmental corruption is a serious problem, it has a negative impact on environmental sustainability and well-being of society. Illegal actions (acceptance of an offer, promise or receipt of an improper advantage by an official, abuse of office, non-transparency in decision-making, etc.) undermine the efforts of all structures

to protect the environment and lead to irrational use of natural resources. One of the main causes of corruption in the environmental field is the imperfection of the legislative framework, insufficient control over compliance with environmental standards, the lack of clear sanctions for their violation that creates favorable conditions for corruption.

T. Nikolaichuk, citing foreign authors¹³, claims that “officials responsible for compliance with legislation in the field of environmental protection must have an appropriate level of awareness of the laws of nature”¹⁴. We consider such a level of awareness to be a key factor in compliance with legislation in the field of environment and natural resource management.

Yu. Leheza took an active part in the discussion on this topic: in his opinion, the field of natural resources use in Ukraine remains one of the most corrupt field of public administration. In modern conditions, many corrupt schemes for the

[zbirnik_vid17kvinty2014.pdf](#) (date accessed: 18.05.2025); Його ж. Корупція у земельній сфері України: соціальна сутність та шляхи подолання. *Кримінально-правові та кримінологічні засади протидії корупції*: зб. тез доп. V Міжнар. наук.-практ. конф. (Харків, 31.03.2017). Харків, 2017. С. 219–220. URI: <http://dspace.univd.edu.ua/xmlui/handle/123456789/14168> (date accessed: 18.05.2025).

- 12 Див., напр.: Захист українського довкілля від корупції: інструменти / Екорайон : вебсайт. 14.03.2023. URL: <https://eco.rayon.in.ua/news/583111-zakhist-ukrainskogo-dovkillya-vid-koruptsii-instrumenti> (date accessed: 18.05.2025); ТОП-5 корупційних скандалів 2023 року у сфері охорони довкілля / Асоціація деревообробних підприємств України : вебсайт. 08.01.2024. URL: <https://surl.li/mtztyl> (date accessed: 18.05.2025); Національне агентство з питань запобігання корупції — НАЗК презентувало дослідження “Корупційні ризики у лісовому господарстві” / Міністерство захисту довкілля та природних ресурсів України : вебсайт. 17.02.2025. URL: <https://surl.li/mmsfwx> (date accessed: 18.05.2025).
- 13 Wen B., Tang Sh.-Ya. and Wing-Hung Lo C. Changing Levels of Job Satisfaction among Local Environmental Enforcement Officials in China. *The China Quarterly*. 2020. Vol. 241. Pp. 112–143. DOI: [10.1017/S0305741019000791](https://doi.org/10.1017/S0305741019000791) (date accessed: 18.05.2025); Li X., Yang X., Wei Q. & Zhang B. Authoritarian environmentalism and environmental policy implementation in China. *Resources, Conservation and Recycling*. 2019. Vol. 145. Pp. 86–93. DOI: [10.1016/j.resconrec.2019.02.011](https://doi.org/10.1016/j.resconrec.2019.02.011) (date accessed: 18.05.2025).
- 14 Ніколайчук Т. Персоналізація трудових відносин як інструмент боротьби з корупцією у сфері природно-заповідного фонду України. *Актуальні проблеми запобігання та протидії корупції*: тези I Всеукр. наук.-практ. конф. (Хмельницький, 28.10.2021). Хмельницький, 2021. С. 235–237. URL: <https://surl.li/coubnx> (date accessed: 18.05.2025).

circulation of large-scale volumes of forest resources, minerals, fish and marine animals, land plots, other natural resources and even waste ¹⁵ have been operating in Ukraine for a long time, due to which corruption in the field of natural resources use has serious consequences for the environmental security of Ukraine. Corruption schemes in the environmental sector are mainly associated with non-compliance by enterprises with environmental standards and norms; officials prone to bribery and fraud have learned to circumvent these norms, which causes air, water and soil pollution, illegal deforestation and this in turn leads to the destruction of ecosystems, loss of biodiversity and intensification of climate change; inefficient distribution and use of natural resources (minerals, land and water); weakening of State control over compliance with environmental standards that allows violators to avoid responsibility; reducing investment in environmental projects and technologies; slowing down progress in the environmental realm and becoming an obstacle to its sustainable development, etc. All this is a serious threat to the ecosystem of our state, health and quality of life of the population. Corruption in the environmental field has negative consequences for society and future generations: as we have already noted, it leads to irrational use of natural resources, illegal deforestation, poaching and other actions that cause ecosystem degradation and loss of biodiversity.

Environmental corruption is often associated with a conflict of interest between an economic and an environmental objective. Political influence and lobbying

by business entities can lead to decisions that contradict the principles of sustainable development. In addition, corruption in the environmental field causes significant economic damage to the state, since the funds that their officials should have directed to environmental protection are inefficiently used or stolen. It is worth mentioning existence of corruption disputes in Ukraine, which undermine citizens' trust in the authorities and reduce the investment attractiveness of our country for potential international partners.

Corruption is a cancerous tumor of social development, which slows down and destroys it, which must be recognized at all levels of management: macro-, meso- and at the citizen level. The foundations of the driving forces of social development are objective contradictions, which can be positive, restorative and negative, destructive. The positive nature of the driving forces operates according to the scheme: contradictions – risks – risk management mechanisms – new (smaller) contradictions. The phenomenon of corruption is a consequence of the functioning of negative driving forces, which operate according to a different scheme: contradictions – risks – problems – crises – antagonisms – social revolutions – new (even more complex) contradictions ¹⁶ requiring a comprehensive approach to development and implementation of effective risk management mechanisms, increasing the level of transparency and accountability in decision-making that are necessary measures to combat corruption.

According to Professor V. Martynenko, Ukrainian society has not yet formed an objective and adequate, holistic reflection

15 Легеза Ю. О. Зазнач. твір.

16 Михненко А. М., Руснак О. В, Мудров А. М., Кравченко С. О. та ін. Запобігання та протидія корупції : навч. посіб. / за ред. проф. А. М. Михненка. 4-те вид., перероб. і допов. Київ, 2013. 666 с. URI: <http://er.nau.edu.ua/handle/NAU/31937> (date accessed: 18.05.2025).

of the nature of corruption (legislative and normative, organizational, social, financial, managerial, spiritual and moral) and the driving forces of integrity in state authorities. Methodology for studying corruption nature requires specifying not only what hinders, but above all what ensures normal functioning of a society suitable for living not for the majority, but for all citizens. All this requires a holistic, cause-and-effect macroeconomic analysis of social development, in which the study of driving forces should become a system-forming tool for forming mechanisms of effective power in civil society, improving the system of control and supervision over the activities of state authorities in this direction. Corruption negatively affects the development of civil society¹⁷: it leads to distrust of population in government institutions, undermines the very foundations of democratic values, limits citizens' participation in decision-making, and inhibits initiatives from below, which ultimately leads to stagnation of social progress and the growth of social injustice. This creates a vicious circle: low trust in government leads to the further spread of corrupt practices and makes it more difficult to combat them.

Methodology for studying the causes of corruption in the field of environment requires an integrated and interdisciplinary approach that will take into account various aspects of the problem under research, namely:

- 1) determination of the main forms and manifestations of corruption in the environmental field (obtaining illegal benefits, abuse of office, etc.);
- 2) systematic analysis of regulatory framework and institutional mechanisms designed to prevent and combat corruption in the environmen-

tal field, and assessment of their effectiveness;

- 3) research on socio-economic factors that contribute to the spread of corruption in the environmental field (in particular, low incomes of the population, weak civil society, lack of openness and transparency in decision-making, etc.);
- 4) studying experience of other countries in combating corruption in the environmental field and opportunities to adapt it to Ukrainian legislation;
- 5) development of practical recommendations for improving anti-corruption policy in the environmental field (in particular, strengthening responsibility for corruption offenses, increasing transparency and accountability of authorities, involving public in the decision-making process, etc.);
- 6) introduction of educational and awareness-raising programs aimed at forming intolerance to corruption in society and awareness of its negative consequences, in particular, for environment.

Consequently, methodology for studying corruption nature in the environmental sector should be based on comprehensive analysis of the problem and development of comprehensive measures to counter this phenomenon at various levels: legal, institutional, socio-economic and cultural. Our research made possible to find out that corruption affects the macroeconomic indicators of Ukraine and the overall level of well-being of society, and statistical analysis helps to identify the main problems contributing to the spread of corruption and find the most ef-

17 Михненко А. М., Руснак О. В, Мудров А. М., Кравченко С. О. та ін. Зазнач. твір. URI: <http://er.nau.edu.ua/handle/NAU/31937> (date accessed: 18.05.2025).

factive methods of preventing or neutralizing them.

In order to effectively prevent and combat corruption in the environmental sector, it is necessary to constantly improve the legal framework and introduce tough sanctions for violations. This issue was raised during the offsite meeting of the Committee on Environmental Policy and Nature Management, where on 25.04.2025 they discussed draft law № 3091 on state environmental control¹⁸: Deputy Head of the National Agency for the Prevention of Corruption Serhii Hupiak expressed the opinion that violations or abuses by inspectors often occur in the environmental sector due to the wide discretionary powers of control bodies that creates high corruption risks and affects the level of transparency, accountability and standardization of procedures in the activities of control bodies. He also emphasized that the main task is to identify corruption risks in advance and eliminate gaps in legislation, as it is always easier to prevent corruption than to investigate criminal offenses in corruption cases¹⁹. The meeting concluded with the need to finalize the aforementioned draft law in order to ensure implementation of European standards and fulfillment of the obligations of the Association Agreement between Ukraine and the European Union²⁰.

In order to solve the problem of corruption in Ukraine (in particular, in environment field), it is necessary to initiate and implement reforms, as well as to raise awareness of citizens and their participation in the fight against this phenomenon. In recent years, several steps have already been taken to combat this problem: in particular, a Specialized Environmental Prosecutor's Office has been created and public control has been strengthened to some extent.

However, much more needs to be done to eliminate corruption in the environmental sector and preserve the environment for future generations, as the fight against corruption is a long-term and complex procedure.

