

Development Prospects of Forensic Expertology in Ukraine in Light of International Experience

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Forensic science in Ukraine is an essential component of justice in all types of proceedings, including in criminal proceedings. In order to ensure fairness and efficiency in court judgements, it is important to continually improve forensic examination procedure in light of international experience. The modern world is changing increasingly rapidly, and technologies are developing faster than ever. This poses new challenges and tasks for forensic expertology. Thus, particular emphasis should be placed on forensic computer examination since malicious users quickly implement the latest achievements of scientific and technological progress in criminal activities. Law enforcement and judicial bodies should stay ahead criminals by possessing a high level of expertise in technical and technological innovations and skills in working with them. That is why a strong awareness of forensic experts and researchers about the latest achievements and international experience in the forensic science field is highly important. This requires regular skill upgrading, exchange of developments and experience between Ukrainian and foreign experts. The *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection always contributes to such exchanges, publishing research of Ukrainian and foreign scientists on its pages.

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There is also a need to increase the level of technical support in forensic science institutions by upgrading forensic lab equipment in order to improve quality, reduce execution time and enhance credibility of forensic examination results. In this connection, it is essential to develop new methods and methodologies for forensic expert research which will help to enhance the efficiency of carrying out forensic examinations through the use of modern equipment and technologies. The improvement of forensic science in Ukraine is a fundamental component of expert support for justice in general and in criminal proceedings in particular. In recent years, the role of forensic science as an incredibly important tool for detecting, investigating and resolving crimes in Ukraine has grown significantly; therefore, a purposeful development of this field is one of the essential tasks of our state. In conditions of Ruscism (Russian fascism) aggression against Ukraine, forensic experts, as much as law enforcement agencies, participate in inspections of ruined buildings and other infrastructure facilities in order to help seize and record evidence in a professional manner. Moreover, they investigate various consequences of the use of weapons that have caused harm to the state, its citizens and legal persons.

At the end of the 20th and the beginning of the 21st century, the world's scientific thought substantially contributed to improving quality and obtaining accurate results concerning expert research. For this reason, to ensure efficiency and enhance quality of forensic expert activities, it is vital to observe international standards and take into account experience gained by world science and research practice.

One of the major steps towards the development of forensic science in Ukraine is to raise funding to improve material and technical support of the forensic science field. There is also a need to ensure proper training of specialists for work on new equipment, constantly improve their professional development, and maintain a high level of professional expertise, abilities, and skills of forensic scientists. The content included in the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection will help you acquire a required expertise within the latest theoretical developments and practical research.

National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» actively promotes exchange of experience between specialists by reaching out to foreign forensic science institutions. The domestic legislation stipulates the right of state specialized institutions where forensic examinations are conducted to establish international scientific contacts with forensic science institutions of other states, to hold joint scientific conferences, symposia, seminars, to exchange trainees, scientific information, printed and electronic editions, as well as to issue joint periodicals in the field of forensic science and criminalistics.

Currently, the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection is indexed in the following online abstract and citation databases: Academic Scientific Journals Indexing, Bielefeld Academic Search Engine (BASE), Directory of Open Access Journals (DOAJ), Directory of Open Access Scholarly Resources (ROAD), Directory of Research Journals Indexing (DRJI), ERIH PLUS, Eurasian Scientific Journal Index (ESJI), Europub, Index Copernicus International, Google Scholar, MIAR,

Polska Bibliografia Naukowa, RefSeek, ResearchBib, Ulrich's, WorldCat, the Register of Scientific Publications of Ukraine. Full-text online versions of the collection are available on Internet on the platforms of the V. I. Vernadskyi National Library of Ukraine, libraries of forensic science institutions of Ministry of Justice of Ukraine, higher education institutions of Ministry of Internal Affairs of Ukraine, etc. The collection is also indexed by Crossref: registrar of digital object identifiers (DOIs) registration. All this contributes to exchange of scientific developments between authors of our edition and scientists worldwide.

