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Achieving Judgment by Means of Forensic Science During the Criminal Proceedings in Romania

*La fundamentación de la enjuiciamiento por medio de las ciencias
forenses en el marco del procedimiento penal en Rumanía*

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ABSTRACT: Achieving the function of judgment by means of forensic science during the criminal proceedings in Romania has presented a real challenge for the judicial system during the years. This challenge must be integrated within the general framework of justice in criminal matters, based primarily on the traditional principles as well as the European ones, such as due process and solving penal cases in reasonable time. The current paper aims to analyze the function of judgment and its achievement through scientific techniques and methods provided by the forensic sciences. Another aim is to consider the penal procedure imperative which leads to ensuring a fair trial. The current paper is part of a research project conducted on the three functions of penal proceedings - accusation, defense and judgment - and their achievement by means of forensic science. The research results state that regarding the function of judgment, its achievement still creates difficulties for judges in their judicial activity of interpreting scientific evidence gathered and examined by the forensic experts. This aspect indicates that there is a lack of understanding the forensic evidence among judges. Despite this deficiency that exists in the judicial activity of solving penal cases and pronouncing decision based on the forensic evidence, it is useful for judges to take into account the forensic science investigation in an inter-professional approach provided by the forensic science. In this

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context, the forensic experts work in close cooperation with other practitioners, such as legal forensic scientists.

KEYWORDS: Criminal proceedings; Forensic science; Forensic examination; Function of judgment; Judicial decision.

RESUMEN: *El ejercicio de la función de juicio por medio de la ciencia forense durante el proceso penal en Rumanía ha supuesto un verdadero desafío para el sistema judicial durante años. Este desafío debe integrarse en el marco general de la justicia en materia penal, basada principalmente en los principios tradicionales y europeos, como el debido proceso y la resolución de casos penales en un tiempo razonable. El presente trabajo tiene como objetivo analizar la función del juicio y su realización a través de técnicas y métodos científicos proporcionados por las ciencias forenses. Otro objetivo es considerar imperativo el procedimiento penal que conduce a garantizar un juicio justo. El presente trabajo forma parte de un proyecto de investigación realizado sobre las tres funciones del proceso penal - acusación, defensa y juicio - y su realización mediante la ciencia forense. Los resultados de la investigación señalan que en cuanto a la función del juicio, su realización aún genera dificultades para los jueces en su actividad judicial de interpretar las pruebas científicas recabadas y examinadas por peritos forenses. Este aspecto indica que existe una falta de comprensión de la prueba forense entre los jueces. A pesar de esta deficiencia que existe en la actividad judicial de resolver casos penales y dictar sentencia con base en la prueba forense, es útil que los jueces tomen en cuenta la investigación de la ciencia forense en un enfoque interprofesional que brinda la ciencia forense. En este contexto, los expertos forenses trabajan en estrecha colaboración con otros profesionales, como los científicos forenses jurídicos.*

PALABRAS CLAVE: Procedimiento penal; Ciencias forenses; Examen forense; Función de enjuiciamiento; Decisión judicial.

SUMMARY: Introduction. – 1. Methodology of research. – 2. Involvement of forensic science. – 3. Discussions on the hypotheses. Conclusions. Bibliography.

INTRODUCTION

Beyond the basic functions of criminal proceedings, which converge on establishing truth in penal cases and solving them legally and substantially, based on pertinent, conclusive and genuine evidence, the main competence of the courts of law is that of evaluating pertinently, completely and objectively the forensic examination reports the forensic experts provide them with. The judge is thus the judicial body which orders forensic examinations during the judgment stage of criminal proceedings, either *ex officio* or at the parties or prosecutor's request, and calls for forensic experts to carry out diverse kinds of forensic examinations.

The determinant role of the court of law is that of being involved in a professional duty of appreciating and improving the forensic examination results to assure establishing truth - *res judicata pro veritate habetur* - in the penal cases it was invested with. Basically, the penal case is solved under the rule of administering evidence, and the scientific evidence is to a certain extent, a scientific one. Although they do not have *ex ante* a procedural established value, the scientific evidence must be corroborated with the other forms of evidence administered in the penal case.

Scientific evidence should have the three classical characteristics for evidence at the criminal proceedings - to be pertinent, conclusive, and useful² - to serve to establishing truth in the penal case and solving it legally. This means that this evidence must be genuine. Otherwise, the court of law would not be able to use it or pronounce a decision based exclusively on such evidence.

Form a theoretical point of view, doctrine emphasizes the issue of the dual feature of balancing expert evidence³ and opinion evidence. The latter type may not meet the three criteria stated above. Opinion evidence is considered as being more a "generalisation of objective facts"⁴,

² A general presentation on administering evidence in criminal cases from a case law perspective is discussed in MOISA, Cristina. *Probleme în procesul penal. Practica judiciară adnotată*. Bucharest: Hamangiu, 2017, p. 3.

³ GILSON, Cedric Charles. The Admissibility of Expert Evidence in Criminal Proceedings in England and Wales. *Recapitulation and Review*, n. 2, 2017, pp. 1-10.

⁴ HARVEY, Ian. Applying rules of evidence in administrative proceedings. *Precedent*, v. 150, 2019, pp. 18-25. Available at: <https://search.informit>.

and, for this reason, judges cannot pronounce a legal and justified judicial decision exclusively based on this evidence. Usually, opinion evidence is called interpretable evidence, whose administration and appreciation by the court of law during the deliberation phase are not permitted. This feature makes it inadmissible. In cases in which it is proposed by the parties involved or by the prosecutor, the judge is entitled to reject them. In other words, a judicial decision cannot be pronounced on this kind of evidence. In these circumstances, the issue leans towards the idea of strengthening forensic science and implicitly with strengthening forensic evidence in practice. Evidence-based practice is a concept commonly discussed by doctrine⁵, although it is appreciated differently by the experts in criminal matters, according to the case-law decisions and the application of the principles of criminal proceedings, advancing the general rules also preferred in this matter.

Based on the general overview of the article, certain aims have been established⁶.

- Making recommendations for the purpose of maximizing the use of forensic science means including scientific technologies and techniques in order to solve penal cases, investigate the crimes of homicide with an unidentified corpse and protect the crime victims⁷.

- Identifying potential advanced scientific tools which may help forensic experts in their activity of using forensic science technologies and techniques.

com.au/documentSummary;dn=240371034047366;res=IELHSS. Accessed on: July 23, 2022.

⁵ CRIADO-PEREZ, Christian; COLLINS, Catherine G.; JACKSON, Chris J.; OLDFIELD, Philip; POLLARD, Brett; SANDERS, Karin. Beyond an 'informed opinion': evidence-based practice in the built environment. *Architectural Engineering and Design Management*, v. 16, n. 1, 2020, pp. 23-40.