In order to overcome corruption, it is extremely important to make declarations of persons authorized to perform state or local government functions available to the general public, to introduce public control and to actually punish corrupt officials. Unfortunately, the latter happens extremely rarely. For example, in the first half of 2023, Specialized Environmental Prosecutor's Office registered more than 4,000 criminal proceedings, of which only 30% were sent to court with indictments. There are likely to be even fewer actual convictions²¹. In our opinion, formation of political will and commitments in the government will help to increase the level

18 Проект Закону про державний екологічний контроль від 19.02.2020 р. № 3091. URL: http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=68186 (date accessed: 18.05.2025).

19 НАЗК запропонувало шляхи усунення корупційних ризиків у законопроекті про державний екологічний контроль під час наради Комітету ВРУ / НАЗК : вебсайт. 25.04.2025. URL: <https://surli.cc/ctddrk> (date accessed: 18.05.2025).

20 Угода про асоціацію між Україною, з однієї сторони, та Європейським Союзом, Європейським співтовариством з атомної енергії і їхніми державами-членами, з іншої сторони : ратифік. із заяв. Законом України від 16.09.2014 р. № 1678-VII (зі змін. та допов.). URL: https://zakon.rada.gov.ua/laws/show/984_011#Text (date accessed: 18.05.2025).

21 Белоусова К. Шанс на зміни для довкілля: чи зможе Україна викоринити корупцію під час війни / Екополітика : вебсайт. 10.10.2023. URL: <https://surli.cc/gyduyf> (date accessed: 17.05.2025).

of efficiency of measures and achieve positive results in combating corruption in the field of environment.

One of the ways to overcome corruption in the field of environment is fruitful cooperation of our State with international organizations that successfully solve the problems of corruption in the environment field. Application of international standards and experience in this area should become the basis for improving national legislation of Ukraine and ensuring effective counteraction to corruption in the field of environment and fulfillment of Ukraine obligations to international community.

It should be noted that one of the elements of preventing corruption in the environmental field is the creation of a transparent and accountable system of state environmental control that would ensure environmental protection. For achieving this goal, it is necessary to conduct constant consultations with the public, business and other stakeholders, as well as to carry out international cooperation with foreign partners to exchange experience in this area. In order to overcome corruption in environmental field, it is necessary to carry out comprehensive measures aimed at increasing transparency, strengthening control and ensuring inevitability of punishment for corruption offenses. Only through joint efforts of the state and society can progress be achieved in preventing and combating corruption and ensuring sustainable development. In addition, it is important to introduce modern information and communication technologies to monitor environment state. Use of satellite images and other technical means will make possible

to timely detect such categories of offenses and develop and take appropriate measures. Use of electronic platforms for filing complaints and appeals from citizens will also contribute to the promptness of response to environmental offenses. In our opinion, it is necessary to strengthen the education of the population about importance of environmental protection and the negative consequences of corruption in this area. Raising the level of environmental awareness of the population through educational programs and information campaigns is a leading factor in overcoming corruption in environmental fields. Citizens' awareness of the importance of environmental protection and the negative consequences of corruption will contribute to the formation of intolerance to corrupt actions. U. Bek, for example, notes the "rather "late" (second half of the twentieth century) recognition of environmental rights and obligations in the system of human and civil rights and their official consolidation, first in international, and later in national legislation" ²². It should be noted that access to information and the possibility of public monitoring and forecasting reduce the risks of corrupt actions. As a result, increased awareness of citizens will encourage them to take an active part in environmental protection, prevent and combat corruption in this area. It is worth mentioning the study of Gorshenin Institute together with the Friedrich Ebert Foundation (conducted in November-December 2020), according to the results of which Ukrainians called "the biggest environmental problem for the world as a whole and Ukraine in particular... water pollution and the shortage of clean water", and "lack of waste incinera-

22 Бек У. Становлення екологічних обов'язків людини і громадянина: міжнародні стандарти. Вісник Національного університету "Львівська політехніка". Серія: "Юридичні науки". 2022. № 1 (33). С. 145—150. DOI: [10.23939/law2022.33.145](https://doi.org/10.23939/law2022.33.145) (date accessed: 18.05.2025).

*tion plants and natural landfills as one of the main causes of environmental problems in Ukraine”*²³.

It should be noted that level of functioning of the State control system in the field of environmental protection is unsatisfactory, as evidenced by analysis of sources devoted to effectiveness diagnosis of national environmental policy implementation²⁴, as well as regulations on the reform of the supervision (control) system in this area.

Thus, the Order of the Cabinet of Ministers of Ukraine dated on May 31, № 616-p approved the Concept of reforming the system of state supervision (control) in the field of environmental protection that emphasizes the following aspects:

- discrediting and actual destruction of the system of State supervision (control) in this area by lobbyists of large industrial and agricultural businesses;
- low qualification level of State environmental inspectors (due to low wages, outdated material, technical and laboratory facilities, insufficient funding);
- high level of corruption;
- non-transparency of decision-making system regarding violators of environmental legislation;
- low efficiency of the State Environmental Inspectorate of Ukraine;
- duplication of supervisory (control) functions by central executive

bodies and the lack of a unified approach to performance of functions;

- lack of a transparent mechanism for monitoring environment state and access to a large amount of environmental data that should be publicly available to the general public;
- occasional participation of public inspectors in the activities of the State Environmental Inspectorate of Ukraine on supervision (control)²⁵.

In an integrated approach to solving problem of corruption in the field of the environment, it is important to take into account economic incentives. Encouraging enterprises to introduce environmental innovations by providing tax incentives can motivate businesses to comply with the rules and regulations of environmental legislation and not use corruption schemes to solve problems.

Overcoming corruption in the field of environmental protection requires integrated approach and joint efforts of the State, business, society, etc. Only by consolidating efforts and planning and implementing anti-corruption measures can we achieve positive results in the area under research and preserve natural resources for future generations.

Conclusions

Impact of corruption on the environment is a serious obstacle to sustainable development and the preservation of environ-

23 Балюк С., Клаунінг Н., Четвертухіна Л., Коваль-Гончар М. Екологічні тренди в Україні: погляд громадян. Звіт за результатами соціологічного дослідження. Київ, 2021. 58 с. URL: <https://library.fes.de/pdf-files/bueros/ukraine/17805.pdf> (date accessed: 18.05.2025).

24 Концепція реформування системи державного нагляду (контролю) у сфері охорони навколишнього природного середовища : схвал. розпорядж. КМУ від 31.05.2017 р. № 616-р. URL: <https://zakon.rada.gov.ua/laws/show/616-2017-%D1%80#Text> (date accessed: 13.05.2025).

25 Концепція реформування ... URL: <https://zakon.rada.gov.ua/laws/show/616-2017-%D1%80#Text> (date accessed: 18.05.2025) ; Городецька І. Зазнач. твір. DOI: 10.32849/2663-5313/2020.8.25 (date accessed: 18.05.2025).

mental balance. In order to effectively combat corruption offenses in environment field, in our opinion, it is necessary to take the following measures:

- 1) strengthen responsibility for corruption related to the illegal use of natural resources, environmental pollution and violation of environmental standards, etc.;
- 2) introduce more stringent requirements for transparency and accountability in the decision-making process related to the issuance of licenses for the use of natural resources, implementation of environmentally hazardous activities, etc.;
- 3) introduce effective mechanisms for protection of whistleblowers of corruption offenses in the field of environment, in particular, guarantee them anonymity, protection from harassment and the opportunity to receive remuneration for providing significant operational information on exposure of corruption offenses;
- 4) strengthen interagency cooperation and coordination between anti-corruption bodies and those that monitor compliance with environmental legislation that will allow law enforcement agencies to more effectively detect and investigate corruption offenses in this area;
- 5) intensify international cooperation in the field of combating corruption in the field of environmental protection, in particular, through the constant exchange of experience, joint actions in investigation of environmental crimes, as well as the joint development and implementation of measures aimed at combating environmental crime in general.

In our opinion, the early implementation of above-mentioned measures will significantly minimize corruption in the environmental field and ensure more rational use of Ukraine natural resources.

Корупція у сфері довкілля: проблеми та шляхи їх розв'язання

**Вадим Бабакін,
Йозеф Затько**

Мета роботи — дослідити стан корупції у сфері довкілля, проаналізувати основні проблеми, які виникають унаслідок такої корупції, і запропонувати шляхи їх розв'язання. Поставлену мету реалізовано завдяки комплексному застосуванню загальнонаукових (аналіз, синтез, узагальнення), діалектичного, порівняльно-правового, системно-структурного та прогностичного методів. Розглянуто основні механізми впливу корупції на стан довкілля. Особливу увагу акцентовано на пошуку ефективних шляхів подолання корупції, удосконаленні законодавства, посиленні контролю з боку посадових осіб і підвищенні прозорості, відкритості й публічності у процесі прийняття рішень у цій сфері. Проаналізовано проблеми, які виникають через корупцію у сфері довкілля, зокрема незаконне використання природних ресурсів, забруднення довкілля, знищення екосистем та ін. Констатовано, що корупція у сфері довкілля є однією з найбільш серйозних проблем сучасного суспільства. Доведено, що тісна співпраця держави з міжнародними організаціями, що досліджують цю проблему, має стати підґрунтям для вдосконалення національного законодавства та практики його реалізації. Запропоновано шляхи розв'язання проблем із мінімізації впливу корупції у сфері довкілля (посилення контролю за дотриманням екологічного законодавства, підвищення прозорості прийняття рішень у сфері довкілля та забезпечення невідворотності покарання за корупційні правопорушення та ін.). Запропоновано підвищувати екологічну

свідомість громадян і залучати їх до активної участі в контролі за дотриманням органами влади екологічного законодавства й іншими питаннями, що є важливим аспектом протидії корупції у сфері довкілля. Окреслено перспективи подальших досліджень у межах порушеної проблематики.

Ключові слова: корупція; довкілля; забруднення; екологічна відповідальність; громадський контроль; кримінальне провадження.

