



**The 1st IMAS International Conference on
Multidisciplinary Academic Studies
Proceeding Book**

EDITORIAL BOARD

Mihaela Pop
Alice-Dalina Matei-Cernăianu

Publisher

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Statement of Responsibility

The legal and scientific responsibility of the manuscripts belongs to the authors.

The conference is organized by the Faculty of Law and Economic Sciences in Târgu Jiu, by the Târgu Jiu Faculty of Nursing within the “Titu Maiorescu” University, in partnership with the Gorj Bar, CECCAR Gorj, UNPIR GORJ, the “Constantin Brâncusi” Research Center, the Association of Criminalists from Romania and InTraders Academic Platform. IMAS International Conference On Multidisciplinary Academic Studies (IMAS 2023) (1st EDITION) was held on 13 May 2023.

Declaration

As part of the events organized on the occasion of the 33rd anniversary of the establishment of the “Titu Maiorescu” University, we are pleased to invite you on Saturday, May 13, at 09:00 a.m. to the "International Conference Multidisciplinary Academic Studies" at the Story Hotel in Ecaterina Teodorescu Boulevard number 78, Târgu Jiu town. The conference will take place in a hybrid system, with physical and online participants through Microsoft Teams.

Conference theme: Legal, Economics and Medical Paradigms in Digital Era.

Conference topics: Law, Economics, Accounting, Business Administration, Finance, Econometrics, Nursing, Health Management.

The written and presentation languages are Romanian and English.

Appreciation

I am very privileged to express my sincere appreciation as I address this gathering to provide a resolute expression of gratitude to the exceptional individuals who have contributed to the success of the IMAS 2023 Conference. I would like to express my profound gratitude for the steadfast commitment and exceptional contributions demonstrated by the Congressional Coordinators, Congressional Committees, and Authors.

The unwavering dedication and significant contributions of individuals have played a pivotal role in the remarkable achievements of this conference. The level of dedication exhibited by the individuals in devoting their knowledge, effort, and resources towards creating a valuable and instructive event for all participants is deserving of admiration.

When reflecting over my appreciation, I am prompted to acknowledge the significant influence that their cooperative endeavors have exerted on the progress of our mutual objectives and the circulation of innovative knowledge within their individual domains. The extent of their engagement and the exceptional performance they have exhibited are indicative of their steadfast dedication to the advancement of academics and society at large.

In conclusion, I express my utmost appreciation to all individuals who have contributed to the success of IMAS 2023. The combined endeavors and fervor exhibited by all those involved serve as the fundamental basis for the achievement we have attained, and as a result, we express our sincere appreciation. I express my gratitude for your assistance.

Lect. Cristian DRĂGHICI, PhD

“Titu Maiorescu” University

Dean of Faculty of Law and Economic Sciences - Târgu Jiu, Romania

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The IMAS International Conference On Multidisciplinary Academic Studies

(IMAS 2023)

(1st EDITION)

13 May 2023, Târgu Jiu, Romania

Conference Program

8.30 - 09.00 - Registration of participants

09.00 - Opening of the Conference proceedings - Opening speech

Lect. Cristian DRĂGHICI, PhD, Dean of Faculty of Law and Economic Sciences - Tg. Jiu, Titu Maiorescu University

Professor Iosif R. Urs, PhD - President of Titu Maiorescu University and President of the Management Board

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Professor Lozneanu Verginel, PhD, Dean of Police Faculty, Alexandru Ioan Cuza Police Academy

Assoc. Prof. Constanța MĂTUȘESCU, PhD, Dean of Faculty of Law and Administrative Sciences, Valahia University

10.00 - 11.00 - Plenum Lectures

Speakers

- Lect. Cristian DRĂGHICI, PhD Dean of Faculty of Law and Economic Sciences - Tg. Jiu, Titu Maiorescu University - Expanding and upgrading the use of digital tools and processes by companies in digital era
- Prof. Titi PARASCHIV, PhD, Vice - Rector Titu Maiorescu University – Brain Computer Interface in Academic Activities
- Accounting expert Maria Mariana SOMNEA, Member of the Superior Council Standing Board of CECCAR, President of UNPIR Gorj-Vâlcea Branch - The digital footprint on the accounting profession and insolvency
- Lect. Ana-Maria CÂMPEANU, PhD, Titu Maiorescu University, Romania - Post-traumatic stress disorder – a reality
- Dr. Sorin Lory Buliga, "Constantin Brâncuși" Research, Documentation and Promotion Center of Tg-Jiu - Brâncuși in the age of digitalization

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11.00 - 12.00 - On-line Lectures

- Zainab Abdulwahab ZUBAIR, Lecturer, PhD, Faculty of Law, Islamic University in Uganda – The war against human trafficking in africa specifically in Nigeria

- Maya MOALLA, Independent researcher, PhD - Causality Nexus Between GDP and Energy Consumption in Turkey and Romania

- Leena JENEFA, Innovation Ambassador and Associate Professor, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi Chennai - An Impact of Socioeconomic factor and Usage of ICT in Pandemic Situation

- Mamoon RASHEED, Lecturer / Salman Iqbal, Assistant Professor, PhD, University of Central Punjab (UCP) - HRM Practices in Employees' knowledge sharing

- Dr. Dauda Adeyemi Ariyoosu, Department of Business Law, Faculty of Law, University of Ilorin, Ilorin, Nigeria - Examining the revenue implications of taxing the informal sector.