⁶ As part of the three paper-series, the current article is focused on the main and general overview of the whole purposes of the research project.

⁷ MAGHERESCU, Delia. The victims' rights on the forensic examination during the penal procedure in Romania. In: ANDRASKO, Jozef; HAMULAK, Jiraj; KAHOUNOVA, Michaela (eds.) *Constitutional, Statutory and Criminological Attributes for Crime Victims*. Bratislava: Univerzita Komenského v Bratislave, 2018, pp. 136-142. Available at: https://www.flaw.uniba.sk/fileadmin/praf/Veda/Konferencie_a_podujatia/bpf_2018_new/Zbornik_BPF2018_sekcia_1.pdf. Accessed on: July 24, 2022.

- Disseminating a guide of the best practices, highlighting practical forensic science activity gathering and analyzing forensic evidence with the purpose of establishing truth in penal cases investigated and solved legally based on scientific evidence.

- Studying incidental legal issues related to forensic science which judges may take into account in pronouncing decisions.

All these issues lead to the need to achieve the quality of criminal proceedings, which was defined by doctrine as an imperative requirement. In this matter, it has been emphasized that "Today the quality of criminal proceedings largely depends on the right to fair, open and timely case hearing in the independent and impartial court determined by the law"⁸.

1. METHODOLOGY OF RESEARCH

Despite the general feature of research design which characterizes the entire paper, the current research is conducted within the context of the legal provisions of the criminal procedure law and forensic rules in force in Romania as well as the other rules and regulations, including the European ones, which are compulsory for the Romanian legislator as part of domestic law.

First of all, the paper seeks to examine how judges evaluate the scientific evidence gathered from crime scenes by the investigation bodies, preserved, analyzed and reported by the forensic experts, administered by the judicial bodies as well as evaluated and perceived by themselves, the evidence being also considered forensically powerful and scientifically complicated⁹.

⁸ In accordance with the provisions regulated by the European Convention for the Protection of Human Rights and Fundamental Freedoms, adopted on 4 November 1950, and entered into force on 3 September 1953. Available at: <https://www.echr.coe.int/Pages/home.aspx?p=basictexts&c>. Accessed on: June 22, 2022. See in this regard, KAIJA, S. Issues in separation of criminal procedural functions. Society. Health. Welfare, v. 40, 2018, p. 4.

⁹ FINDLAY, Mark. Juror Comprehension and the Hard Case – Making Forensic Evidence Simpler. *International Journal for Law, Crime and Justice*, v. 36, n. 1, 2008, pp. 15-53.

The research study also focuses on the issue of the evaluation of expert opinion by judges. In this judicial context, some pertinent questions must be asked on the following judicial issues.

- Do judges have sufficient professional abilities to understand and evaluate the forensic examination reports on the evidence provided by the forensic experts?
- Could their evaluation be disturbed by the other kinds of evidence also administered in the penal case?
- Could they create confusion of evaluation?

These are common questions and the current research looks for answers in such a way as to delimit the common tendencies in judicial activity from the standardization of forensic activity.

Secondly, in achieving the aims of the research, the qualitative classic methods have been used consisting of a comprehensive evaluation of the legal provisions in force that regulate forensic examinations in criminal matters combined with in-depth research on the most relevant aspects of the jurisprudence references stated by the courts of law in Romania.

2. INVOLVEMENT OF FORENSIC SCIENCE

In disseminating these questions, an inter-professional approach has been taken into account, which consists of setting up mixed teams of forensic investigators¹⁰ who work in close cooperation to gather the forensic evidence in penal cases¹¹. The forensic evidence turns then into expert evidence¹², which helps judges in making decisions in penal cases¹³.

¹⁰ MAGHERESCU, Delia. *Teoria generala a expertizelor criminalistice*. Bucharest: Hamangiu, 2021, p. 18.

¹¹ According to Article 172 of the Code of penal procedure of Romania.

¹² LAUREIRO-MARTINEZ, Daniella; BRUSONI, Stefano. Cognitive flexibility and adaptive decision-making: evidence from a laboratory study of expert decision makers. *Strategic Management Journal*, v. 39, n. 4, 2018, pp. 1031-1058.

¹³ A contrary point of view involves the penal cases in which the judgment focuses around the evidence gathered exclusively in the investigation phase of criminal proceedings. *De iure*, it is the case stated by Article 349 para (2) of Code of criminal procedure of Romania, which supposes that the court of law is entitled to solve the criminal case under the evidence administered

In this respect, multiple specializations can occur. The present study involves legal forensic science, forensic psychiatry and odontology. The research is based on three judicial themes set up on a hypothetical basis, each of them having particular relevance in practice due to the major involvement of the forensic sciences in the judges' activity of evaluating and understanding the forensic evidence.

THEME 1: INVOLVEMENT OF LEGAL FORENSIC SCIENCE

Homicide cases create the judicial framework¹⁴ for judges to decide upon the activity of carrying out forensic examinations, which will provide them with conclusive results.

Once conducting a legal forensic examination has been ordered and the forensic legal expert appointed by the court of law¹⁵, some specialized activities must be outlined. In particular cases, it implies a standardization activity¹⁶, which consists of several multidisciplinary approaches and objectives stated in purpose to achieve the goals proposed.

During the procedure of forensic examination of a corpse, as victim of violent homicide, a series of pre-existing diseases are often discovered. In certain cases, the anatomical diseases or body's infirmities can influence a violent death or can even condition its genesis. For this reason, at the crime scene the forensic investigator will be interested in establishing the entire victim's medical history. Such data, along with the

during the investigation phase, if defendant requires expressly the simplified procedure and admits totally the deeds he was in charge for by prosecutor, as well as if the court of law appreciates that those evidence are enough to find the truth in penal case and solve it legally.

¹⁴ PĂCURARIU, Ioana. Pentru îndeplinirea condițiilor de legalitate a administrării probelor, este necesar ca autopsia medico-legală să fie efectuată de un expert medico-legal oficial? *Revista Universul Juridic*, n. 11, 2018, pp. 50-55; HOUGH, Richard M. The investigation of homicide. *Homicide Studies. An Interdisciplinary and International Journal*, v. 23, n. 2, 2019, pp. 87-92.

¹⁵ According to Article 173 and Article 185 Code of penal procedure of Romania.

¹⁶ MURPHY, Erin. Forensic Evidence. In: LUNA, Erik. (ed.), *Reforming Criminal Justice, Pretrial and Trial Processes*, vol. 3, Phoenix: Arizona State University, 2017, pp. 171-173.

forensic examination results, will help the forensic expert in determining the role of pre-existing diseases in the violent cause of death¹⁷.