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Declaration of Competing Interest

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Legal and Regulatory Framework for Thermal Modernization in Construction

Nataliia Matsak*

* NSC “Hon. Prof. M. S. Bokarius FSI”, Kharkiv, Ukraine,

ORCID: <https://orcid.org/0000-0001-6966-5615>, e-mail: nata120175@ukr.net

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Energy conservation and efficiency play a vital role in modern society. In particular, the need for thermal modernization of buildings has become ever more pressing. Energy-saving policy in construction is a top priority during overhauls and new construction. Accordingly, the choice of materials, products, and structures must address energy-efficiency goals and reduce overall energy consumption. When the right materials are selected, interior comfort improves: materials with excellent thermal insulation characteristics retain heat in winter and help keep spaces cool in summer, cutting reliance on heaters, fans or air-conditioning — and with it, energy use. This article aims to present the key rules and requirements for building energy efficiency during thermal modernization works and to analyze these projects by highlighting specific challenges encountered in practice. To fulfil this goal, we employ general (theoretical analysis and synthesis) and special methods (review of design documentation, analysis of the building materials used, thermographic inspection). We examine relevant building rules and standards governing such work and outline mandatory quality requirements. The study notes the need to strengthen regulations on upgrading thermal insulation of external envelopes and on replacing window, exterior-door, and balcony assemblies. We also address the following topics: energy conservation, energy-saving policy, building energy performance certificates, and the efficient use of fuel and power resources.

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Keywords: *energy audit; energy conservation; building envelope; heating; fuel and energy resources; heat loss; thermal insulation; insulation.*

Research Problem Formulation

Today, the challenge of securing energy resources is acute in Ukraine and worldwide.

The United Nations Framework Convention on Climate Change (hereinafter referred to as the UNFCCC) was adopted on May 9, 1992; Ukraine signed it on June 11, 1992, and ratified it on October 29, 1996¹.

The UNFCCC is an international environmental treaty aimed at addressing the issue of greenhouse emissions (gases). Currently, it is vital to stabilize and then maintain greenhouse gas emissions at levels that do not harm the environment or exacerbate climate change. Under the Convention, participating countries commit to improving their energy-use efficiency.

Overall, Ukraine's energy-saving policy focuses on the rational and economical use of energy resources. Furthermore, it is important to recognize that the housing stock of our country predominately relies on heating units from outdated systems. Particularly the buildings commissioned before 1993 were erected under obsolete construction standards. Thus, to conserve fuel and power, we must implement energy-efficient measures aimed at promoting the introduction and production of energy-efficient products, technologies, and equipment.

One of the main requirements for any building's technical and technological design is energy efficiency and conservation.

Contemporary realities demand that heating, ventilation, cooling, and lighting systems meet technical criteria ensuring low energy consumption during operation.

Research Purpose

The research paper's purpose is to study issues of energy conservation, energy-saving policy, and the efficient use of fuel and energy resources—specifically by analyzing the energy efficiency of building thermal modernization—and to draw attention to the necessity of improving the regulatory framework for the technical retrofitting of thermal insulation in external building envelopes, as well as the replacement of window, external door, and balcony units.

Research Methods

General methods employed include theoretical analysis and synthesis, while special methods comprise analysis of project documentation, assessment of applied building materials, and thermographic inspection.

Inspecting the project documentation facilitates an accurate evaluation of the compliance of the building's thermal envelope with energy-efficiency requirements.

The building materials assurance is conducted via laboratory testing, which allows for the calculation of the materials' thermal conductivity coefficients.

1 Рамкова конвенція Організації Об'єднаних Націй про зміну клімату : ратифік. Закон. України від 29.10.1996 р. № 435/96-ВР. URL: https://zakon.rada.gov.ua/laws/show/995_044#Text (date accessed: 11.05.2025).

Analysis of Essential Researches and Publications

This article presents a system of indicators and criteria which, in the author's view, will help bring the energy efficiency of Ukrainian buildings into alignment with current rules and standards. The legal basis for this study is provided by the Law of Ukraine: *On Energy Efficiency of Buildings* ² and the corresponding modern construction rules addressing this issue. Improving existing Ukrainian building regulations, bringing them into conformity with international standards, as well as enacting a series of laws aimed at introducing advanced technologies and modernizing construction processes, will undoubtedly foster the emergence of buildings with low energy-consumption metrics, thereby significantly reducing their maintenance costs.

The issue of conserving and rationally using thermal energy is increasingly tackled by the scientific community. Technical retrofitting and thermal modernization of buildings have been examined in studies by O. Halinskyi, P. Hryhorovskiy, V. Ploskyi, C. Ushatskyi, V. Halushko, A. Necheporchuk, V. Torkatiuk, R. Tor-

mosov, R. Tian, H. Fareniuk, A. Shpakov, V. Shalennyi, et al. Several researchers (V. Halushko, H. Sokha, V. Saviovskiy, H. Ratushniak, O. Ratushniak, S. Ponizov, I. Babii, O. Borysov, L. Kucherenko, N. Oliynyk) have researched the range of building materials and the selection of technological solutions for carrying out thermal modernization works.

H. Fareniuk, O. Filonenko, and M. Tymofieiev ³ have focused specifically on building modernization with respect to reducing energy consumption and curbing greenhouse gas emissions. They also put forward a contemporary approach to selecting the optimal modernization strategies.

R. K. Jain ⁴ examined economic, environmental, and efficient construction practices, highlighting the advantages of such construction in reducing greenhouse gas emissions.

Researchers J. Torkar, D. Goricanec, and J. Krobe ⁵ addressed the reliability and uninterrupted operation of centralized heat-supply systems, emphasizing the importance of monitoring and control measures.

V. Semko ⁶ investigated the thermal failure challenges of the building envelope

- 2 Про енергетичну ефективність будівель : Закон України від 22.06.2017 р. № 2118-VIII (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/2118-19#Text> (date accessed: 11.05.2025).
- 3 Фаренюк Г. Г., Філоненко О. І., Тимофеев М. В. Энергоефективність громадських будинків з врахуванням ергономіки теплового середовища. *Комунальне господарство міст. Серія: Технічні науки та архітектура*. 2017. Вип. 135. С. 119–124. URL: http://nbuv.gov.ua/UJRN/kgm_tech_2017_135_22 (date accessed: 11.05.2025).
- 4 Jain R. K. A Study on Eco-Friendly Cost-Effective Earthbag House Construction. *Kathmandu University Journal of Science, Engineering and Technology*. 2013. Vol. 9. No. 1. Pp. 200–211. DOI: [10.3126/kuset.v9i1.63925](https://doi.org/10.3126/kuset.v9i1.63925) (date accessed: 11.05.2025).
- 5 Torkar J., Goricanec D., Krobe J. Economical heat production and distribution. Proceedings of the 3rd IASME/WSEAS Int. Conference on Heat Transfer, Thermal Engineering and Environment (Corfu, Aug 20–22, 2005). 2005. Pp. 18–23. URL: https://www.academia.edu/19945433/Economical_heat_production_and_distribution (date accessed: 11.05.2025).
- 6 Семко В. О. Методика визначення ймовірності теплової відмови огорожувальних конструкцій із сталевих холодноформованих елементів за теплотехнічними показниками. *Строительство. Материаловедение. Машиностроение. Серия: Инновационные*

as one of the principal causes of economic losses due to increased energy consumption.

B. Basok et al.⁷ addressed the integration of architectural features with technical and technological parameters to maintain appropriate sanitary and hygienic conditions within building interiors.

A. Maksymov's research paper⁸ presented a novel and rational approach to organizing the design process for thermal modernization measures for buildings, and provided examples of optimizing structural solutions during the implementation of such thermal modernization.

A. Perekrest examined the automation of monitoring heat-exchange parameters in buildings⁹.

V. Babak et al.¹⁰ explored contemporary tools and methods for supervising thermal-energy equipment.

I. Babii, O. Borysov, L. Kucherenko, and N. Oliinyk noted that, given the cur-

rent condition of the residential building stock, 90% of all multi-story buildings require thermal modernization¹¹.

V. Saviovskiy also devoted his work to the promising field of building thermal modernization¹². His research identified the causes by which structural elements of buildings lose their thermal-protective properties; the researcher highlighted the principal technological characteristics that must be considered during the design and execution of preparatory works; the author described the primary technical and technological solutions for carrying out these works and detailed the quality assurance for construction operations. Furthermore, he provided a step-by-step breakdown of the procedures for installing window and external door units and presented advanced technologies for installing the building's thermal envelope (methods for insulating external walls, roofs, floor slabs over unheated spaces, and the building's plinth).

технологии жизненного цикла объектов жилищно-гражданского, промышленного и транспортного назначения. 2016. Вып. 91. С. 140–147. URL: http://nbuv.gov.ua/UJRN/smmmit_2016_91_21 (date accessed: 11.05.2025).

7 Басок Б. І., Недбайло О. М., Ткаченко М. В., Божко І. К., Новіцька М. П. Схемні рішення оснащення енергоефективного будинку системою теплозабезпечення. *Промышленная теплотехника*. 2013. Т. 35. № 1. С. 42–48. URL: <https://dspace.nuft.edu.ua/server/api/core/bitstreams/231a7815-e412-4ae5-b6b8-296b31ca0ac9/content> (date accessed: 11.05.2025).

8 Максимов А. С. Організаційні підходи до термомодернізації будівель на підставі оптимізації вибору конструктивно-технологічних рішень : дис. ... канд. техн. наук. Одеса, 2021. 218 с. URL: <https://uacademic.info/ua/document/0421U102386> (date accessed: 11.05.2025).

9 Перекрест А. Л. Методи та засоби створення високоефективних комп'ютеризованих систем автоматичного контролю параметрів теплового комфорту в будівлях : дис. ... д-ра техн. наук. Покровськ, 2020. 493 с. URL: <https://uacademic.info/ua/document/0520U101750> (date accessed: 11.05.2025).

10 Бабак В. П., Берегун В. С., Бурова З. А., Воробйов Л. Й., Декуша Л. В. та ін. Апаратно-програмне забезпечення моніторингу об'єктів генерування, транспортування та споживання теплової енергії : монографія. Київ, 2016. 298 с.

11 Бабій І. М., Борисов О. О., Кучеренко Л. В., Олійник Н. В. Визначення факторів, що впливають на терміни утеплення фасадів багатопверхових будівель. *Сучасні технології, матеріали і конструкції в будівництві*. 2021. Т. 31. № 2. С. 32–36. DOI: 10.31649/2311-1429-2021-2-32-36 (date accessed: 11.05.2025).

12 Савйовський В. В. Термомодернізація будівель : навч. посіб. Київ, 2021. 278 с. URL: <https://lira-k.com.ua/preview/12893.pdf> (date accessed: 11.05.2025).

R. Carabano et al. analyzed building materials intended for thermal-insulation works (with respect to their life-cycle durability)¹³.

L. Brojan, A. Petric, and P. L. Clouston conducted a comparative analysis of building materials from ecological and economic perspectives¹⁴.

