

**BATIUK O.V.,**  
Doctor of Legal Sciences,  
Professor of the Department  
of National Security  
(*Lesya Ukrainka Volyn  
National University*)

**HRYNKIV O.O.,**  
Doctor of Legal Sciences,  
Senior Lecturer at the Department  
of Special Disciplines  
(*Bohdan Khmelnytsky National Academy  
of the State Border Guard Service  
of Ukraine*)

**PYSAREVSKYI S.V.,**  
Candidate of Sciences in Public  
Administration,  
Deputy Head of the Retraining  
and Professional Development Center  
(*National Academy of the National Guard  
of Ukraine*)

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## THE APPLICATION OF SPECIALIZED KNOWLEDGE IN THE INVESTIGATION OF CRIMES AGAINST THE FOUNDATIONS OF NATIONAL SECURITY OF UKRAINE

The application of criminalistic and forensic expert knowledge is an integral part of effective investigation of crimes both at the regional and national levels. Without their use, criminal proceedings lose their evidence base and effectiveness. However, with globalisation, the development of technology and the increasing speed of information exchange, criminals are increasingly using advanced scientific and technological means, especially in committing crimes against the foundations of national security, such as espionage, sabotage, unauthorised dissemination of information on the direction and movement of weapons, armaments and ammunition.

**Key words:** *security, state, sabotage, expertise, nation, crime, treason, special knowledge, criminalistics, collaboration, espionage.*

**Батюк О.В., Гриньків О.О., Писаревський С.В. Використання спеціальних знань при розслідуванні злочинів проти основ національної безпеки України**

Застосування криміналістичних та судово-експертних знань є невід'ємною складовою ефективного розслідування злочинів як на регіональному, так і на національному рівні. Без їх використання кримінальне провадження втрачає доказову базу та результативність. В зв'язку з масштабною глобалізацією, розвитком технологій та зростанням швидкості обміну інформацією, особи, які

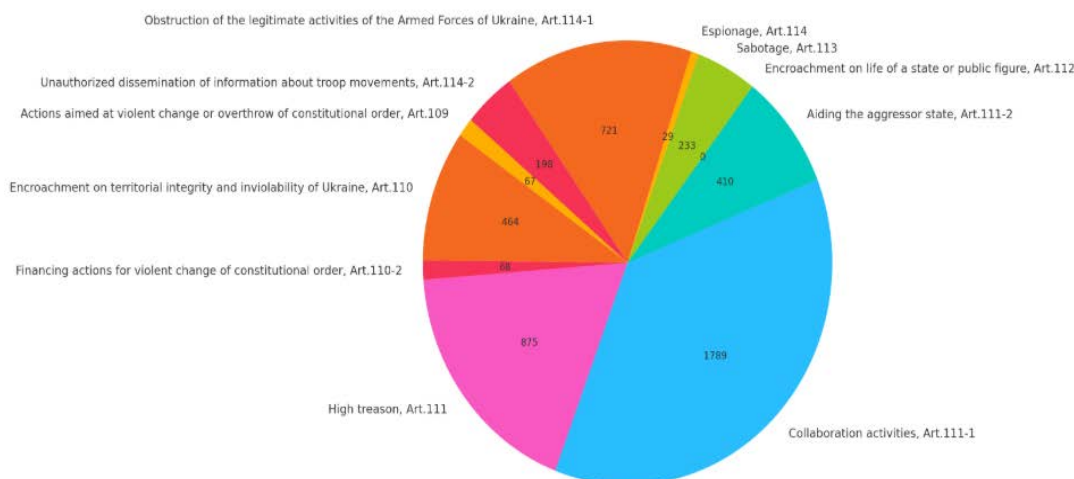


вчиняють кримінальні правопорушення, дедалі частіше застосовують передові досягнення науково-технічних засобів, особливо під час вчинення злочинів проти основ національної безпеки – таких, наприклад, як шпигунство, диверсія, несанкціоноване поширення інформації про направлення, переміщення зброї, озброєння та бойових припасів. Це створює нові виклики для протидії таким протиправним діям та вимагає активного залучення криміналістичних і судово-експертних знань для підтримки правозастосовної діяльності. Метою дослідження є встановлення визначальної ролі спеціальних знань в розслідуванні злочинів проти основ національної безпеки України. Отже, автори, використовуючи криміналістичні та судово-експертні знання, історичні процеси формування спеціальних знань, проаналізувавши думки провідних науковців за цією тематикою, запропонували пропозиції щодо удосконалення положень криміналістичної техніки та практики її використання уповноваженими суб'єктами у правозастосовній діяльності.