In cases of forensic examination of violent death, the forensic experts will respond to several objectives in their specializations based on questions they were assigned by judges. The objectives of forensic examinations refer to the following issues:

- a) the cause of death;
- b) the approximate time of death;
- c) whether the death was violent and the character of influencing factors as well as their particularities;
- d) the number, succession and mechanism of producing lesions;
- e) the causality relation between the bodily lesions ascertained and the death;
- f) whether the lesions ascertained present a vital or a post-mortem feature;
- g) the consumption of alcohol or drugs before death and their quantity.

Other sciences are also involved in achieving the final report of the forensic legal examination including anthropology, odontology or even entomology whose conclusions might be compulsory in certain cases of unidentified, putrefied or decaying corpse¹⁸.

First of all, the situation depends on the category of homicide investigated¹⁹. This means that the situation differs from one case to another. For example, in cases of homicide with an unidentified

¹⁷ PĂCURARIU, Ioana, *op. cit.*, pp. 50-55.

¹⁸ Based on several specializations of forensic examinations, the particular feature of an aggravated murder, in cases with unidentified corpse, is provided by the special means of examination of corpse, and the crime scene as well. For this reason, the complex investigation teams of forensic examination are required. Moreover, in complex cases, an international cooperation will be highly involved in solving such crimes. See a future perspective of the issue in DE KINDER, Jan; PIRÉE, Hugo. The future of the forensic science providers – Time to re-think our structures?. *Forensic Science International*, v. 316, November 2020.

¹⁹ PIZZARO, Jesenia M.; TERRILL, William; LO FASO, Charles A. The impact of investigation strategies and tactics on homicide clearance. *Homicide Studies. An Interdisciplinary and International Journal*, v. 24, n. 1, 2020, pp. 13-22.

corpse, the forensic legal expert is called to express his opinion on the following aspects:

- (i) the cause of death;
- (ii) the victim's age;
- (iii) the victim's gender;
- (iv) the victim's illness history.

In cases of serious homicide, as violent crimes²⁰ or family homicide²¹, a blood examination is necessary in order to gather DNA evidence. This kind of examination will establish the victim's DNA profile as well as that of the perpetrator, if the forensic investigator has drawn samples from the crime scene and provided them to the forensic legal expert. Such samples can consist of saliva, semen, seminal fluid, or any biological material sampled from the victim's corpse.

Victim identification can involve several forensic techniques²². The investigation to identify the corpse depends on the object examined which can consist either of an entire corpse or its separated parts. For the latter situation, the procedure of forensic identification²³ must be preceded by solving the other aspects regarding the following issues:

- the parts of corpse found;

²⁰ LIEM, Marieke; KRUSSELMANN, Katharina; EISNER, Manuel. From murder to imprisonment: Mapping the flow of homicide cases - A systematic review. *Homicide Studies*, v. 24, n. 3, 2020, pp. 220-241.

²¹ IRATZOQUI, Amaia; MCCUTCHEON, James. The influence of domestic violence in homicide cases. *Homicide Studies*, v. 22, n. 2, 2018, pp. 145-160; LETH, Peter Mygind. Homicide by drowning. *Forensic Science, Medicine, and Pathology*, n. 15, 2019, pp. 233-238.

²² EDGAR, Heather J.H. Dental morphological estimation of ancestry in forensic contexts. In: BERG, Gregory E., TA'ALA, Sabrina C. (eds.). *Biological affinity in forensic identification of human skeletal remains*. Boca Raton: CRC Press, Taylor&Francis Group, 2015, pp. 191-208.

²³ The process of identification has been discussed by doctrine as being a "universal method of finding truth" within the process of judicial knowledge of solving any aspect which appears during the criminal investigation and judgment. In this regard, see STOIAN, Maria Georgeta; GALAN, Elena. Relația microurmă/ întreg stabilită prin metode spectrometrice moderne și formularea concluziei expertizelor fizico-chimice criminalistice, p. 111. Available at: http://old.mpublic.ro/jurisprudenta/publicatii/relatia_microurma_intreg.pdf. Accessed on: June 4, 2022.

- the anthropological conclusion of the corpse parts found as being either of human or non-human;
- the number of victims the corpse parts belong to.

The human parts of a corpse which are not amputated surgically may have different origin. *De facto*, the situation can refer to the cases in which parts were lost by the legal forensic specialists from diverse causes. Other cases can involve corpse parts undiscovered during the initial investigation of the crime scene, but subsequently, especially in cases of road accidents, in explosions, when the human body is fragmented and spread over a large area. Some corpse parts can be moved by animals or the corpse parts are separated intentionally by the perpetrator in order to hide them.

Doctrine has stated the idea of management in the field of crime scene investigation. In this matter, it has been emphasized that "Crime scene management skills are an extremely significant task component of investigation because evidence that originates at the crime scene will provide a picture of events for the court to consider in its deliberation"²⁴. The general environment of the crime scene investigation should thus be organized at high standards in such a manner for the judicial bodies to assure the integrity of the crime scene and achieve the functions of criminal justice properly. Moreover, the crime scene management is an invariable task of understanding how important the forensic activity in the investigation phase of criminal proceedings is. Consequently, the crime scene management is then connected directly to the process of deliberation in criminal cases.

THEME 2: INVOLVEMENT OF FORENSIC PSYCHIATRY

In achieving the judicial objectives stated by the court of law, the forensic legal examinations are also divided into two parts. One of these supposes the exclusive forensic legal examination of the victim's corpse, while another is the forensic psychiatry examination of defendant.

²⁴ GEHL, Rod; PLECAS, Darryl. *Introduction to criminal investigation: Processes, practices and thinking*. New Westminster, BC: Justice Institute of British Columbia, 2016, p. 102.

In cases of serious crimes, the forensic psychiatric examination is compulsory in accordance with Article 184 (1) Code of penal procedure²⁵. These cases refer to:

- murder or any other violent crimes;
- crimes committed by minors between the age of 14-16 years old;
- cases of murdering of a new-born child by mother;
- any other cases in which the judge has a reasonable doubt regarding the defendant’s discernment at the moment of committing crime.

It has been stated that in some cases having defendants who present a level of psychological disturbance, if they would be under criminal liability, some medical or sociological-legal measures are also necessary²⁶.

TABLE 1. The decision of „ten standard marks”

Psychological examination issue	Mark in judgment orientation			
Physical contact/ Gesture/ Posture	Difficult	Poor	Good	Excellent
Perception				
Memory				
Consciousness				
Orientation				
Thinking/ idiolect				
Affectivity/ emotion/ instinct				
Social integration/ adaptability				
Representation				
Current personality				

²⁵ LAW no. 135 of 2010 on the new Code of Criminal procedure, published in the Official Journal of Romania no. 486 of 15 July 2010, into force on 1 February 2014.

²⁶ HECSE, Lazlo; HADAREANU, Viorel. Expertiza medico-legala psihiatrica sau expertiza medico-legala psihiatrica si psihologica? Argumente teoretice si practice. *Dreptul*, n. 11, 1999, pp. 124-131.