I. Babii and L. Kucherenko assessed existing thermal-insulation construction and installation technologies in terms of their techno-economic efficiency¹⁵.

V. Serdiuk addressed the issue of aging residential buildings constructed during the large-scale construction of the 1980s and 1990s, which have exceptionally high energy consumption rates. He proposed addressing this issue by applying ventilated rainscreen facades and extending their functionality¹⁶.

D. Stepanov et al.¹⁷ emphasized the urgency of reducing greenhouse gas emissions and, within this framework, substantiated the establishment of regulatory parameters required to ensure

the thermal resistance of building envelopes.

Main Content Presentation

The Law of Ukraine: *On Energy Efficiency of Buildings*¹⁸, which is aimed at stimulating reductions in buildings' energy consumption, establishes the legal, social, economic, and organizational grounds for activities in the field of maintaining buildings' energy efficiency.

Pt. 1, Article 1 of this Law specifically defines the following terms: "nearly zero-energy building" (cl. 2), and "a building's energy efficiency" (cl. 5):

"2) *Nearly zero-energy building* – a building with an energy efficiency level exceeding the established minimum requirements, where energy primarily from renewable sources is used to form proper living conditions and/or human activities;

<...>

5) *Energy efficiency of a building* is the property of a building characterized by the

- 13 Carabano R., Hernando S. M., Ruiz D., Bedoya C. Life Cycle Assessment (LCA) of building materials for the evaluation of building sustainability: the case of thermal insulation materials. *Revista de la Construcción*. 2017. Vol. 16. No. 1. Pp. 22–33. DOI: [10.7764/RDLC.16.1.22](https://doi.org/10.7764/RDLC.16.1.22) (date accessed: 11.05.2025).
- 14 Brojan L., Petric A., Clouston P. L. A Comparative Study of Brick and Straw Bale Wall Systems from Environmental, Economical and Energy Perspectives. *ARPJ Journal of Engineering and Applied Sciences*. 2013. Vol. 8. No. 11. Pp. 920–926. URL: https://www.academia.edu/5439665/A_COMPARATIVE_STUDY_OF_BRICK_AND_STRAW_BALE_WALL_SYSTEMS_FROM_ENVIRONMENTAL_ECONOMICAL_AND_ENERGY_PERSPECTIVES (date accessed: 11.05.2025).
- 15 Бабій І. М., Кучеренко Л. В. Моделювання організаційно-технологічних факторів для визначення ефективних рішень проекту утеплення фасадів з облицюванням штукатурками. *Сучасні технології, матеріали і конструкції в будівництві*. 2023. Т. 34. № 1. С. 84–90. DOI: [10.31649/2311-1429-2023-1-84-90](https://doi.org/10.31649/2311-1429-2023-1-84-90) (date accessed: 11.05.2025).
- 16 Сердюк В. Р. Розширення функціональних властивостей навісних вентиляованих фасадів при утепленні будівель. *Там само*. С. 91–99. DOI: [10.31649/2311-1429-2023-1-91-100](https://doi.org/10.31649/2311-1429-2023-1-91-100) (date accessed: 11.05.2025).
- 17 Степанов Д. В., Степанова Н. Д., Оникієнко С. М., Мартиненко В. В. Показники енерго-ефективності громадської будівлі. *Там само*. С. 134–139. DOI: [10.31649/2311-1429-2023-1-134-139](https://doi.org/10.31649/2311-1429-2023-1-134-139) (date accessed: 11.05.2025).
- 18 Про енергетичну ефективність будівель ... URL: <https://zakon.rada.gov.ua/laws/show/2118-19#Text> (date accessed: 11.05.2025).

*amount of energy required to create proper living conditions and/or human activities in that building*¹⁹.

In recent years, the number of scientific and technical studies related to thermal modernization (insulation) of buildings has increased significantly. Most of these studies focus on assessing the scope and operational charges listed under the category of “energy-saving measures for building reconstruction”. In addition, they provide detailed technical, spatial, and structural characteristics of the buildings undergoing facade thermal modernization. These include the building’s shape, overall external dimensions, number of floors (specifying the height of each floor individually if they differ), presence of annexes or porches, total building volume, and the number of exterior doors.

Let’s take the following example:

“The facility designated for thermal modernization is a building with a T-shaped floor plan, measuring 67.0 × 12.5 m in its principal dimensions. It comprises two main storeys, each with a height of 7.0 m, along with a projecting section measuring 40.5 × 12.5 m (single storey, 6.0 m high), and attached entrance porches with areas of 27.0 m², 4.5 m², 3.3 m², and 4.5 m². The total construction volume amounts to 10 465 m³. The building includes six separately positioned and spatially distributed exits.

Structurally, the building follows a frameless design, characterized by parallel load-bearing walls constructed from silicate brick, placed atop strip reinforced concrete foundations. The floors and roof are formed by precast hollow-core reinforced concrete slabs.

The foundation system consists of prefabricated reinforced concrete blocks. The plinth is made from red clay brick, with a variable height ranging from 550 mm to 1200 mm.

The attic space is non-operational.

The external walls are constructed from 510 mm-thick silicate brick.

The internal walls are constructed from 380 mm-thick silicate brick.

The partitions are constructed from silicate brick, with thicknesses ranging from 120 mm to 150 mm.

The windows are uPVC-framed.

The external doors are metal.

The roof assembly is of the hipped type, supported by wooden rafters and battens, and covered with profiled metal sheeting”.

The working project typically includes the execution of the following construction and installation works: replacement of window units and sills; facade thermal insulation; hydro- and thermal insulation of the plinth; insulation of the floor slab; and the modernization or replacement of heating system engineering networks.

Research is usually provided with design and cost estimate documentation related to the implementation of energy-efficiency measures in the building, comprising the following components:

“WORKING PROJECT (WP):

- General Explanatory Note, Volume 1, Code XXXP-EN;
- Architectural and Structural Solution, Volume 1, Code XXXP-AS;
- Cost Estimate Documentation, Volume 2, Code XXXP-XXXX-CED”.

The implementation of energy efficiency measures in buildings not only contributes to the conservation of fuel and energy resources but also delivers significant social and environmental benefits. The latter is especially important today in light of efforts to raise living standards and improve housing conditions. Reducing energy consumption can only be achieved through a comprehensive approach to

19 Про енергетичну ефективність будівель ... URL: <https://zakon.rada.gov.ua/laws/show/2118-19#Text> (date accessed: 11.05.2025)..

energy efficiency: one that incorporates enhanced architectural and structural design solutions as well as the replacement of building engineering systems taking into account climatic, technical, economic, social, and environmental factors.

One of the most important steps in conserving energy is additional insulation of external building walls. When additional insulation is added, a once-homogeneous wall becomes a multi-layered structure. This transformation increases the complexity of both the design and construction phases, as the use of multiple materials raises the risk of design and installation errors. These errors can diminish the thermal resistance and overall performance of the insulated structures.

Today, enhanced insulation of the building is executed using a wide range of construction and technological solutions, materials, and products. Unfortunately, these solutions are sometimes selected without adequate consideration of building thermophysics. Moreover, insufficient attention is often paid to the reliability of the chosen materials and the technological and structural soundness.

The primary goals and objectives of the technical standards for thermal modernization projects include the following:

- clarifying the requirements for design documentation developed for comprehensive thermal modernization and approving its scope;
- defining the necessary energy-saving measures;

- establishing the work procedure;
- explaining and general principles and methodological approaches to the development of technical documentation;
- outlining the main rules and operational requirements for buildings following the completion of work;
- setting qualification standards for construction companies involved in insulating structural elements of a building or reconstructing / upgrading energy supply networks;
- bringing the standard in line with applicable national and international building standards, as well as modernizing energy supply networks.

Among the scholars who have addressed energy efficiency in buildings are H. Ratushniak, Yu. Biks, and A. Lialiuk²⁰. Their research highlights measures to be implemented for energy conservation and rational use of energy resources and the importance of monitoring the integrity of a building's thermal insulation over time.

The national standard ДСТУ-Н Б В.3.2-3:2014: *Guidelines for the Thermal Modernization of Residential Buildings*²¹ was introduced to strengthen Ukraine's regulatory framework in the construction sector.

According to cl. 3.1 of the Standard, "thermal modernization is a set of construction works aimed at improving the thermal performance of building envelope components, optimizing the energy consumption of engineering systems, and ensuring the build-

20 Ратушняк Г. С., Бікс Ю. С., Лялюк А. О. Моніторинг та експертно-аналітична оцінка надійності теплоізоляційної оболонки будівель. *Сучасні технології, матеріали і конструкції в будівництві*. 2023. Т. 20. № 1. С. 140—145. DOI: 10.31649/2311-1429-2023-1-140-145 (date accessed: 11.05.2025).

21 ДСТУ-Н Б В.3.2-3:2014 Настанова з виконання термомодернізації житлових будинків [Чинний від 15.10.2015]. Київ, 2014. 71 с. URL: https://enfcities.org.ua/upload/files/new_dstu-n-b-v_3_2-3-2014.pdf (date accessed: 11.05.2025).

ding's overall energy efficiency meets or exceeds minimum regulatory requirements"²².

The above-mentioned State Standard primarily addresses work on conducting energy audits and certifying buildings, as well as thermal modernization measures aimed at improving the building's thermal performance. Key activities include the retrofitting and upgrading of utility networks, as well as the thermal insulation of building envelopes. Collectively, these measures contribute to reduced energy consumption and ensure comfort and coziness in premises.

Summarizing the foregoing, we can state that the adoption of ДСТУ-Н Б В.3.2-3:2014 is intended to:

- lower operating energy demands for building maintenance;
- promote efficient and sustainable use of energy resources;
- extend the service life of buildings.

Additionally, the current Ukrainian ДСТУ ISO/IEC 17000:2007: *Conformity assessment — Vocabulary and general principles* (an official translation of ISO/IEC 17000:2004, *Conformity assessment — Vocabulary and general principles*) outlines requirements that comply with the current legislation of Ukraine and defines general terms and definitions of concepts governing conformity assessment procedures. It covers the accreditation of conformity assessment bodies and the application of conformity assessment. Specifically, the standard states:

"2.1 Conformity assessment

*Demonstration that specified requirements (3.1) related to products (3.3), process, system, person, or body have been fulfilled"*²³.