**Ключові слова:** безпека, держава, диверсія, експертиза, нація, злочин, зрада, спеціальні знання, криміналістика, колаборація, шпигунство.

**Introduction.** The relevance of the topic is due to the fact that in the investigation of criminal offences against the foundations of national security, such as actions aimed at violent change or overthrow of the constitutional order or the seizure of state power, encroachment on the territorial integrity and inviolability of Ukraine, sabotage, espionage, such investigative action as inspection of the scene of an incident presents unique challenges and requires special procedures and professional knowledge and skills of both the investigator and specialists (explosive experts, trace evidence experts, ballisticians and forensic experts) involved in its conduct.

It is worth noting that according to the official data of the Office of the Prosecutor General of Ukraine, the number of crimes against the foundations of national security in 2024 was 4 854 criminal offenses, compared to 4,743 criminal offenses in 2023.



**Fig. 1 Criminal Offenses Against National Security of Ukraine in 2024**

**Analysis of scientific publications.** In international forensic science, incident scene investigations focus on the scientific analysis of traces, including the collection of physical evidence, forensic photography, fingerprinting, bloodstain pattern analysis, ballistics, trace and



toxicological examinations, vehicle inspections, handwriting analysis, and technical forensic document examination. Additionally, identification through facial recognition and criminal registration are key components. Notably, fingerprint and shoe print analysis are among the most frequently used investigative methods at crime scenes.

One of the fundamental scientific works summarizing the problems of the use of special knowledge in criminal proceedings is a monograph reflecting the results of Scherbakovsky's M.G. doctoral dissertation «Conducting and using forensic examinations in criminal proceedings». The author, summarizing the achievements of scientists, defines the controversial issues that are the basis of the discussion of scientists regarding the definition of the essence of special knowledge and their characteristic features. Let's dwell separately on their characteristics [1].

In a scientific article: «Use of Special Knowledge in the Field of Forensic Computer-Technical Expert Examination in the Pre-Trial Investigation of Crimes Against the Foundations of National Security» author Hora I.V. analyzes the current state of forensic computertechnical expert examination and the current forensic expert practice in this area, considers the issue of the need for special knowledge to conduct this type of examinations. It is substantiated that forensic computer-technical expert examination is an independent type of forensic expert examination and belongs to the class of engineering and technical examination. The definitions of the object, the subject of computer-technical examination are presented, typical tasks are formulated. The issues, faced by the experts when assigning forensic computertechnical examinations for the study of new computer objects are considered. Determination of the expert's assignment and the formulation of questions are considered as an important stage in the planning of an examination, on which the correct choice of research methodology depends. With the development of information technologies, investigators are interested in new objects for which it is necessary to prepare individual methodological recommendations, manuals for determining the sequence of conducting various types of examinations. It has been substantiated that the conclusions of forensic experts on computer-technical examination are of great evidentiary value. They make it possible to: decipher the encoded information; find information that was considered missing, lost or destroyed; restore the mechanism of a criminal event based on information traces [2].

In a scientific article: «Special knowledge in criminal proceedings: concept, content, forms of implementation during the investigation of criminal offenses» authors Chornous Yu., Lisitsky A. research was conducted signs of special knowledge: scientific validity; practical value; are not publicly available and generally known; obtained as a result of special training and practical activities; is a system of knowledge, skills, and abilities; correspond to the current state of development of science and technology; used by a knowledgeable person in a certain field of science, technology, art, craft; aimed at ensuring the process of proof; are used to achieve the goals of criminal proceedings [3].