The situations identified in Table 1 refer to the category of questions which the forensic psychiatric expert asks defendants when conducting the psychiatric forensic examination. In accordance with the answer provided by them, the appropriate mark of evaluation is stated by the forensic psychiatric expert which will guide them when drawing up the evaluation report on the defendants' discernment in the moment of committing crimes²⁷. Every mark is actually the preliminary statement of evaluation, which will be followed by the final report containing also the recommendation that the forensic psychiatric expert will provide to the court of law²⁸.

The forensic psychiatry examination is not limited to questionnaires, which are complimented by the defendant's other personal elements, such as:

- medical documents on psycho-pathological history;
- information on the defendant's family lifestyle;
- psycho-pedagogical elements during the education process.

The main psychological forensic examination is usually completed by the other clinical or interdisciplinary examinations, such as neurological and electroencephalography ones.

From a penal procedural point of view, the psychiatric forensic expert is called by the courts of law to respond to standardized objectives whose report conclusions will help them in decision making process. Essentially, the psychiatric forensic experts are looking for answers which guide them to one of the defendant's clinical mental illnesses or health²⁹.

²⁷ CRIMINAL DECISION no. 160/A/2021 of 2 June 2021 of the High Court of Cassation and Justice of Romania. Available at: <http://www.scj.ro>. Accessed on: July 11, 2022. See also BOTNARU, Stela. Responsabilitatea redusă în pruncucidere: Implicatii juridico-penale. *Studia Universitatis Moldaviae*, v. 3, n. 73, 2014, pp. 138-141. Available at: <http://dspace.usm.md:8080/xmlui/bitstream/handle/123456789/175/18.-p.138-141.pdf?sequence=1&isAllowed=y>. Accessed on: July 12, 2022.

²⁸ CRIMINAL DECISION no. 532/RC/2021 of 18 November 2021 of the High Court of Cassation and Justice of Romania. Available at: <http://www.scj.ro>. Accessed on: July 11, 2022.

²⁹ CRIMINAL DECISION no. 837/R of 31 May 2012 of the Cluj Court of Law. Available at: <https://legeaz.net/spete-penal-ca-cluj-2012/decizia-penala-837-2012-ca-cluj-qvb>. Accessed on: June 25, 2022; VIDAICU, Mihaela. Expertiza

The psychiatric legal forensic expert will then appreciate the psychiatric state in which the defendant acted when committing the offence. Thus, the final report will conclude on the aspects presented in Table 2.

TABLE 2: APPRECIATING VALUES OF THE DEFENDANT'S ACTION IN COMMITTING CRIMES

Defendant's action in committing crime	Defendant's appreciation of anti-social feature of action
Under the mental alienation	No appreciation
Under the mental debility	No appreciation
Under the state of serious consciousness disturbance	No appreciation
Missing discernment	No appreciation
Psychotic state	Limited appreciation
Mental debility	Limited appreciation
Under the state of consciousness disturbance	Limited appreciation
Pathological psychical state	Full appreciation

In penal cases where the psychiatric examination concludes that the defendants did not have discernment at the time of committing crime, then they will not be charged with that crime³⁰. In these circumstances, the court of law will decide upon applying certain safety measures of medical character. Some may relate to the defendant's isolation, therapy, and penal decision. Nevertheless, these kinds of safety measures are different to those related to the compulsory therapeutic measures which are applied to the psychical mentally sick defendants.

judiciara. Indrumar pentru avocati. Sirius, 2015, pp. 68-72. Available at: https://www.bizlaw.md/wp-content/uploads/2017/02/Expertiza_juridiciara.pdf. Accessed on: June 3, 2022.

³⁰ VIDAICU, Mihaela, *op. cit.*, pp. 68-74.

In practice, the court of law cannot pronounce decision of condemnation against defendants in several circumstances of psychical diagnoses. They refer to schizophrenia, depressive-maniacal psychosis, demential state, trailing reactive psychosis, chronic psychotic state, persistent delirious disturbance.

The Recommendations no. R (87)3 of 1987 of the Council of Ministers to the Member States of the Council of Europe has decreed that in cases with mentally alienated defendants, the courts of law cannot convict them, but they are instead transferred immediately to the appropriate medical establishments for hospitalization³¹.

THEME 3: INVOLVEMENT OF FORENSIC ODONTOLOGY

Regarding the contribution of forensic odontology to solving penal cases, two particular situations are configured in this context.

(1) The first situation refers to the identification of victims.

Several cases involve the forensic investigation of serious crimes, such as homicide with unidentified, putrefied or burnt corpse³² as well as particular cases of trafficking in human beings associated with several cases of crimes³³. Dental identification is successfully used by the forensic

³¹ RECOMMENDATION. Council of Ministers to the Member States on the rules of the European Prison Rules, no. R(87)3, 1987. Available at: <https://rm.coe.int/16804f856c>. Accessed on: July 22, 2022.

³² DE BOER, Hans H.; ROBERTS, Julie; DELABARDE, Tania; MUNDORFF, Amy Z.; BLAU, Soren. Disaster victim identification operations with fragmented, burnt, or commingled remains: experience-based recommendations. *Forensic Science Research*, n. 5, 2020, pp. 191-201; VALENZUELA, A.; MARTIN-DE LAS HERAS S.; MARQUES T.; EXPOSITO N.; BOHOYO J.M. The application of dental methods of identification to human burn victims in a mass disaster. *International Journal of Legal Medicine*, v. 113, n. 4, 2000, pp. 236-239; BERKETA, John William; SIMS, Catherine; RAHMAT, Rabiah Al Adawiyah Binti. The utilization of small amounts of residual endodontic material for dental identification. *Journal of Forensic Odonto-Stomatology*, v. 37, n. 1, 2019, pp. 63-65. Available at: <https://www.iofos.eu/Journals/JFOS%20May19/JFOS-37-1-63.pdf>. Accessed on: July 13, 2022.

³³ It has been appreciated that the areas of forensic odontology as well as the forensic genetics are of the highest value in cases of trafficking in human beings. In this purpose, see LORENTE, Jose A.; SAIZ, Maria; HAARKÖTTER,

investigators in cases requiring the identification of "human remains of air traffic accidents, industrial accidents, natural disasters, terrorist attacks, determination of age, gender and ethnic origin, bite marks analysis particularly in case of child abuse and rape victims"³⁴. Other serious homicide cases are also discussed by doctrine as abstruse crimes³⁵. In these circumstances, a question arises for the judicial bodies, particularly to know the victim's identity³⁶. In this regard, the issue of standardization procedure could be understood by applying a set of means of particular tools, also required for the entire proceedings in criminal cases. Such standardization appears in comparison with the other elements of forensic science, such as those presented in particular feature, related to the above discussed cases of legal forensic and forensic psychiatry. Obviously, in these circumstances a separated approach of these issues cannot be taken into consideration, due to the fact that the criminal proceedings is characterized by an emphasized interdisciplinary feature. Therefore, the objectives stated by the court of law will be obtained through several forensic examinations.