Furthermore, ДБН В.2.6-31:2021: *Thermal Insulation and Energy Efficiency of Buildings*²⁴ sets technical parameters for energy efficiency in buildings, with a particular focus on regulating thermal conductivity of insulation materials used during the installation of building envelope components.

According to these building regulations, the building thermal envelope is defined as a system "consisting of the enclosing structures of the heated (or conditioned) volume of the building that ensures the conservation of energy used for heating and/or cooling interior spaces"²⁵.

Ukraine's national energy-saving policy is oriented toward the development of legal regulations and documents that support the implementation of high-efficiency technologies to meet defined targets for energy efficiency and conservation. This is due to the fact that excessive thermal energy consumption contributes directly to rising heating and water supply costs, which in turn negatively impacts household well-being by increasing utility expenses. Therefore, state-sponsored energy efficiency programs aim to improve the economic, environmental, and social conditions concurrently.

It is worth considering that the majority of Ukraine's residential building stock consists of Soviet-era constructions. Under

22 ДСТУ-Н Б В.3.2-3:2014 URL: https://enefcities.org.ua/upload/files/new_dstu-n-b-v_3_2-3-2014.pdf (date accessed: 11.05.2025).

23 ДСТУ ISO/IEC 17000:2007 Оцінювання відповідності. Словник термінів і загальні принципи (ISO/IEC 17000:2004, IDT). [Чинний від 19.02.2025]. Київ, 2008. 20 с. URL: https://quality.nuph.edu.ua/wp-content/uploads/2018/04/dstu_iso_iec_17000_2007.pdf (date accessed: 11.05.2025).

24 ДБН В.2.6-31:2021 Теплова ізоляція та енергоефективність будівель [Чинний від 01.09.2022]. Київ, 2022. 23 с. URL: https://e-construction.gov.ua/laws_detail/3075196638495507996?doc_type=2 (date accessed: 11.05.2025).

25 Там само.

the economic model of that time, energy was considered cheap, and conservation was not a priority. Today, however, the country faces new realities. Modern construction—whether in the construction of new buildings or during overhauls—must incorporate contemporary energy-economic considerations and adopt measures that significantly reduce energy consumption.

In general, thermal modernization of buildings should be carried out through comprehensive insulation measures, which necessarily include the replacement of windows and doors, as well as the modernization or full replacement of the heating system. During these works, particular emphasis must be placed on upgrading the heating system, as practical experience demonstrates that the effectiveness of thermal modernization largely depends on its performance. Understandably, such modernization efforts entail substantial financial investment.

Upon closer examination, it becomes evident that one of the primary causes of excessive heat loss is the inadequacy of the external building envelopes. As previously noted, a significant portion of Ukraine's building stock exhibits poor thermal insulation performance. Thermal engineering calculations used during the old housing stock period differ markedly from contemporary standards: mainly because they did not prioritize energy efficiency. That's why the then thermal protection requirements were several times lower than the current norms. This explains why structural components of older buildings experience substantially higher heat losses compared to modern counterparts.

Compounding this issue are outdated windows—often poorly sealed, with subpar thermal properties, and sometimes unnecessarily large in surface area—con-

tributing significantly to heat loss. Another critical factor is the low energy efficiency of heating systems installed during that time, which are now both technically and morally obsolete. Unauthorized modifications, such as the replacement of radiators and piping, or the improvised installation of heating layouts, further degrade system efficiency. Additional shortcomings include clogged pipelines and the complete absence of their thermal insulation: both in basements and outside.

Obviously, this is not an exhaustive list of deficiencies associated with the old heating systems. It is therefore entirely reasonable to conclude that energy efficiency cannot be achieved through the insulation of buildings' facades and their structures alone if the heating infrastructure remains outdated. Meaningful reductions in fuel and energy consumption can only be realized through comprehensive thermal modernization of the building.

Thermal modernization measures typically include the following construction interventions:

- insulation of the roof (roof assembly) structure;
- insulation of ground-level floors;
- insulation of the floor slab above unheated basements;
- thermal insulation of building facades (external walls);
- replacement of window and external door units;
- replacement or modernization of the building's heating system;
- modernization of the heating distribution substation.

Building insulation is typically performed on the exterior face of the load-bearing component of the building envelope. This is achieved by adding one or more layers of material with adequate thermal resistance. The goal of this work

is to reduce heat loss and raise the internal wall surface temperature, thereby improving the structure's thermal performance and mitigating the risk of surface condensation and mold growth.

The degree of thermal insulation of walls is determined by the thermal resistance coefficient R : the higher the R , the lower the heat loss. Modern State Building Regulations (ДБН В.2.6-31:2021) establish minimum permissible thermal resistance values ($R_{q\ min}$) in $4,00\ m^2 \times K/W$ (Climate Zone I) and $3,50\ m^2 \times K/W$ (Climate Zone II). Older buildings, however, typically do not meet these standards. The only effective way to reduce heat loss in such structures is through insulation. Proper insulation ensures continuous thermal protection across the entire wall surface and effectively prevents energy loss.

The correct selection of thermal insulation material is crucial for a long service life and efficient operation of a building. National Standard ДСТУ 9191:2022: *Building insulation. Method for selecting insulation material for thermal retrofitting stipulates "methods of choosing insulation materials in residential, public, and industrial buildings during design, new construction, reconstruction, or overhaul, including thermal modernization"*²⁶. This standard is aimed at implementing the provisions of ДБН В.2.6-31.

According to the Law of Ukraine *On Construction Regulations*²⁷, compliance with state building regulations is mandatory, particularly when selecting materials for building insulation. ДСТУ 9191:2022 regulations apply to opaque building envelope components, prescribing the methodolo-

gy for determining their thermal performance, providing the calculated thermal performance values of building materials, and serving as the foundation for the development of design documentation on energy conservation and energy efficiency in general. Therefore, the selection of thermal insulation material must be carried out in accordance with this Standard, taking into account its thickness, density, and other physical and technical indicators, as well as methods of fastening.

In line with regulatory requirements, insulation materials must be selected for the following types of opaque building components:

- embedded and plinth-level structures;
- ground-contact floors;
- external walls;
- floor slabs (including ground-level, intermediate, and attic slabs);
- roof assemblies;
- partitioning structures separating rooms with a temperature difference exceeding 4°C .

Currently, the most widespread thermal insulation method in Ukraine involves the insulation of external walls. This method consists of adhering and mechanically fastening insulation boards—typically expanded polystyrene or mineral wool—to the building's external surfaces. A protective and decorative plaster layer, reinforced with fiberglass mesh, is then applied. When performed using quality materials and proper construction techniques, this approach is considered among the simplest, most effective, and durable thermal retrofitting solutions.

26 ДСТУ 9191:2022 Теплоізоляція будівель. Метод вибору теплоізоляційного матеріалу для утеплення будівель [Чинний від 01.03.2023]. Київ, 2023. 60 с. URL: <https://surl.li/hvcguf> (date accessed: 11.05.2025).

27 Про будівельні норми : Закон України від 05.11.2009 р. № 1704-VI (зі змін. та допов.). URL: <https://zakon.rada.gov.ua/laws/show/1704-17#Text> (date accessed: 11.05.2025).

When selecting a thermal insulation material, it is essential to consider the following physical and technical properties:

- maximum service temperature;
- moisture content;
- water absorption capacity;
- frost resistance;
- vapor permeability;
- fire resistance classification;
- compressive strength;
- shear strength limit;
- tensile strength perpendicular to the surface;
- density;
- geometric accuracy.

These physical and mechanical indicators must comply with the requirements of ДСТУ Б В.2.7-195²⁸.

In addition, to ensure that the chosen insulation meets regulatory thermal (and energy-economic) performance criteria, the following indicators should be taken into account: calculated thermal conductivity coefficient and expected effective service life.

Insulation of roofs and floor slabs typically involves installing an additional thermal barrier layer. Floor slabs over an unheated basement are insulated from the basement side using adhesive-mounted insulation panels. Special attention should be paid to the layer of thermal insulation material during these works, since its characteristics are decisive for the efficiency of the work performed. That is why it is essential to use high-quality materials of appropriate thickness. Roof insulation generally follows a standard technique involving several layers of thermal insulation materials arranged in a way that is commonly referred to as a “thermal sandwich”. This technique is necessary for

ensuring proper heat retention. Undoubtedly, the effectiveness of any thermal insulation depends on the workmanship involved.

Ground-bearing floors represent a cost-effective flooring solution. They typically consist of a concrete slab not connected to the building's foundation or walls. This method can be implemented in two ways: by installing prefabricated concrete slabs or by in-situ casting.

In heated spaces, insulating ground-bearing floors is essential to minimize thermal losses. However, if the room is unheated, such insulation is unnecessary. In those cases, it is more appropriate to insulate the intermediate floor slab that separates the unheated basement from the heated first floor. To insulate ground-contact floors effectively, it is essential to use a moisture-resistant thermal insulation material capable of withstanding significant loads. Extruded polystyrene foam, for example, meets these requirements.

The replacement of windows and balcony doors plays a crucial role in reducing heat loss, as these components typically account for a substantial share of thermal energy leakage in buildings. Today, there are many different types of energy-efficient structures that provide superior thermal and acoustic insulation and are easy to install and maintain.

Another major factor influencing thermal energy efficiency is the condition of the building's heating system. To ensure optimal performance, a complete modernization of the heating system is required. This includes upgrading all key components of the system, such as heat exchangers, circulation pumps, and control units, especially those located within

28 ДСТУ Б В.2.7-195 Будівельні матеріали. Матеріали і вироби теплоізоляційні. Номенклатура показників [Чинний від 01.08.2010]. URL: https://dnaop.com/html/60909/doc-%D0%94%D0%A1%D0%A2%D0%A3_%D0%91_%D0%92.2.7-195_2009 (date accessed: 11.05.2025).

the building’s heat substation or boiler room.

Additionally, improving the ventilation system is a critical prerequisite for achieving sustainable thermal modernization outcomes.

Thermal modernization measures should follow the following sequence. First of all, for high-quality and efficient building insulation, it is crucial to conduct an energy audit: an assessment aimed at evaluating current energy consumption levels and, if necessary, identifying areas for improvement. This step helps pinpoint the primary sources of heat loss and informs the appropriate selection of insulation materials. The next step involves

selecting and installing energy-efficient equipment. Following this, careful attention must be paid to selecting and applying insulation materials for the building’s external envelope. Proper insulation requires a multi-layered assembly—or “thermal insulation sandwich”—that provides comprehensive protection for enclosing structures. Finally, existing window units and balcony doors should be replaced with modern, heat-retaining structures.