In a scientific article: «Technical and forensic support for the investigation of war crimes: Concept, purpose, individual areas of development» author Filipov Y. research was conducted the terms «technical and forensic support» and «technical and forensic means» were analysed, and the definition of technical and forensic support for war crimes was proposed. The following components of technical and forensic support were investigated: scientific, legal, organizational, educational and methodological, scientific and technical, material and technical support. Attention was drawn to the specific features of technical and forensic support for the investigation of war crimes: constant readiness of authorized entities to use technical means and methods; integrated use of technological systems; involvement of numerous information resources; coordination of work on technical equipment of law enforcement agencies with the provision of other departments, including the Armed Forces of Ukraine. The study focuses on the possibility of using technical and forensic support for the investigation of war crimes by security investigators together with National Police investigators. It was concluded that the technical and forensic support for the investigation of crimes includes a system of legal, scientific, organizational measures aimed at the effective use of technical means and their corresponding methods for investigating criminal offences. Promising areas of development of technical and forensic support for the investigation of



war crimes are as follows: the use of drone-made evidence (aerial photography); the use of ground-based 3D scanning; the introduction of systems for detecting and visualizing biological traces of participants in war crimes and their victims; the development of identification and search engines for identifying people involved in the commission of war crimes on the territory of Ukraine [4].

Perlin S. offers the levels of authorized subjects of technical and forensic support: the first level is the provision of law enforcement activities in general; the second – technical equipment for the activities of the bodies of the sphere of justice; the third – technical and forensic support of individual departments, and the fourth – equipping individual subjects of the investigation. Perlin S. singles out the technical support of the investigation of certain types of criminal offences as an element of ensuring the investigation of crimes, as well as the technical support of the conduct of certain investigative actions, using the help of specialists [5].

Klymenko N.I., in the monograph «General Theory of Forensic Expertology,» states that the differentiation of the type (form) of specialized knowledge is based on the following criteria: Regulatory classification – procedural and non-procedural; Procedural status of individuals possessing specialized knowledge – investigator, expert, specialist, consultant; Procedural form of implementation – forensic examinations, participation of a specialist in proceedings, participation of a consultant; Content-based classification [6].

The study employed a set of scientific methods: terminological, system-structural, formal logical, comparative legal. The terms «technical and forensic support» and «technical and forensic means» were analysed, and the definition of technical and forensic support for crimes against the basics national security.

**The purpose of the article** is to establish the decisive role of forensic knowledge and forensic expertise in the investigation of crimes against the foundations of Ukraine's national security. To achieve this, the authors have examined forensic and expert knowledge, historical processes of the formation of specialized forensic knowledge, and the perspectives of leading scholars. This analysis serves as the basis for developing proposals to improve the provisions of forensic technology and its practical application by authorized entities in law enforcement activities.

**Setting the problem in general and its connection with important scientific or practical tasks.** The concept of «specialized knowledge» was introduced in forensic science when individuals possessing expertise in specific fields of science, technology, art, or craftsmanship began to be involved in addressing issues related to the collection, examination, and evaluation of evidence.

In the process of solving and investigating crimes against the foundations of national security of Ukraine, such as: actions aimed at the violent change or overthrow of the constitutional order or the seizure of state power; encroachment on the territorial integrity and inviolability of Ukraine; financing of actions committed with the aim of violently changing or overthrowing the constitutional order or seizing state power, changing the boundaries of the territory or state border of Ukraine; high treason; collaborative activities; aiding an aggressor state; attempt on the life of a state or public figure; sabotage; espionage; obstruction of the lawful activities of the Armed Forces of Ukraine and other military formations; unauthorized dissemination of information about the sending, movement of weapons, armaments and ammunition to Ukraine, the movement, relocation or deployment of the Armed Forces of Ukraine or other military formations formed in accordance with the laws of Ukraine, committed in conditions of martial law or a state of emergency; specific knowledge, skills and abilities are required for the people who conduct investigation, which they often lack. For this reason other people possessing special knowledge are involved in the process of investigation, they are as a rule: a specialist, an interpreter, an expert, a teacher, a psychologist, a doctor.

It is worth noting that technical and forensic support is transforming in accordance with systems of interconnections and modern advancements in natural and technical sciences. In recent years, scholars have developed specific aspects of technical and forensic support in the field of crime prevention.

Specialized knowledge utilized within the framework of criminal proceedings serves as a scientific foundation for investigative and judicial activities. A precise definition of the purpose



of its application at each stage of the criminal process is crucial for a proper understanding of the functions and authority of individuals who employ specific types of knowledge in legally prescribed procedural forms.