In practice, there are cases in which the judicial bodies call for the forensic odontologists to establish the crime victim's identity by using the technique provided by the forensic odontology³⁷. It consists in identifying the victim through analyzing teeth marks found on the crime scene.

Christian; ROBLES-FERNANDEZ, Inmaculada; ALVAREZ-CUBERO, Maria J.; GALVEZ, Xiomara; MARTINEZ-GONZALEZ, Luis J.; LORENTE-REMÓN, Begona; ALVAREZ, Juan C. Genetic identification against traffic in human beings. *WIREs Forensic Science*, v. 3, 2021, pp. 1-13.

³⁴ SINGH, Narendra Nath; GOWHAR, Owais; AIN, Tasneem S.; SULTAN, Saima. Exploring trends in forensic odontology. *Journal of Clinical and Diagnostic Research*, v. 8, n. 12, 2014, pp. 28-30.

³⁵ The differences between several kinds of crimes are the key-point in drawing up the methodological recommendations on their forensic examination. See, DORAS, Simion. Clasificarea si caracteristica criminalistica a infractiunilor de omor ca puncte de repere privind directionarea activitatii de urmarire penala. *Revista de Stiinte Penale*, v. II, 2006, pp. 37-41.

³⁶ HIGGINS, Denice; AUSTIN, Jeremy J. Teeth as a source of DNA for forensic identification of human remains: A Review. *Science & Justice*, v. 53, n. 4, 2013, pp. 433-441.

³⁷ FORREST, Alexander Steward; WU, Henry Yuan-Heng. Endodontic imaging as an aid to forensic personal identification. *Australian Endodontic Journal*,

On this topic, doctrine discusses a series of methods for identifying an unknown corpse. They refer to personal description regarding the hair, age³⁸, height, visual identification, medical historical records regarding implants, tattoo, prosthesis, scars, fingerprints, DNA profiling. As a rule, particular attention has been paid to dental identification due to the fact that dental tissues are very preserved³⁹ even if the corpse is fully burnt, dismembered or putrefied. A particular overview arises in these cases to state over the new technologies the specialization of legal forensic odontology was provided with during the last period of time. In this context, the procedure of identifying corpse involves new means of technologies implemented at the institutional level of forensic science and particularly in specialized laboratories. Among them, the current procedure used by the forensic science in the field of odontology involves the computer program which the 3D presentation in scanning the crime scene⁴⁰.

These methods are frequently used by the forensic odontologists to find out the victims' sex, age, and ethnicity⁴¹. In practice, there are no

v. 36, n. 2, 2010, pp. 87-94; SILVA, Rhonan Ferreira; FRANCO, Ademir; MENDES, Solon Diego Santos Carvalho; PICOLI, Fernando Fortes; NUNES, Fernando Gomes; ESTRELA, Carlos. Identifying murder victims with endodontic radiographs. *Journal of Forensic Dental Sciences*, v. 8, n. 3, 2016, pp. 167-170.

³⁸ BLENKIN, Matthew R.B.; EVANS, Wendell. Age estimation from the teeth using a modified Demirjian System. *Journal of Forensic Sciences*, v. 55, n. 6, 2010, pp. 1504-1508; AALDERS, Maurice; LEAH, Wilk. Investigating the Age of Blood Traces: How Close Are We to Finding the Holy Grail of Forensic Science?. In FRANCESE S. (ed). *Emerging Technologies for the Analysis of Forensic Traces. Advanced Sciences and Technologies for Security Applications*. Cham: Springer, 2019, pp. 109-128.

³⁹ HILL, Anthony J.; LAIN, Russell; HEWSON, Ian. Preservation of dental evidence following exposure to high temperatures. *Forensic Science International*, v. 205, n. 1-3, 2011, pp. 40-43.

⁴⁰ Doctrine in criminal matters has advanced five series of hypotheses which comprise, among others, domestic, work-related and accidents issues. See, GALANTE, Nicola; FRANCESCHETTI, Lorenzo; DEL SORDO, Sara; CASALI, Michelangelo Bruno; GENOVESE, Umberto. Explosion-related deaths: An overview on forensic evaluation. *Forensic Science, Medicine and Pathology*, v. 17, 2021, pp. 437-448.

⁴¹ BERKETA, John William. Maximizing postmortem oral-facial data to assist identification following severe incineration. *Forensic Science, Medicine, and Pathology*, v. 10, n. 2, 2014, pp. 208-216.

several errors committed by new tools of technology provided for these cases and, for this reason, the judicial bodies are confident with the results gathered from the crime scene, investigated scientifically by the forensic odontologists and provided in criminal cases they are invested with.

The trend in methods of collecting data and also the forensic technologies used by the forensic odontologists in cases of serious homicide with unidentified corpse⁴² has had a rapid evolution, which were prevalently met during the procedure involving conventional forensic methods, such as dental imaging techniques, bite-mark analysis, and DNA dental tissue analysis⁴³. The same is true in other serious cases of trafficking in human beings, whose victims are part of the human rights violations. Related to this kind of crimes, doctrine has highlighted that "the physical hardness of dental tissue, which is the most resistant tissue in the entire body, makes them ideal for identifying remains, even after long periods of time or after exposure to high temperatures, due to both their hardness and to their small sizes. Dental tissues are highly valuable for human identification and can also be used to identify other human trafficking-related problems, such as child abuse and neglect, violence, and sexual abuse, based on bite mark evidence"⁴⁴.

(2) The second situation regards identification of the perpetrators.

The criterion is analyzed following several indicators of forensic sciences. Perpetrators are typically identified by fingerprint marks, by traces found on the crime scene as well as by biological materials found at the crime scene. The third case contains dental traces the judicial bodies could discover at the crime scene in such a way that their examination results should lead to the perpetrator's identification. A different character

⁴² BERKETA, John William; JAMES, Helen; LAKE, Anthony W. Forensic odontology involvement in disaster victim identification. *Forensic Science, Medicine, and Pathology*, v. 8, n. 2, 2012, pp. 148-156.

⁴³ Some techniques also use sequence of radiographic evidence to compare samples with findings in human identifications. See, SILVA, Rhonan Ferreira; FRANCO, Ademir; MENDES, Solon Diego Santos Carvalho; PICOLI, Fernando Fortes; NUNES, Fernando Gomes; ESTRELA, Carlos. *op. cit.*, pp. 167-170.