When executed correctly, thermal modernization significantly reduces heat loss and energy demand. The table below presents the comparative efficiency of various modernization measures when implemented to a high standard.

Thermal modernization efficiency measures

No.	Thermal modernization measures	Heat Loss Reduce in %
1	Thermal insulation of exterior walls, roof coverings, and floor slabs above unheated spaces	20–45
2	Thermal insulation of roof assemblies and floor slabs above unheated spaces	10–25
3	Thermal insulation of floor slabs above unheated spaces (basements)	3–6
4	Replacement of window units and external entrance doors	25–47
5	Modernization of the ventilation system	30–40
6	Modernization of the engineering networks within the building’s heat substation	10–30
7	Modernization of the internal heating system	10–25

When drafting a thermal modernization contract for a building, the findings of a preliminary energy audit should be used to determine the full scope of work and required materials. Building thermal insulation should be conducted on the basis of the design. In our view, planning a project is essential even in cases where building codes do not explicitly require it, since a well-developed project defines and describes the insulation materials to be used (specifying their type, properties, and

compliance with Ukrainian construction and sanitary standards). It also outlines how these materials should be installed. This includes surface preparation, fastening methods, installation of the thermal insulation layer on the floor slab, application of the anchoring layer, and how insulation will interface with structural elements.

Project and cost-estimate documentation on thermal modernization measures must comply with construction regulations.

If project documentation is prepared prior to thermal modernization, a post-construction inspection of the building should be carried out to verify whether the completed work meets energy efficiency requirements. If needed, a state-mandated energy efficiency examination may be conducted to confirm that the building's performance meets the requirements outlined in corresponding legal regulations for energy use. This process concludes with the issuance of an Energy Performance Certificate (EPC) and a summary the findings.

Conclusions

The purpose of thermal modernization and heating system upgrades is to achieve optimal efficiency during the use of fuel and energy resources and reduce corresponding costs.

State regulations set clear standards for the thermal resistance of envelope components. Design solutions for the creation and modernization of the thermal building envelope must therefore consider not only the requirements for the rational use of energy resources but also meet the requirements of sanitary and hygienic standards and ensure the durability of components during building operation.

The modern construction market offers a wide array of thermal insulation materials, not all of which meet current regulatory requirements. Therefore, the right choice of energy-efficient products that would ensure the rational use of fuel and energy resources is a highly important task.

One should keep in mind that all selected products must meet thermal performance criteria and be certified as safe for use in occupied spaces. High-quality thermal insulation materials must be

approved by the Ministry of Health of Ukraine and have a valid hygienic and epidemiological certificate.

Нормативно-правові засади виконання термомодернізаційних робіт у будівництві Наталія Мацак

У сучасному суспільстві енергоекономічність та енергоефективність відіграють дуже важливу роль. Зокрема, зростає актуальність проблеми термомодернізації будівель. Енергоекономічна політика в будівництві — одне з першорядних завдань під час проведення капітальних ремонтів і нового будівництва. Тож вибір будівельних матеріалів, виробів та конструкцій обумовлюють потреби енергоефективності та зменшення рівня енергоспоживання. Якщо будівельні матеріали дібрано правильно, умови перебування людей усередині будівлі стають комфортнішими, оскільки матеріали з високими теплоізоляційними характеристиками взимку сприяють підтриманню в будівлі тепла, а влітку — прохолоди, зменшуючи потребу в обігрівачах або вентиляторах чи кондиціонерах, отже, і у споживанні енергії. Метою цієї статті є ознайомити з основними правилами й вимогами щодо енергетичної ефективності під час проведення робіт з термомодернізації будинків і проаналізувати здійснення цих робіт із висвітленням окремих проблем, що виникають під час їх проведення. Для досягнення мети застосовано загальні методи (теоретичний аналіз і синтез) та спеціальні (аналіз проектної документації, аналіз застосованих будівельних матеріалів, тепловізізне обстеження). Приділено увагу будівельним нормам і правилам, що стосуються виконання такого виду робіт, опрацьовано обов'язкові вимоги до їхньої якості. Зазважено про потребу вдосконалити нор-

мативну базу з питань технічного переоснащення теплової ізоляції зовнішніх огорожувальних конструкцій, а також із заміни віконних, зовнішніх дверних і балконних блоків. порушено питання щодо енергозбереження, енергозберігаючої політики, енергетичного паспорта будівлі, економії паливно-енергетичних ресурсів.

Ключові слова: енергетичний аудит; енергозбереження; огорожувальні конструкції; опалення; паливно-енергетичні ресурси; тепловтрати; теплоізоляція; утеплення.

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Declaration of Competing Interest

The author declares no conflict of interest.

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All-Ukrainian Scientific and Practical Conference: *Methodological Principles of Criminalistics — Traditions and Innovations* dedicated to the memory of Academician V. O. Konovalova (*Konovalova Forensic Readings*)

On March 28, 2025, Yaroslav Mudryi National Law University (hereinafter referred to as NLU) organized and the *Methodological Principles of Criminalistics — Traditions and Innovations Forensic Readings*, dedicated to the memory of **Violetta Omelianivna Konovalova**, Honored Professor of NLU, Academician of NASU, Doctor of Law, Professor, and Honored Worker of Science and Technology of Ukraine. The event was conducted in a hybrid format.



The conference was moderated by **Viktor Shevchyuk**, Head of the Department of Forensic Science at NLU, Doctor of Law, Professor.

Anatoliy Getman, Rector of NLU, Doctor of Law, Professor, Academician of NASU, delivered his welcoming speech at the forensic readings.

Hanna Spitsyna, First Deputy Director, gave opening remarks on behalf of **Serhii Tiulieniev**, Director of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» (hereinafter referred to as NSC FSI), emphasizing the importance of conducting scientific measures to commemorate and pay tribute to the achievements of such renowned researchers as V. O. Konovalova.

Violetta Omelianivna was an outstanding leader whose contribution to the formation and development of forensic science in Ukraine cannot be overlooked. Furthermore, the researcher's scientific papers on topical issues of forensic methodology, tactics, and techniques of crime investigation are still relevant today. Violetta Konovalova's scientific school has been known by many generations of lawyers, crime scientists, and forensic experts who now excel in different sectors of law enforcement,

law application, and forensic activities. Under her supervision, more than 30 PhD and doctoral dissertations have been defended. Her energy, dedication to science, and integrity set a worthy example.

The attendees were also greeted by **Ella Simakova-Yefremian**, Deputy Director for Academic Affairs, who delivered a report: *Methodology and Organization of Scientific Research in Modern Forensic Science (on the example of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute»)*.

The NSC FSI staff takes great pride in the fact that V. O. Konovalova contributed to the work of the Editorial Board for over 20 years and her articles were published regularly in issues of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection, an edition co-founded by NSC FSI and NLU.

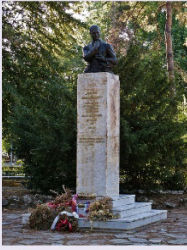


The participants of the readings presented papers on 11 topical areas in the field of criminalistics.

NSC FSI is actively developing and introducing advanced achievements in forensic science and criminalistics into practical activities. Such events promote the mutual exchange of experiences, the discussion of topical issues, and the finding of ways to solve them. They are also a platform for fruitful discussions, the exchange of ideas, and the building of new scientific connections.

*Information was prepared by **Viktoriia Hrokhovska**,
Researcher at NSC FSI*

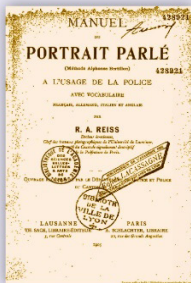
International Scientific and Practical Conference on Topical Issues of Forensic Science and Criminalistics



Пам'ятник Рудольфу Арчібальду Рейссу,
Топчидерський парк,
Белград,
Сербія



Пам'ятник Миколі Сергійовичу Бокаріусу,
Національний науковий центр
«Інститут судових експертиз
ім. Засл. проф. М.С. Бокаріуса», Харків, Україна



Міжнародна науково-практична конференція «Актуальні питання судової експертизи криміналістики» присвячена 150-річчю від дня народження відомого вченого-криміналіста, доктора наук, професора Рудольфа Арчібальда Рейсса



Національний науковий центр
«Інститут судових експертиз
ім. Засл. проф. М.С. Бокаріуса»
Міністерства юстиції України



Міжнародна науково-практична конференція «Актуальні питання судової експертизи і криміналістики»

присвячена 150-річчю
від дня народження
відомого вченого-криміналіста,
доктора наук, професора

**РУДОЛЬФА
АРЧИБАЛЬДА
РЕЙССА**



Тези доповідей
м. Харків, 23 травня, 2025 р.

International Scientific and Practical Conference on Topical Issues of Forensic Science and Criminalistics dedicated to the 150th anniversary of the birth of the renowned criminalist, Doctor of Science, Professor Rudolf Archibald Reiss was organized by National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» (hereinafter referred to as NSC FSI) and held in person and via videoconference on May 23, 2025.

The conference was opened by **Serhii Tiulieniev**, Director at NSC FSI, who greeted the participants and highlighted the institution's long-standing tradition of organizing events dedicated to distinguished figures in the field of criminalistics.

The participants were welcomed by: **Andrii Haichenko**, Deputy Minister of Justice of Ukraine for the Enforcement Service, **Natalia Tkachenko**, Director of Forensic Science Support to Justice Department at the Ministry of Justice of Ukraine, directors of forensic science institutions of the Ministry of Justice of Ukraine, heads of forensic institutions of the Ministry of Internal Affairs, as well as foreign partners of NSC FSI: **Ion**

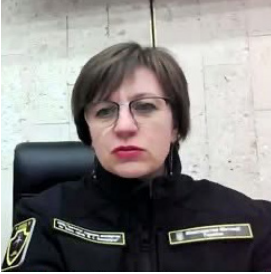
Lopatenko, representative of the National Center of Forensic Expertise at the Ministry of Justice of the Republic of Moldova, **Soren Blau**, Head of Archaeology and Anthropology Division at International Commission on Missing Persons (Netherlands), **Gunnar Tasa**, Deputy Director of Development at Estonian Forensic Science Institute, **Jozef Zatko**, Member of International Association of Journalists and Member of International Police Association from Slovakia, **Aleksandar Ivanović**, Advisor to the Police Administration of Montenegro, and **Raimonds Apinis**, Deputy Director at State Forensic Science Bureau of Latvia.