Referring directly to the content of the *Theory and Practice of Forensic Science and Criminalistics* current issue (No. 29), let's briefly summarize its main provisions.

The article authored by **Snieguolė Matulienė** (Lithuania), Doctor of Law, Professor, **Viktor Shevchuk** (Ukraine), Doctor of Law, Professor, Honored Lawyer of Ukraine, and **Jurgita Baltrūnienė** (Lithuania) is dedicated to the European and domestic experience of using artificial intelligence in activities of law enforcement and justice agencies. Specifically, the research paper outlines current issues of the application of artificial intelligence technologies in law enforcement and justice bodies in the conditions of martial law and global threats; identifies the main trends, issues and forensic research prospects using artificial intelligence through the prism of European integration processes; highlights gaps in the normative and legal regulation of the use of digital technologies; outlines directions for its improvement. The European development vector of modern criminalistics and forensic science in Ukraine significantly affects directions of formation of modern forensic knowledge.

Under such circumstances, the time has come for formation, introduction and active application of a new scientific field of forensic science: *Digital Criminalistics*. At present, digital criminalistics tools help identify, document and investigate war crimes committed by Russian occupation troops in the territory of Ukraine. The paper substantiates the need to revive scientific research in the field of digital criminalistics, which today is becoming a strategic direction in the development of modern criminalistics as a European science. Authors singled out and analyzed new scientific approaches to resolving debatable issues and identified promising directions for further scientific developments.

The research paper authored by **Boivob Majumder** (India) presents results of comparative study related to plea bargaining's application in India and some foreign countries. Plea bargaining is known as a means of settling court disputes around the world. Application, scope and operation of plea bargaining significantly change depending on peculiarities of common and civil law in each particular state. The author has analyzed these differences on the example of various jurisdictions of such pleas in the USA, Italy and India and put forward the thesis as to introduction of a structure which would ensure timely justice administration. Indian courts are being battered by the rise in criminal cases. Prisons are now overflowing with inmates who are being held without a trial due to the ongoing delays in case resolution. India has developed plea bargaining (as a response to this sad status of the judicial system), which was acknowledged as a trustworthy strategy for concluding open cases and accelerating the criminal justice system. However, despite

years of conceptualization, the Indian criminal justice system has yet to adopt plea bargaining. The paper by Indian colleague attempts to research whether plea bargaining in India in its present form and structure is adequate to achieve that goal by weighing its advantages and disadvantages in the context of the Indian judicial system. Given the above, it is proposed to introduce changes to this contemporary dispute resolution mechanism.

The article by **Ivan Yatsenko** (Ukraine), Doctor of Veterinary Medicine, Professor, studies into legal status of a forensic expert as a subject of forensic science activity in the context of the latest legislation of Ukraine. It has been proven that elements of legal status of forensic expert, provided for by civil, economic, administrative and criminal legislation of Ukraine, as well as by departmental regulatory legal acts, do not fully correlate with each other: they have different rights, obligations, prohibitions, restrictions and the legal responsibility of forensic expert, that can negatively affect implementation of the principles of forensic expert activity, in particular impartiality of conducting forensic veterinary examination, as well as the provision of a substantiated, objective, reliable, correct and truthful expert conclusion. In view of these shortcomings, there is a need to unify the mentioned norms for their uniform application in order to comprehensively implement principles of forensic expert activity: regardless of the type of court proceedings and grounds for carrying out forensic examination. Amendments and additions to mentioned normative legal acts of Ukraine are proposed with the aim of unifying the legal status of forensic expert.

The following article authored by **Ihor Bohdaniuk** (Ukraine), PhD in Law, Senior Researcher, concludes research paper section. It is proposed to differentiate the tasks of engineering and technical research according to four groups that define the system as general (generic). Based on the developed general structure of tasks of forensic engineering and technical research, a general list of tasks of forensic engineering and technical research have been formed, which will further contribute to unification and timely modernization of relevant sections of Research guidelines concerning preparation and appointment of forensic examinations and researches in accordance with the main task lists and approximate lists of issues to be resolved in forensic researches in all expert specializations of engineering and technical types of forensic researches. It is expedient to consider a developed general list of tasks resolved by conducting forensic engineering and technical researches as the basic for new species (subspecies) of forensic engineering and technological researches.