⁴⁴ LORENTE, Jose A.; SAIZ, Maria; HAARKÖTTER, Christian; ROBLES-FERNANDEZ, Inmaculada; ALVAREZ-CUBERO, Maria J.; GALVEZ, Xiomara; MARTINEZ-GONZALEZ, Luis J.; LORENTE-REMON, Begona; ALVAREZ, Juan C., *op. cit.*, p. 4.

appears in this case than in the procedure of the identification of victim's corpse, already presented. This means that the situation is well established in the above presented case, while the procedure of identification of perpetrator is more complicated, analyzing from several points of view. One of these involves the examination of evidence gathered from the crime scene by the forensic odontologists, knowing that the only one pertinent evidence is the trace of the perpetrator's teeth, sampled either from the victim's corpse or from foods if presented in the surrounding area. Otherwise, the activity of odontologists is blocked as long as there are no traces to be sampled in order to be examined in laboratory.

The cases of homicide present a particularity due to the fact that both activities of discovering and investigating them are carried out in an uncertain environment in the beginning of the investigation stage because the court of law does not hold enough data for coherent direction of a penal case. In such cases, the judicial bodies seek appropriate investigative ways of clarifying the circumstances the crimes were committed in. In these circumstances, the forensic means of investigation of serious crimes are a key tool in this matter⁴⁵. They will conclude on the identity of the perpetrator who will then be charged with committing the crime.

3. DISCUSSIONS ON THE HYPOTHESES

De facto, all these kinds of forensic examinations are indispensable for judges in the procedure of deliberating and implicitly making judicial individualization of punishment in penal cases. Thus, they must take into account all criteria regulated by the Penal Code regarding the degree of crime and degree of accusation, determined also by the circumstances of committing crime as well as by the perpetrator's personal circumstances. Based on this argument, the court of law is then entitled to state beyond any reasonable doubt that the criminal activity exists, it is a crime and was committed by defendant under appropriate form of guilt stated by the penal law⁴⁶. Referring to the degree of accusation, doctrine has

⁴⁵ DORAS, Simion, *op. cit.*, pp. 37-41.

⁴⁶ For a contrary opinion, see CRIMINAL DECISION no. 40/A/2022 of 28 February 2022 of the High Court of Cassation and Justice of Romania. Available

emphasized that it is "analyzed both at abstract level in accordance with the kind of crime and legal limits of punishment, and at concrete level in accordance with the real circumstances the crime was committed in, as well as with the defendant itself"⁴⁷.

On the one hand, the exemplar feature of punishment has consequences for the defendant's judicial status. On the other hand, the resoluteness feature of punishment determines that it is a deterrence prevention, while its proportion, decided by judges, will reflect the seriousness of the crime and the defendant's degree of guilt⁴⁸.

PRINCIPLES OF EVALUATING SCIENTIFIC EVIDENCE

First of all, the science of criminal procedure law and the activity of forensic examination require that the evidence must be pertinent, conclusive and genuine. In order for the judges to evaluate this kind of evidence and implicitly achieve the proposed judicial goal, a set of principles must be coordinated in a comprehensive manner and in such a way to pronounce the legal decision at the end of criminal proceedings. In these circumstances, they activate the judicial mechanisms provided by forensic science, whose importance is taken into account while proceed to evaluate entire evidence administered by the judicial bodies both in the investigation and judgment phases of criminal proceedings. This is because achieving judgment by means of forensic science must firstly provide the guarantees of due process.

at: <http://www.scj.ro>. Accessed on: July 4, 2022.

⁴⁷ TOCAN, Isabelle. Arestarea preventiva. In: UDROIU, Mihail (ed.), *Codul de procedura penala. Comentariu pe articole*, Third ed. Bucharest: C.H. Beck, 2020, p. 1423.

⁴⁸ CRIMINAL DECISION no. 188/A of 24 October 2011 of the Cluj Court of Law, definitive pronounced by the High Court of Cassation and Justice - Penal Section, Criminal Decision no. 421 of 15 February 2012. Available at: https://www.curteadeapelcluj.ro/cacj_vechi/Jurisprudenta/sectia%20penala/Penal%20trim%20I%202012.pdf. Accessed on: July 23, 2022.

The current research study imposes a limitation between the principle of effectiveness⁴⁹ and the principle of disposition⁵⁰, which characterize the criminal proceedings in Romania. They are reflected in the judges' activity of evaluating the forensic examination reports result as well as in the procedure of pronouncing judicial decisions in penal cases.

The judicial framework is accustomed to respecting general rules of forensic examination reports that the forensic experts provide the courts of law with. Actually, in the procedure of analyzing the forensic examination report, the judge is not limited to observing the forensic experts' conclusions, but it supposes the evaluation of entire elements existed in the penal case.

The research conducted on this topic highlights that the formal analysis of forensic evidence implies both a particular evaluation of the forensic examination report entirely and the scientific character of the methods and means of forensic science used by experts, even if the last part is not necessary to be carried out by judge because any technical aspect regarding the activity of carrying out the forensic examination is a matter for the forensic expert. In other words, this procedure may exclude the judges' competence as long as the forensic experts explain in detail the methodology and forensic methods used in purpose to gather the conclusions provided in the forensic report. This argument could be supported by the fact that the Code of criminal procedure in Romania does not regulate such a procedure, and its missing is equally to applying the principle of *ubi lex non distinguit, nec nos distinguere debemus*.

The lack of judges' technical forensic knowledge is the real procedural reason of calling for forensic experts as technical specialists in forensic sciences. In these circumstances, the judges cannot exercise their control over the scientific character of the forensic experts' technical means themselves. In this way, doctrine has stated that it is unreasonable to provide the judge with the right of control of forensic examination,

⁴⁹ COMMUNITY-BASED SENTENCING ORDERS. Imprisonment and parole options. Final Report, Brisbane: Queensland Sentencing Advisory Council, 2019, pp. 40-42.

⁵⁰ BANACH-GUTIERREZ, Joanna Beata; HARDING, Christopher. *EU Criminal Law and Policy. Values, Principles and Methods*. London: Routledge, 2016, pp. 111-132.

technically speaking, as long as it has called on forensic experts and required them, because he does not have technical competences in the matter⁵¹.

Secondly, the principle of effectiveness is more connected to the pre-trial judicial bodies' activity being also its consequence. The situation must be viewed in accordance with the particular kind of evidence, as presented in Table 3. Each of them is featured by scientific technologies and means of gathering evidence useful for the court of law's activity of judgment.

TABLE 3: FORENSIC EVIDENCE PATTERN

Experience evidence	Analytical evidence	Digital evidence
fingerprint examination	DNA examination	digital cameras
firearm examination	material	computer network
handwriting/documents	fluid	hard drive
bite mark	drug	electronic evidence
bloodstain pattern	chemical	digital support
hair	fire and explosion	optic support

In the penal proceedings environment, a question could be asked, as follows. Why use forensic evidence in criminal proceedings? The answer is a long-time research activity result and dominated by diverse points of view.