Around 200 participants from Ukraine (responsible employees of the Ministry of Justice, the Ministry of Internal Affairs, the Security Service, the State Emergency Service of Ukraine, etc.) and various European countries (Estonia, Latvia, Moldova, Slovakia, the Kingdom of the Netherlands, Great Britain, etc.)—including forensic experts, researchers, and employees of the judicial, law enforcement, and educational systems—joined the conference.

NSC FSI employees delivered the following scientific reports: *150 Years Since the Birth of Rodolphe Archibald Reiss: Founder of Forensic Photography, Renowned Scientist and Publicist* by **Anatoliy Tiapkin** (Head of the Sector of Theoretical Research and Editorial-Publishing Activities), **Ella Simakova-Yefremian** (Deputy Director for Academic Affairs), and **Oleksandr Sviderskyi** (Head of R&D and Publishing, International





Cooperation Laboratory); *Regarding the Issue of Communication Between Forensic Experts and Clients of Expertise (Limits, Strategic Goals and Typical Errors)* by **Tetyana Chabanets** (Deputy Director and Head of the Kyiv Branch), **Viktoriia Aliksieichuk** (Deputy Head for Scientific and Methodological Work and Postgraduate Education at the Kyiv Branch), and **Yevhen Yaremenko** (Head of the Forensic Examinations Department at the Kyiv Branch); *Possibilities of Forensic Veterinary Examination in Identifying Defects in Veterinary Care That Have Adversely Affected Animal Life and Health* by **Ivan Yatsenko**, Principal Researcher; *Legal Aspects Related to Forensic Environmental Engineering Examination of Military Crimes Against the Environment* by **Ihor Krainov**, Principal Researcher, **Volodymyr Sabadash**, Principal Forensic Expert, and **Kostiantyn Chernihivskiy**, Forensic Expert; *Forensic Economic Activity in the Fight Against Organized Crime* by **Svitlana Yevdokimenko**, Principal Researcher, **Serhii Yevdokimenko**, Associate Professor at the Department of Criminal Law, Criminology, Civil and Commercial Law of Higher Educational Institution «National Academy of Management».

Overall, 81 employees of NSC FSI took part in the conference, and 37 prepared abstracts of reports (individually or in co-authorship).

An abstract of the report *Forensic Archaeology in Ukraine: Towards Broader Application and Integration* was delivered by **Daria Cherkaska** (an expert in forensic archaeology and anthropology at the International Commission on Missing Persons, Great Britain), and co-authored by **Dr. Soren Blau** (Netherlands), and **Prof. Caroline Sturdy Colls** (Great Britain).

The participants discussed the achievements and scientific and expert legacy of Rudolph Archibald Reiss. His work laid the groundwork for modern methods of crime investigation and the introduction of expert technologies. They also addressed urgent issues in forensic science to promote law, order, and justice in the state. Additionally, the participants explored the latest developments and future prospects in this field. Most importantly, they had the opportunity to collaborate in order to apply the outcomes of theoretical research to expert and forensic practices. The researchers also exchanged insights on theoretical and practical advancements in criminalistics, forensic examination, and criminal procedure.

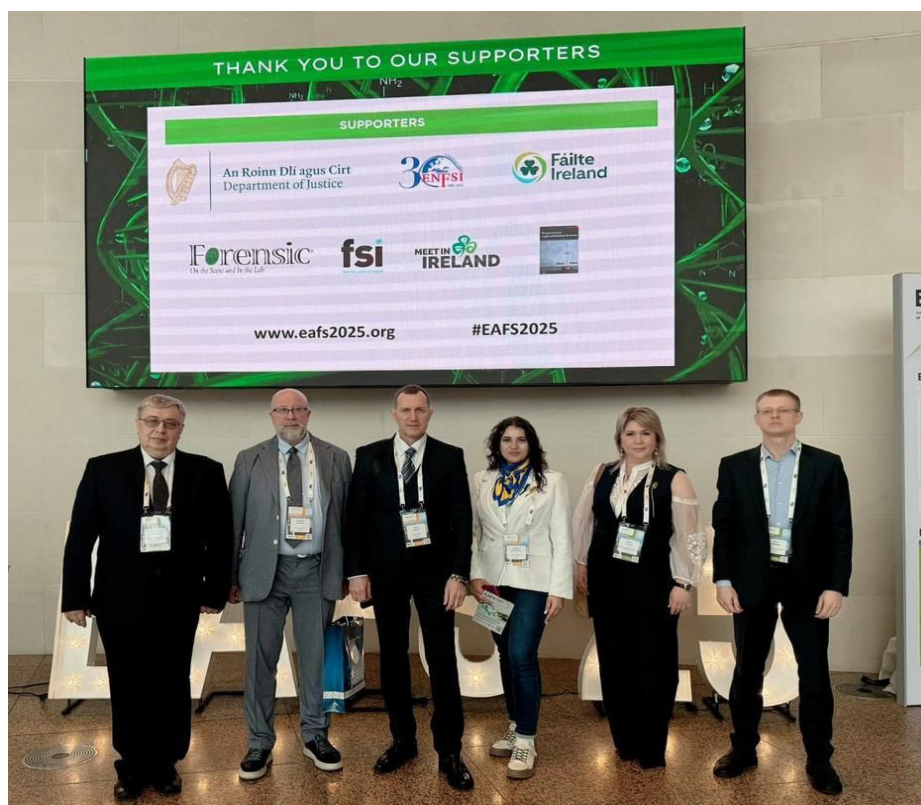
NSC FSI published a collection of conference report abstracts and sent it, along with participation certificates indicating the number of ECTS credits, electronically to all event participants.

Information was prepared by Oksana Chala, Researcher at NSC FSI

Annual ENFSI Meeting and EAFS Conference

The delegation of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine (hereinafter referred to as *NSC FSI*) actively participated in the annual meeting of the European Network of Forensic Science Institutes (hereinafter referred to as *ENFSI*) and in the International Conference on Forensic Science and Criminalistics: *EAFS 2025*. This year's events took place from May 26 to 30 at the *Dublin Convention Center* (Ireland).

The delegation included **Serhii Tiulieniev**, a permanent ENFSI member with voting rights, Director of NSC FSI, **Volodymyr Minenko**, Deputy Director for Forensic Examinations, as well as **Tetiana Droshchenko**, Head of International Cooperation Sector.



This year's event brought together significant occasions for the European forensic community: the 30th anniversary of ENFSI and the 10th anniversary of the *European Academy of Forensic Science (EAFS)*.

More than 1000 representatives of forensic institutions, research centers, specialized EU agencies, industrial partners, and global international organizations joined the conference.

The *EAFS* 2025 program encompassed a wide range of relevant topics: DNA forensics, digital evidence, chemical examination, drug analysis, biometrics, forensic anthropology, management of forensic medical services, quality assurance systems, and modern forensic education.

Throughout the week, attendees engaged in plenary sessions, thematic panels, scientific discussions, and practical workshops.

The NSC delegation gave special importance to participation in the *Annual ENFSI Meeting* 2025, dedicated to the topic: *Reflections on Forensic Science: Looking back to look forward*, which was held between May 27 and 28.

During the event, heads of leading European forensic institutions discussed the network's strategic directions and made key decisions regarding its further development for the period from 2025 to 2026.

Results of NSC FSI participation in the Annual *ENFSI* Meeting and *EAFS* 2025 conference:

- New professional contacts and partnerships have been made with European and international colleagues;
- Promising avenues for joint research and implementation of modern methodologies have been identified;
- Preliminary agreements have been reached regarding the participation of Ukrainian experts in international projects and initiatives;



Scientific News

- NSC FSI has proved to be an active participant in the European expert community and has emphasized implementing the best practices in Ukraine.

Participation in similar events is an important step for integrating the Ukrainian forensic community into the European scientific space, strengthening international cooperation, and enhancing Ukraine's international prestige.



NSC FSI would like to extend its deepest gratitude to the Estonian Forensic Science Institute, and, personally, to Mr. **Ivar Priits**, the Director, for their support and assistance with organizational and financial matters related to the NSC FSI delegation's participation in the Annual ENFSI Meeting: *Annual Meeting ENFSI 2025*. We would also like to thank Mr. **Raimonds Apinis**, Deputy Director at State Forensic Science Bureau of Latvia, for advising on joint international grants; Mr. **Dariusz Zuba**, Director of the Professor Jan Sehn Institute of Forensic Research in Krakow, for advising on drug examinations; Ms. **Penelope Haddrill**, Director at the Department of Pure and Applied Chemistry, Centre for Forensic Science: University of Strathclyde, for her continuous cooperation, and many other ENFSI members for their professional advice and support of Ukraine during the hardships imposed by martial law.

This type of assistance is invaluable for promoting efficient international cooperation in forensic science and fostering stronger partnerships between Ukrainian forensic institutions and other countries.

*Information was prepared by **Tetiana Droshchenko**,
Head of International Cooperation Sector at NSC FSI*

V All-Ukrainian Forum of Forensic Experts: New Horizons and Strategic Challenges

V Всеукраїнський форум судових експертів

СУДОВА ЕКСПЕРТИЗА: ПЕРСПЕКТИВИ РОЗВИТКУ ТА ОКРЕМІ ВЕКТОРИ ЗМІН

6 червня 2025 року, м. Львів

Odesa Scientific Research Institute of Forensic Sciences (hereinafter referred to as *Odesa SRIFS*) organized the V All-Ukrainian Forum of Forensic Experts — *Forensic Examination: Development Prospects and Individual Vectors of Change* (hereinafter referred to as the Forum) in a hybrid format, in Lviv, on June 6,

2025. The Ministry of Justice of Ukraine initiated the event.

Antonina Cheremnova, Academic Secretary at Odesa SRIFS, moderated the forum.

Dmytro Kishko, Director of Odesa SRIFS, launched the event with a welcoming speech.

The event's participants were also greeted by distinguished guests: **Andrii Haichenko**, Deputy Minister of Justice of Ukraine for the Enforcement Service; **Olena Ferens**, Deputy Minister of Justice of Ukraine; **Natalia Tkachenko**, Director of Forensic Science Support to Justice Department; **Petro Filiuk**, Judge of the Constitutional Court of Ukraine; **Oksana Hryshchuk**, Judge of the Constitutional Court of Ukraine; **Valeria Chorna**, Judge of the High Anti-Corruption Court; directors of Ministry of Justice forensic institutions and other ministries and agencies; representatives of the judiciary, higher education institutions, and other institutions and organizations.