The section of the collection with case notes begins with an article by **Daria Davydenko** (Ukraine), PhD in Economics, Senior Researcher, **Karina Palkova** (Latvia), PhD in Law, Docent, **Yuliia Shpak** (Ukraine). The issue of ensuring forensic expert training in conditions of online education with the help of open educational resources have been analyzed by the authors. The paper studies the issue of the need to introduce open educational resources in order to ensure forensic expert training in offline learning conditions. The paper presents research and development of National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» within the framework of the *Open Educational Resource: Forensic*

Science project implementation. The research results include educational materials on forensic science collected in order to freely use them during forensic expert training in Ukraine and abroad. International experience of European partners regarding the application of available educational resources while training experts in the field of law has been considered. Expediency of applying experience gained in this field to the practice of conducting such training in Ukraine in other expert specializations has been emphasized. The research suggests continuing to expand capabilities of free access under conditions of forensic expert distance learning, introducing international educational resources into mandatory educational and methodological support of educational programs.

The research by **Anna Szyszka** (Poland), PhD, is dedicated to the model of judicial proceedings used by Polish administrative courts. Administrative justice in Poland consists of voivodship administrative courts, which hear cases in the first instance, and the Supreme Administrative Court as a court of second instance. The author assumes that the introduction of a mixed model of judicial practice of administrative courts effectively fulfils the main goal of administrative proceedings, which is to protect individual rights from the arbitrariness of public administration bodies. The intrusion of the administrative court into the sphere of powers of the authorities is justified by the effectiveness and efficiency of the judiciary. This allows the complainant to get a decision on the merits much faster. The mixed model of judicial practice of Polish administrative courts allows more effective implementation of the protection of individual rights.

The research paper by **Mykola Dementiev** (Ukraine) determines grounds, essence, conditions and coverage of the forensic expert's internal conviction in conclusions of performed research. The essence of internal conviction is the psychological state of a forensic expert, his/her confidence in obtained findings, and readiness to word conclusions. The procedural prerequisite for ensuring objectivity, impartiality of internal conviction is guaranteed by the forensic expert's independence. External manifestation of the forensic expert's inner conviction is answers to addressed questions (in the form of categorical judgments). The lack of internal conviction may be embodied by the forensic expert while formulating a conclusion as to possibility of existence (availability) of circumstances and facts. The author stresses that a possible conclusion should be distinguished from a probable one. A possible conclusion is a form of the expert version which probability or credibility is determined stemming from results of evaluation of all pieces of evidence as a whole by the investigator, prosecutor, investigating judge, and court.

The article authored by **Kostiantin Kapustnik** (Ukraine), Honored Economist of Ukraine, **Olexiy Khomutenko** (Ukraine), PhD in Economics, Senior Researcher, and **Pavlos Kipouras** (Greece), Professor, is devoted to the need to develop scientific and methodology basis on the issues of carrying out forensic economic examinations while considering other types of forensic examinations. The authors attempted to study the development of scientific and methodological guidelines on conduct of forensic economic examinations taking account other types of forensic examinations, substantiate the relevance of issues associated

with carrying out forensic economic examinations that consider other types of forensic examinations. As forensic economic examinations involve the use of other types of forensic examinations but do not fall under the concept of multidisciplinary forensic examination, and conclusions of other types of forensic examinations are not the research object of forensic economic examination, this paper emphasizes the need to develop an algorithm for conducting forensic economic examinations that take into account other types of forensic examinations. This will help forensic economists to use conclusions of other types of forensic examinations in multidisciplinary research without their evaluation, which in turn will enable to reduce time for conducting forensic examinations and contribute to obtaining objective and unbiased expert conclusions.