- It firstly helps the judges in the procedure of making decisions in the penal case, beyond any reasonable doubt.
- Forensic evidence helps in the reconstruction of the crime scene, and identifying perpetrators.
- Forensic evidence is useful in finding defendants guilty or not guilty by the court of law as well as understanding the criminal motives for committing crimes.

⁵¹ IONESCU, Lucian; SANDU, Dumitru. *Identificarea Criminalistica*. Bucharest: Editura Stiintifica, 1990, pp. 219-228.

In accordance with the above stated ideas, doctrine has highlighted that "Because of the power of science to persuade, courts are careful to assess the validity of a scientific process before accepting its results"⁵².

The procedure of evaluating scientific evidence usually involves four criteria⁵³:

- (i) the theory or technique has been tested;
- (ii) a level rate of error must be taken into account in respecting the standard in implementing techniques;
- (iii) the theory or technique has been implemented in practice;
- (iv) the theory or technique has been accepted in a forensic professional environment⁵⁴.

Following these criteria, the courts of law are less likely to make misinterpretation errors, which can degenerate into unlawful justice. They reduce the chance of judicial errors in forensic evidence evaluation.

Thirdly, a real dilemma appears when the judge must evaluate the scientific evidence of the DNA examination report results. From this point of view, the Probabilistic Genotype (PG) is relevant - which as a concept is relatively new for justice in criminal matters. The PG is a standardized indicator of evaluating DNA forensic examination results used by forensic and legal forensic experts in their activity of achieving real result. In these circumstances, good knowledge of evaluating DNA forensic examination results by means of PG are required. They also will help the judges to pronounce the legal decision on the defendants and their guilt, established beyond any reasonable doubt.

Usually, the penal procedure of Romania does not necessitate such knowledge among judges, but taking into account the trend of penal procedure in the USA, for example, where the jurors are provided with the PG indicators, it is relevant to consider that this kind of procedure could enhance criminal proceedings in Romania in advantage of criminal justice system.

⁵² EOGHAN, Casey. *Digital Evidence and Computer Crime. Forensic science, Computers and the Internet*, Third ed. Orlando, FL.: Academic Press, 2011, p. 73.

⁵³ *Ibidem*.

⁵⁴ *Idem*, pp. 73-74.

In this matter, pronouncing decisions unsubstantiated by absolute evidence and condemning defendants based on erroneous evaluation of evidence will be avoided. For this reason, the judges will pronounce decisions exclusively legally and substantially under the fair trial principle.

Considering all these aspects, it could be appreciated that the PG is a key factor for the judges which helps them in solving penal cases. On the one hand, this kind of evaluating factor is specific to the criminal procedure belonging to the common law judicial system, where the jurors are involved in deliberation on finding defendants guilty or not guilty⁵⁵. On the other hand, during the criminal proceedings in Romania, the judges make judicial decisions based on their personal belief on analyzing and evaluating all evidence administered in criminal case by corroborating them pertinently.

Basically, by using the PG technique of evaluating scientific evidence, judicial errors of interpretation will be avoided as much as possible. In these cases, the forensic examination reports will contain remarks regarding the causes of impossibility of formulating individual identity conclusions⁵⁶.

Although the current research was not conducted under the principle of covering criminal proceeding by stages, from a procedural point of view, the most important moment of judgment in penal cases is that of deliberation sessions. The final verdict then depends on whether the judge has adequate abilities and skills to evaluate the scientific evidence of a penal case. Deliberating procedure is of high interest for all actors involved in the penal case. For the defendants who are interested in finding the final judicial decision on their innocence, for the prosecutors who are interested in establishing whether their charge is proved by evidence and, last but not least, for the judge who is interested in solving the penal case through legal evidence including the scientific ones.

Fourthly, for judges, there is a challenge to use the active role that the penal procedure Code provides them with, especially in the courtroom debates while the parties involved in penal case face the

⁵⁵ COBLE, Michael D.; BRIGHT, Jo-Anne. Probabilistic genotyping software: An overview. *Forensic Science International: Genetics*, v. 38, 2019, pp. 219-224.

⁵⁶ STOIAN, Maria Georgeta; GALAN, Elena, *op. cit.*, pp. 109-122.

scientific evidence. It is appreciated that in this phase of judgment, it is very difficult for defendants to combat the scientific evidence - as expert evidence⁵⁷. For this reason, it has been pointed out that usually, there is no evidence in the defendant's hands to combat it⁵⁸.

THE IMPACT OF PSYCHIATRIC LEGAL FORENSIC ON THE JUDICIARY

The configuration of legal framework in the area of forensic science's involvement in criminal cases where the appropriate psychiatric examination is called has a considerable impact upon the entire judicial process achieved by the forensic means. In this respect, it has been emphasized by the legal doctrine that "Different legal frameworks create different legal consequences and, in some cases, hierarchical problems"⁵⁹. This is because the procedural approach of forensic examinations is centered typically on a case-by-case basis⁶⁰.

The main purpose of psychiatric forensic examination is to help the court of law in making a judicial decision in a particular case. The psychiatric forensic examination skills involve:

- (1) establishing the elements of the defendants' mental health or illness;
- (2) diagnosing the defendants' state of non-pathological psychical pressure;
- (3) evaluating the motivational side of defendants' personality;
- (4) evaluating the defendants' capacity for being aware of the importance of their own actions as well as for controlling them⁶¹.

⁵⁷ HARVEY, Ian, *op. cit.*, pp. 18-25.

⁵⁸ In purpose to gather several points of view on the topic of the defendants' ways to defense by means of forensic science, see also MAGHERESCU, Delia. *Achieving defense by means of forensic science during the criminal proceedings in Romania*, RBDPP, vol. 6, no. 1, 2020, pp. 117-146.

⁵⁹ KAIJA, Sandra; KUDEIKINA, Inga; GUTOROVA, Natalya. Medical and procedural-legal aspects of inpatient and outpatient forensic psychiatric examination. *Wiadomosci Lekarskie*, v. LXXIII, n. 7, 2020, p. 1537.

⁶⁰ *Ibidem*.

⁶¹ RIJIKOVA, Svetlana. Impactul expertizei psihologice asupra activitatii sistemului judiciar. *Revista de Stiinte Penale*, v. I, 2005, pp. 144-150.

The psychiatry legal forensic examination report contains the conclusions the psychiatry forensic expert gathered during the examination⁶². They are a conclusive, pertinent and useful form of evidence for the judge who required the forensic examinations. This means that the conclusive report will be annexed to the penal case and will be analyzed and appreciated together with the other evidence administered in the penal case. In this matter, doctrine emphasizes that the court of law analyzes the psychiatry legal forensic examination report from the point of view of its quality, the conclusions' scientific features, as well as their degree of argumentation of answers. Based on these aspects, the judges will decide whether the report will be used in the procedure of making decisions and solving the penal case or whether a counter-examination is needed to be carried out. A new examination should be ordered in cases in which the first report of examination contains contradictory conclusions or indistinct ones as well as there are contradictions between the examination report's content and its conclusions which cannot be rectified in another way (*i.e.*, through hearing the first expert).