Representing the National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine (hereinafter referred to as NSC FSI), **Hanna Spitsyna**, First Deputy Director, opened and participated in the forum. Speaking on behalf of **Serhii Tiulieniev**, Director of NSC FSI, and the Institute's staff, she congratulated the organizers and participants, emphasizing the relevance of the event, the challenges of upholding the rule of law, and the vital role of expert support for justice in Ukraine under martial law.

The participants showcased developments, products, and services for forensic laboratories, in particular:

- use of modern geoinformatics to record the destruction caused by the armed aggression against Ukraine (*Navigation and Geodetic Center LLC*);
- modern *Thermo Fisher Scientific* instrument solutions for chromatography, spectrometry, and mass spectrometry for forensic laboratories (*ALT Ukraine Ltd.*);
- cutting-edge solutions in the diagnostics of building materials (*Himlaborreaktiv LLC*), etc.

During the panel discussion, NSC FSI employees delivered the following reports: *Subject, Object, and Methods of Forensic Authenticity Examination for Solving Diagnostic Problems* by **Yevheniia Kovkina**, Leading Researcher, Head of Laboratory; *Using Multimodal Language Models in Zero-Shot Mode to Detect Infrastructure Damage at Sites of Weapons of Mass Destruction Deployment from Unmanned Aerial Vehicle Video Footage* by **Serhii Chorny**, Leading Researcher. Other employees of the Institute also prepared reports on topical issues of forensic activities.

The scientific event was organized to a high professional standard in an atmosphere of mutual understanding and creativity. The participants discussed the prospects for developing forensic examinations and the effective interaction between Ukraine's forensic institutions and law enforcement agencies, courts, and the public. They concluded that this would enhance the efficiency of justice in our country, reflected on the results, and underlined the importance of continued cooperation between all research institutes in Ukraine's forensic expert system.

*Information was prepared by **Nataliia Zhyla**,
Researcher at NSC FSI*

Round Table: Standards of Professional Conduct for Advocates and Forensic Experts — Problematic Issues and Ways to Resolve Them

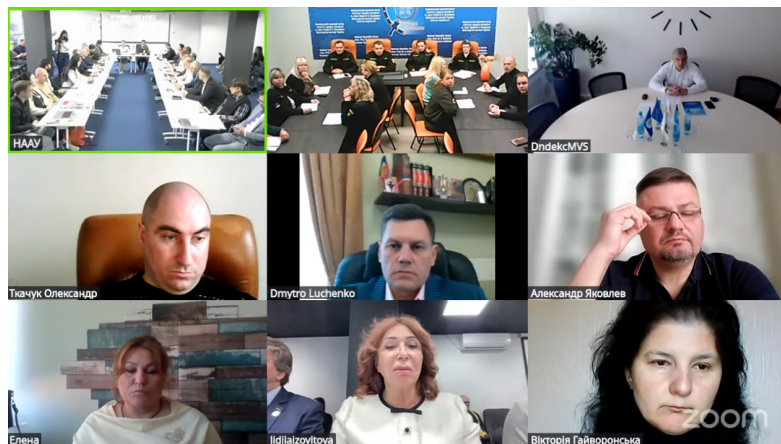


On June 16, 2025, the *Standards of Professional Conduct for Advocates and Forensic Experts — Problematic Issues and Ways to Resolve Them* Round Table (hereinafter referred to as the *Round Table*) was held in a hybrid format in Kyiv. The event was organized by the Committee of the Ukrainian National

Bar Association on Expert Support for Advocacy (hereinafter referred to as the *UNBA Committee*), the Ministry of Justice of Ukraine, National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» (hereinafter referred to as *NSC FSI*) of the Ministry of Justice.

The event was moderated by **Tetyana Chabanets**, Deputy Director and Head at the Kyiv Branch of NSC FSI, and **Yurii Hryhorenko**, Deputy Chairman of the Committee of the UNBA on Expert Support for Advocacy, Director of a private forensic institution.

Forensic experts from forensic institutions under the Ministry of Justice, lawyers, academics, and representatives of other institutions and organizations attended the event.



The welcome address at the event was given by **Lidiya Izo-vitova**, President of the UNBA and the Bar Council of Ukraine. The participants of the roundtable were greeted by: **Volodymyr Vattras**, Member of the Verkhovna Rada of Ukraine of the 9th Convocation, Member of the Verkhovna Rada Committee on Legal Policy, Chairman of the Subcommittee on the Organization and Activities of the Bar and Legal Aid Bodies; **Natalia Tkachenko**, Director of Forensic Science Support to Justice Department, Chair of the Central Expert Qualification Commission at the Ministry of Justice of Ukraine.



Serhii Tiulieniev, Director of NSC FSI, presented NSC FSI pilot project: *the Hotline for Forensic Support*.

During a meeting between representatives of the Ministry of Justice of Ukraine, RIFE staff, and lawyers, an online consultation platform and call center for interaction with lawyers and citizens were introduced on May 2, 2025. Serhii Tiulieniev stressed

the need for systematic, fast, and convenient interaction that would allow lawyers to receive professional advice and clarifications on forensic issues in a timely manner.



According to Serhii Tiulieniev, *the Hotline* will serve as a platform for regular information exchange, advice, and the sharing of analytical materials and methodological guidelines. The call center will address practical requests related to scheduling and conducting forensic examinations and the procedural aspects of interacting with expert institutions in real time, etc. The NSC FSI pilot project sparked lively interest from the audience.

The launch of the Advisory Hub is a crucial step towards deepening the partnership between the legal and forensic communities. The goal is to enhance the quality of court proceedings in Ukraine.

Other speakers included **Natalia Tkachenko**, Director of Forensic Science Support to Justice Department, **Viktoriia Alieksieichuk**, Deputy Head for Scientific and Methodological Work and Postgraduate Education at the Kyiv Branch, **Violeta Fedchyshyna**, Chair at the UNBA Committee, Vice-Rector at Higher School of Advocacy of UNBA, and **Andrii Misiats**, Interim Chairperson of the Higher Qualification and Disciplinary Commission of the UNBA.

The Roundtable participants specifically discussed:

- problems related to normative and legal regulation of expert and lawyer's activities;
- current state and ways related to reforming disciplinary responsibility of lawyers and forensic experts;
- legislative initiatives of the Ministry of Justice of Ukraine regarding forensic expert activity, in terms of Ukraine's accession to the EU.

*Information was prepared by **Olena Sharapova**,
Leading Researcher at NSC FSI*

Tribute to the Jubilarian!

April 30, 2025, marked the 70th anniversary of the birth and 45 years of scientific and pedagogical activity of **Vasyl Olkhovskyi**, Professor, Doctor of Medicine, Professor at the Department of Forensic Medicine, Medical law named after prof. M. S. Bocarius of Kharkiv National Medical University (hereinafter referred to as KNMU), a sincere friend of National Scientific Center “Hon. Prof. M. S. Bokarius Forensic Science Institute”, member of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection Advisory Board.



V. Olkhovskyi is a graduate of the renowned Kharkiv Anatomical and Forensic Medicine School. In 1978, he graduated with honors from the Medical Faculty at KNMU, Doctor of Medicine (2004), Professor (2005), Corresponding Member of the International Academy of Integrative Anthropology (2000), Honored Professor of KNMU (2019). Between 2003 and 2020, he headed the Department of Forensic Medicine, Medical Law at KNMU, and also worked as the Dean of the 2nd Medical Faculty at KNMU (2009–2014), Deputy Chairman

of the University's Specialized Academic Council for the Defense of Doctoral Dissertations specializing in *Forensic Medicine* (2017–2021); chaired the KNMU Approval Board for the preliminary examination of dissertations submitted by candidates from the University's morphological departments (2010–2021).

Vasyl Oleksiiovych initiated the organization of 3 scientific and practical conferences for Ukrainian medical examiners and criminalists that were held at the department with the involvement of international participants (2005, 2006, 2009), as well as the establishment of the Department History Museum (2005) featuring sculptures of professors M. S. Bokarius and M. M. Bokarius inside.

In his PhD (1984) and doctoral (2004) dissertations, Vasyl Olkhovskyi covered an anatomical study of peripheral nerves in different age groups at macro and microscopic levels.

After his election as the Head of the Forensic Medicine Department, Vasyl Oleksiiovych focused on the following areas of research: developing a method for assessing the reliability of a forensic expert's opinion when determining the death's cause and duration and the severity of bodily injuries in living persons (based on the study about the nature of their diagnostically significant features); historical aspects associated with the development and formation of the Kharkiv School of Forensic Medicine; improving the organization and content of the educational and methodological work within the department staff.

Under his supervision, 1 doctoral, 10 PhD dissertations, and 1 master's thesis have been completed and defended.

Alongside his medical work, V. O. Olkhovskyi also earned two higher education degrees: one from Yaroslav Mudryi National Law University (2011) and another one from Ukrainian Engineering Pedagogics Academy (2013).

Vasyl Oleksiyovych's academic legacy includes over 500 scientific papers on forensic medicine, human morphology, and the founding and advancement of the Kharkiv Forensic School, etc.

Professor V. O. Olkhovskyi was awarded the Honorary Certificates of KNMU, the Main Department of Healthcare, Education and Science of Kharkiv Regional State Administration, a commendation from the Minister of Health of Ukraine and the Chairman of the Kharkiv Regional State Administration.

***Best wishes to the jubilarian on this special day!
We wish peace, health, and well-being!***

Requirements for Research Papers

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.

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

Author (co-authors) should provide reference (the reference of such content file name should consist of the last name (last names) of the author (co-authors) and the sent date with the note: research paper title; author full name (co-authors) in Ukrainian and English; academic degree (area of specialization code); academic rank (department name or area of specialization code); job position; institutional affiliation; settlement, country; ORCID (if available) or Researcher ID (if available); official and personal email address; mailing address; phone.

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Scientific Edition

**THEORY AND PRACTICE OF FORENSIC SCIENCE
AND CRIMINALISTICS**

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«Hon. Prof. M. S. Bokarius Forensic Science Institute»,

8a, Zolochivska St., Kharkiv, Ukraine, 61177

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