The application of specialized knowledge in criminal proceedings is driven not only by the lack of necessary expertise among investigators, prosecutors, and judges but also by procedural requirements that mandate its implementation by legally designated individuals.

In practice, specialized knowledge is widely applied in forms that are neither defined nor regulated by legislation. These include the use of specialized knowledge in the form of documentary verification, technical and other inspections, preliminary examination of traces and physical evidence by a competent individual, advisory and reference activities conducted by an expert, and technical assistance provided by a qualified specialist. Such forms can be classified as non-procedural.

It is worth noting that the normative documents regulating expert activities in Ukraine, such as the Law of Ukraine «On Forensic Examination» [7], the Instruction on the Appointment and Conduct of Forensic Examinations and Expert Studies dated October 8, 1998, № 53/5 [8], and other related guidelines, do not provide a definition of specialized knowledge. This omission often leads to errors in the appointment of forensic examinations or the involvement of specialists in investigations.

Additionally, the concept of specialized knowledge is absent in Article 3, «Definitions of Key Terms of the Code,» of the Criminal Procedure Code of Ukraine. However, Article 69 of the Code stipulates that «an expert in criminal proceedings is a person who possesses scientific, technical, or other specialized knowledge,» while Article 71 defines a specialist as a person who «possesses specialized knowledge.» Despite these references, the content and scope of the term specialized knowledge remain undefined.

In judicial and investigative practice, when disputes arise regarding the application of specialized knowledge, investigators often rely on scientific interpretations, which at times fail to yield positive results in the evidentiary process.

Understanding the concept of specialized knowledge and its classifications is of significant importance to the theory of forensic science. In the investigation of criminal offenses against the national security of Ukraine, the notion of the forms of applying specialized knowledge is particularly crucial. These forms represent the means by which theoretical principles of science are implemented in the practice of crime investigation in general and in cases related to national security in particular. Despite the well-developed forms of applying specialized knowledge among scholars, debates on this issue persist. Scientific discourse is further fueled by legislative changes and the absence of a clearly defined list of forms for utilizing specialized knowledge.

It is reasonable to agree with the following viewpoint on classifying forms of specialized knowledge based on their use as evidence in criminal proceedings.

Procedural form of utilizing specialized knowledge: involvement of a specialist in conducting investigative (search) actions; provision of a written explanation by a specialist as an annex to the protocol of an investigative (search) action; submission of a specialist's opinion in criminal proceedings concerning criminal misdemeanors; engagement of an expert and the conduct of forensic examinations; interrogation of an expert during court proceedings.

Consultative form of utilizing specialized knowledge, the results of which are subject to additional assessment based on the criteria of relevance and admissibility concerning the possibility of recognizing the provided documents as sources of evidence (Articles 93, 99 of the Criminal Procedure Code of Ukraine): audit conclusions and inspection reports; fire incident reports, reports on the causes of fires, compiled by a fire investigation specialist.

Non-procedural form of utilizing specialized knowledge: preliminary express analysis of traces of a criminal offense; verification against forensic records and information-reference databases; oral consultations with a specialist; application of personal specialized knowledge by an investigator, inquirer, prosecutor, judge, or defense attorney [3, p. 480].





We believe that specialized knowledge may be utilized in the investigation of crimes against the foundations of national security, provided that it is appropriate for establishing or clarifying the circumstances of the offense. Its application is not quantitatively limited and may be employed as many times as necessary to form a sufficient evidentiary base.

At the same time, investigators are not authorized to independently and directly apply such knowledge for the collection and examination of evidence. Although they acquire certain specialized knowledge during their studies at law schools (in forensic medicine, forensic psychiatry, forensic psychology, informatics, etc.), this scope is limited and insufficient for independent use in pre-trial investigations. Consequently, it does not ensure objectivity and reliability in resolving relevant issues.

Moreover, individuals conducting pre-trial investigations represent the prosecution and, therefore, cannot be considered impartial participants in criminal proceedings.

Having analyzed the provisions of the current Criminal Procedure Code of Ukraine, we consider it appropriate to distinguish the following procedural forms of applying specialized knowledge in the investigation of crimes against the foundations of national security: Involvement of a specialist; Involvement of an expert; Participation of a forensic medical expert or a physician in the conduct of a bodily examination; Requesting and obtaining conclusions from audits and inspection reports.