ADVANCED METHODS IN ACHIEVING AND EVALUATING FORENSIC EVIDENCE

Beyond the PG standards used in the DNA forensic examination, as it could be observed in cases of analyzing effects of illicit drugs on forensic DNA⁶³, the function of judgment is also characterized by the theory of probabilistic conclusion, which can be admissible even if there are contrary opinions expressed by judges. Some of them do not accept a probabilistic conclusion due to the fact that they consider an uncertainty, even well-argued, does not offer criteria of establishing material truth, does not solve the issue, and does not have a probative value in front of the court of law⁶⁴.

⁶² CRIMINAL DECISION no. 835/2017 of the Court of Law of Craiova. Available at: <http://portal.just.ro>. Accessed on: July 11, 2022.

⁶³ GRIFFIN, Amy; HENRRY, Julianne; KIRKBRIDE, K. Paul; PAINTER, Ben; LINACRE, Arian. A survey of the effects of common illicit drugs on forensic DNA analysis. *Forensic Science International*, v. 336, 2022.

⁶⁴ CRIMINAL DECISION no. 312/A/2018 of 27 November 2018 of the High Court of Cassation and Justice of Romania; CRIMINAL DECISION no. 678 of

Other judges consider that probabilistic conclusions are admissible and useful, but the judicial decision cannot be exclusively based on them. In this context, they are more scientific hypotheses which reach the level of certainty. Despite this feature, taking into account the theory of evidence during the criminal proceedings, the value of probabilistic conclusions is similar to other forms of evidence administered in the penal proceedings.

According to this idea, it has been appreciated that obtaining forensic evidence and the process of evaluation is a real methodological activity of verification by the forensic investigators. Moreover, a complex activity involves the process in which the evidence is expected to be used in the original form as well as an unmodified one.

Beside the general complexity of the penal case, the forensic investigators' particular attention will be paid to protecting evidence as far as possible in order to achieve the useful genuine conclusions of the examination.

As a consequence, the procedure of using forensic evidence in penal cases of serious crimes involves a series of activities, the most common being the following:

- (i) Collecting evidence from the crime scene and administering them;
- (ii) Analyzing the practical situation of the forensic experts' manner in which they testify the forensic evidence in the court of law;
- (iii) Avoiding the causes of misinterpretation of forensic evidence;
- (iv) Using the principles of an adversarial system during the proceedings in criminal matters;
- (v) Avoiding the misuse of forensic evidence;
- (vi) Avoiding vulnerable forensic evidence;
- (vii) Applying the principle of the judges' handling forensic evidence.

13 May 2015 of the High Court of Cassation and Justice of Romania. Available at: <http://www.scj.ro>. Accessed on: September 8, 2021.

CONCLUSIONS

This research study was conducted on the topic of achieving the function of judgment in criminal cases by means of forensic science. The comprehensive analysis of the investigation of crimes and achieving criminal justice support the prominence of forensic examinations and forensic evidence in the judicial bodies' activity of solving penal cases, including complex ones⁶⁵, and pronouncing judicial decisions⁶⁶. Although at the first sight it could be appreciated that the forensic expert is the only one person able to evaluate the forensic evidence resulted from the forensic examinations pursued during the criminal proceedings, the *de iure* situation is featured by the principle of official character of the proceedings and the active role of judge in criminal cases of Romania⁶⁷. The procedure requires a more particular involvement of judge in solving criminal cases⁶⁸, especially in the action of deliberating and pronouncing criminal decision, based on pertinent, conclusive and genuine evidence⁶⁹. As long as the forensic evidence are scientific ones, despite their own character, the judge cannot be deprived of the right to appreciate and evaluate legally the conclusions stated in the forensic examination conclusions.

The research highlighted how judges are faced with the procedure of evaluating the scientific evidence gathered by investigators, analyzed and reported by the forensic experts and administered by themselves during the judgment in penal cases they are invested with.

A further finding highlights how scientific evidence influences the decision making process as the judicial decision is pronounced in the judgment phase based exclusively on pertinent, conclusive and genuine evidence and, from a procedural point of view, the forensic evidence

⁶⁵ FINDLAY, Mark, *op. cit.*, pp. 18-49.

⁶⁶ SESSION PRELIMINARY DECISION of 03 April 2015 of the Court of Appeal of Bucharest. In: MOISA, Cristina, *op. cit.*, pp. 4-6.

⁶⁷ MAGHERESCU, Delia. *Teoria generala a expertizelor criminalistice*. Bucharest: Hamangiu, 2021, pp. 259-263.

⁶⁸ *Ibidem*.

⁶⁹ CRIMINAL DECISION no. 143/A/2020 of 9 June 2020 of the High Court of Cassation and Justice of Romania. Available at: <http://www.scj.ro>. Accessed on: September 8, 2021.

meets all these criteria. Otherwise, those forensic evidence, which do not fulfill these conditions should be removed from the criminal case, being thus rejectable for the judicial action conducted by judge⁷⁰.

Last but not least, although the forensic expert's conclusion is based on scientific findings, it is not exclusively tantamount to a scientific decision for the judiciary. In order to be administered during the judgment as a form of evidence, it needs to be appreciated from the point of view of its probative value by the judge - *domini litis* - who cannot become a judge-expert. Nevertheless, the judge can become "the expert of experts" - *peritus peritorum* - being the only judicial body entitled to evaluate the forensic expert's conclusions⁷¹.

As a consequence, the forensic expert's opinion does not oblige the presiding judges, who make the decision in the penal case under their own belief of the entire probative evidence administered in the case. Moreover, the judges are not limited to analyzing only the conclusive part of the forensic examination report, but the entire report in order to observe whether the forensic expert's demonstration is motivated and it justifies the conclusion stated.

Doctrine also refers to the training of lawyers in order to better understand and evaluate the expert evidence⁷². It would be an effective tool in the process of remedying difficulties in comprehending DNA evidence by the entitled person to decide on the defendants' guilt or innocence.

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⁷⁰ CRIMINAL DECISION no. 112/A/2020 of 14 May 2020 of the High Court of Cassation and Justice of Romania. Available at: <http://www.scj.ro>. Accessed on: September 8, 2021.

⁷¹ IONESCU, Lucian; SANDU, Dumitru, *op. cit.*, pp. 216-228.

⁷² WHEATE, Rhonda Marie. Jury comprehension and use of forensic science. PhD Thesis: University of New South Wales, Australian Defence Force Academy, 2007. <https://doi.org/10.26190/unswworks/17988> Available at: <https://unswworks.unsw.edu.au/entities/publication/15558eb1-17d8-4621-9d9d-a4b7e-383c9a2>. Accessed on July 22, 2022.

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