The research paper by **Alexei Horlachuk** (Ukraine), PhD in Economics, who constantly publishes his research papers in our collection, is dedicated to problematic aspects of classifying forensic economic examinations. The theoretical-methodological foundations of the development of forensic economic examination regarding the determination of classification features of its species composition have not only theoretical-methodological, but also direct practical significance in the activities of expert economists, as well as judicial investigative bodies in the event that the latter appoint this type of examinations. It has been found that the criterion for systematization of the species composition of forensic examinations is located in the economic plane, namely in the distribution of social production into the spheres of material and immaterial production. The next stage of

the distribution of economic examinations is to the relevant industries according to certain types of activity with the definition of the main criterion of classification – according to the type of production activity. Thanks to this, compliance with the set of requirements for the scientifically based selection of classification criteria with the distinction of sorts and types of economic examinations is ensured.

The content published by **Iryna Sivchuk** (Ukraine), PhD in Economics, is dedicated to research on peculiarities of carrying out forensic merchandising examination while investigation of crimes related to illegal logging in Ukraine. The negative impact of illegal logging on the environment is substantiated as well as changes taking place in the territories of logging are stressed. Conducted research is built on application of comparative approach involving the analysis of prices of sale and offers of this type of timber. The definition of the terms *timber*, *round timber*, their classification and characteristics are also provided. Merchandising research of round timber presupposes obtaining raw data on measurement of wood parameters and applying a certain algorithm of actions in order to assess its market value. The new national wood quality standards have been analyzed and the need to attract a forest industry specialist in the course of forensic merchandising examination is justified.

The *News of Scientific Life* section finalizes Issue No. 29 of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection. Its content covers the VI Kharkiv International Legal Forum: one of the most significant events in the legal field in 2022. The Kharkiv International Legal Forum is a national legal event organized thanks to close

and fruitful cooperation of the Ministry of Economy, Ministry of Education and Science, Ministry of Justice, National Academy of Legal Sciences of Ukraine and Yaroslav Mudryi National Law University. A number of the most pressing legal issues in conditions of war and global threats of the 21st century were discussed. These discussions involved a range of thematic areas and various forms of implementation, such as panel discussions, satellite events, round tables, presentations, master classes, and lectures. The forum was held for the sixth time, despite difficulties associated with Russian invasion of Ukraine. More than 1,000 experts specialized in various fields of law from all regions of Ukraine and 30 countries of the world (including Great Britain, the USA, France, the Netherlands, Germany, Italy, Switzerland, Denmark, Norway, Lithuania, Slovenia, Slovakia, Serbia, Azerbaijan, Kazakhstan, Uzbekistan, Taiwan, Malaysia, Brazil, etc.) attended the event. More than 40 speakers joined the discussion: distinguished Ukrainian and foreign legal scholars, employees of state law enforcement agencies, representatives of leading international courts (in particular, the International Criminal Court, European Court of Human Rights) and scientific institutions, as well as non-governmental human rights organizations, etc. You can

find a more detailed summary of the topics of the Forum participants' reports on the pages of the *News of Scientific Life* section.

The Editorial Board of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection expresses gratitude to authors of research papers who adhere to ethical and formal requirements at an adequate level before submitting their scientific articles for publication. The indicated standards are based on the quality standards for research papers and rules for their presentation established by the global scientific community. These entail publishing principles of the Publishing Ethics Resource Kit (PERK), the guidelines of Elsevier, and the Committee on Publication Ethics (COPE), Ethical Code of Ukrainian Scientist, as well as work experience of foreign and Ukrainian professional communities, scientific organizations, editorial boards and editorial offices of editions. We highly appreciate contribution of each scientist to the development of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection: by ensuring legal support for forensic expert activities, we strengthen the foundations of the rule of law in modern and future Ukraine.

We invite everyone to cooperate!
Together we will win! Glory to Ukraine!

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