In our view, specialized knowledge in criminal proceedings related to crimes against the foundations of national security should be understood as knowledge in various fields of science and technology acquired through specialized training or experience and applied for the purpose of obtaining evidentiary information.

During the investigation of criminal offenses, procedural forms of applying specialized knowledge are used both for independently resolving specific investigative tasks and for verifying facts established through non-procedural means.

A widely used procedural form of applying specialized knowledge is the involvement of a specialist in pre-trial investigation or court proceedings (Article 71 of the Criminal Procedure Code of Ukraine). The subject of this application is the specialist.

A specialist in criminal proceedings is a person possessing specialized knowledge and skills in the use of technical or other means and capable of providing consultations during pre-trial investigation and court proceedings on matters requiring such specialized knowledge and skills (Part 1, Article 71 of the Criminal Procedure Code of Ukraine). The specialist draws the investigator's attention to circumstances related to the detection and preservation of evidence and provides explanations regarding specialized issues involved.

An individual may be involved as a specialist if they: Possess specialized knowledge and skills; Have no vested interest in the outcome of the investigation; Have not conducted audits or inspections whose materials are being used in the proceedings.

For participation in procedural actions as specialists, the following individuals may be involved: Employees of forensic expert institutions at all levels and from various governmental bodies; Competent personnel of regulatory agencies; Representatives of other practical, scientific, and academic institutions with profound expertise in their respective fields; Private individuals who are not staff members of any official institutions. The specialist's participation and the obtained results are documented in the record of the investigative (search) action.

During the investigation of criminal offenses, specialists are engaged in investigative (search) actions in cases where:

The investigator lacks the necessary specialized knowledge and skills for the proper preparation and execution of an investigative (search) action; The investigator does not have sufficient proficiency in techniques and tools required for the rapid and high-quality performance of specific tasks that demand specialized knowledge and skills; Ethical or tactical considerations necessitate assigning particular tasks to a specialist; Several forensic technologies must be applied simultaneously; A substantial volume of work requiring specialized knowledge and skills must be performed.



The involvement of a specialist is a right, not an obligation, of the investigator. The investigator independently decides on this matter, guided by their assessment of the scope and complexity of the work required for a particular investigative (search) action, as well as the necessity of specialized assistance.

We believe that the need to involve non-legal professionals arises when the available capabilities, knowledge, accessible methods and technical means of cognition, as well as the subject's skills in applying such methods and tools, prove insufficient for the effective collection, analysis, evaluation, and utilization of information, the establishment of specific facts, the detection of hidden connections, properties, and characteristics of examined objects, and the fulfillment of other investigative tasks. The criminal procedure law ambiguously regulates the issue of the admissibility and scope of applying specialized knowledge during various investigative (search) and other procedural actions.

In the investigation of crimes against the foundations of national security, specialized knowledge is applied through: The involvement of specialists in procedural and other investigative activities; The conduct of forensic examinations; The performance of various audits and inspections; Obtaining reports and consultations from knowledgeable individuals; Requesting and utilizing documents prepared by such individuals in the course of their official duties; Interrogating specialists as witnesses or forensic experts if they have participated in forensic examinations.

**In conclusion**, it should be noted that the current criminal procedural legislation of Ukraine does not define the concept of specialized knowledge or disclose its content. In criminal procedural and forensic literature, specialized knowledge is generally regarded by scholars as knowledge that is not commonly known in criminal proceedings, acquired by an individual through professional education or practical experience in a specific field, and utilized to address the objectives of criminal justice.

Specialized knowledge encompasses information that is not directly related to the administration of criminal justice and extends beyond the scope of general and specialized educational programs but is applied to achieve legal objectives within criminal proceedings.

Depending on the degree of normative regulation concerning the use of specialized knowledge and the documentation of its results in procedural records, scholarly and practical discourse distinguishes between procedural and non-procedural forms of its application. Non-procedural forms of applying specialized knowledge in the investigation of crimes against the foundations of national security arise when the results of such application are not recorded in procedural documents.

Future research will focus on the characteristics of the types of specialized knowledge used in the investigation of crimes against the foundations of Ukraine's national security.

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