- Tajudeen Sanni, Research Fellow at the South African Research Chair in the Law of the Sea and Development in Africa, Nelson Mandela University - Right to a healthy ocean and the prospects of ocean accounts framework in South Africa

- Tulus Suryanto, Lecturer at Faculty of Islamic Economics and Business, Universitas Islam Negeri Raden Intan Lampung, Indonesia - Business Opportunities on the Small Medium Enterprises in Indonesia

- Svetlana Rastvortseva, Doctor of Sciences, Professor of World Economy Department, HSE University, Moscow, Russia - The development of the system of cities in the modern economy

- Guzel Lotfullina, Svetlana Rastvortseva, Professor assistant at the World Economy Department, HSE University, Moscow, Russia / Doctor of Sciences, Professor of the World Economy Department, HSE University, Moscow, Russia - Technological competitiveness of mobile operators

- Maria FLORI, University Assistant, PhD, Lucian Blaga University of Sibiu - The use of a sustainable model for the management of a crisis in the context of economic development

12.00 - 12.30 - Coffee break

Section Lectures

12.30 - 14.00 - Section 1 Law

Moderators: Lect. Cristian DRĂGHICI, PhD

Prof. Carmen Silva PARASCHIV, PhD

- Prof. Carmen Silva PARASCHIV, PhD, Titu Maiorescu University, Romania - The state - guarantee of the principle Respect for human dignity and private life" in the framework of the criminal process, in the digital era
- Professor POPA GHEORGHE, PhD, President of Romanian Forensic Scientists Association – Role and importance of the involvement of Romanian Forensic Scientists Association in the development of the Romanian school of forensics
- Lawyer Constantin GROZA, Dean of the Gorj County Bar - The future of lawyer profession. The impact of digitization on the profession.
- Gabriel MICU, Associate Professor, PhD, National School of Political and Administrative Studies, Teaching staff associated Bioterra University, West University of Timișoara - The supremacy of national constitutions in the age of globalization.
- Mircea TUTUNARU, Associate Professor, PhD / Andreea Teodora AL-FLOAREI, Lawyer, PhD student, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu / West University, Timișoara - Historical view of the administrative organization of Romania under the empire of the constitution since 1923
- Emilian CIONGARU, Professor, PhD, University Titu Maiorescu Bucharest - Faculty of Law and Economic Sciences Tg-Jiu - The science and values of law
- Ion PĂDUCEL, Assoc.Prof. PhD, Faculty of Law and Economic Sciences Targu Jiu, Titu Maiorescu University of Bucharest - Some considerations relating to the suspension of the individual employment contract in the event of the granting of carers' leave under the updated labor legislation.
- Romulus MOREGA, Lecturer, PhD, University Titu Maiorescu Bucharest - Faculty of Law and Economic Sciences Tg-Jiu - Forensic identification - sides of the process of establishing the factual circumstances.
- Remus IONESCU, Lecturer - Phd., Faculty of Law and Economic Sciences Tg.-Jiu, „Titu Maiorescu” University, Romania, President Criminal Division – Gorj County Court, Andrei IONESCU, Student - Atypical situations found in the preliminary chamber phase. Procedural remedies.
- Diana-Elena RĂDUCAN-MOREGA, Lecturer, PhD, "Titu Maiorescu" University of Bucharest, Faculty of Law and Economics - Târgu-Jiu, România, Lawyer, Gorj Bar - Self-defense in competition with other justifiable acts or impunity causes

- Mihaela POP, Lecturer, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Fraud to the Law in Private International Law
- Michaela Loredana TEODORESCU, Lecturer, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Criminal policy reflected in legislative changes
- Ioana-Ruxandra MĂLĂESCU, Assistant, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Filing a challenge for annulment on grounds of the statute of limitation considering the Decision no.676/2022 of the panel for preliminary ruling on questions of law.
- Nadia-Elena DODESCU, Assistant Professor, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Theoretical and practical aspects regarding migrant trafficking
- Diana DEACONU-DASCĂLU, Assistant, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu / Silviu DEACONU, lawyer - The protection of persons with intellectual and psychosocial disabilities through judicial counseling and special guardianship
- Mihai Raul SECULA, Assistant professor, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - The actuality of the regulation of the inheritance right for the surviving spouse
- Anica MERIȘESCU, PhD University Lecturer, Public Notary, “Titu Maiorescu University”, Bucharest, Faculty of Law and Economics Sciences Targu Jiu - Brief considerations on the legal regime of the transmission of shares in a limited liability company by succession
- Moise BOJINCĂ, Professor PhD, “Titu Maiorescu University”, Bucharest, Faculty of Law and Economics Sciences Targu Jiu - Some reflections regarding Romania in the constellation of the unsafe world
- Liviu BUCIU, lawyer, Gorj Bar - Tools for a Harmonious Transition: Managing the Impact of Automation on the Labor Market
- Sebastian POPA, PhD student, Public notary office - Cross-border insolvency of group of companies members at the intersection of universalist and territorialist principles

14.00 - 14.30 - Lunch Break

14.30 - 15.30 - Section 2 Economic Sciences

Moderators: Assoc. Prof. Marian ACHIM, PhD

Lect. Alice-Dalina MATEI-CERNĂIANU, PhD

- Marin CIUMAG, Associate Professor, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Establishing the tax result and registration in accounting
- Marian-Lucian ACHIM, Associate professor, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Householder insurance in case of natural disasters
- Alice – Dalina MATEI CERNĂIANU, Lecturer, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Types of data analytics to improve decisionmaking.
- Traian IANA, Lecturer, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Audit of the quality of accounting information in the context of digitalization
- Teodora VĂTUIU, Associate Professor, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - Computerized decision assistance for the management of renewable resources in the current context of digitalization and the implementation of the national hydrogen strategy
- Gabriel POPEANGĂ, Lecturer, PhD, Titu Maiorescu University, Tg Jiu School of Law and Economics - General considerations regarding the phenomenon of tax evasion
- Valentin STEGĂROIU, Lecturer, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - The contributory benefit in the redistributive pension system
- Ana-Maria MĂLĂESCU, Associate Professor, PhD, Titu Maiorescu University Bucharest, Faculty of Law and Economic Sciences Tg-Jiu - The importance of esg reporting for companies in the light of the CSRD European directive
- Ioana CATRINA, Lecturer, PhD, “Titu Maiorescu University”, Bucharest, Faculty of Law and Economics Sciences Targu Jiu - Documentary accounting control, control procedure used in practice, exercise methods or techniques for establishing the reality, legality and efficiency of the operations of economic and financial activities
- Grigore LUPULESCU, Associate professor PhD, “Titu Maiorescu” University from Bucharest, Faculty of Law and Economic Sciences from Târgu Jiu - The economic Gorj – yesterday, today and perspectives

15.30 - 17.00 - Section 3 Nursing

Moderators: Assoc. Prof. Olivian STOVICEK, PhD

Lect. Ana-Maria CÂMPEANU, PhD

Lect. Johana HOLT, PhD

- Liviu MARTIN, university lecturer / Dan Gheorghe MĂLĂESCU, university professor / Adina MARTIN, associate lecturer, Faculty of Nursing Tîrgu Jiu, UTM Bucharest / Faculty of Nursing Tîrgu Jiu, UTM Bucharest / UMF Craiova - Surgical nursing in chronic venous insufficiency
- Univ. Prof. Dr. Eng. Titi PARASCHIV - Titu Maiorescu University; Prof. Dr. Eng. Cosmin Karl BĂNICĂ - Polytechnic University of Bucharest; Prof. Dr. Eng. Felix ADOCHIEI – Polytechnic University of Bucharest; Univ. lecturer, Dr. Psych. Ruxandra Victoria PARASCHIV – Titu Maiorescu University; Univ. Lecturer, Ph.D. Eng. Ioana ADOCHIEI – Military Technical Academy; Dr. Andrei IGNAT – Bucharest Military Technical Academy; Eng. Ștefana DUȚĂ - Polytechnic University of Bucharest - The study of the relationship between facial characteristics, eeg waves and the cognitive and emotional characteristics of the human being
- Olivian STOVICEK, Associate Professor, Faculty of Nursing, Târgu Jiu Subsidiary, “Titu Maiorescu” University, Bucharest - Medication errors and pharmacological malpractice
- Johana HOLT, Lecturer PhD, Faculty of Communication Sciences and International Relations, Titu Maiorescu University of Bucharest - Marta Trancu-Rainer, a providential personality of Romanian surgery
- Gabriel BUCIU, Lecturer, PhD / Dragos-Laurentiu POPA, Associate Professor, PhD / Daniel Cosmin CĂLIN, Specialist Doctor, Faculty of Nursing, "Titu Maiorescu" University, Târgu Jiu /Faculty of Mechanics, University of Craiova / County Emergency Hospital of Slatina – Three innovative models of intramedullary orthopedic nails
- Cătălin-Alexandru FOLCUȚI, Lecturer, PhD / George ADAM, Lecturer, PhD / Daiana ANGHELOIU, Lecturer, PhD / Diana STĂNCULESCU, Lecturer, PhD / Roxana-Mihaela FOLCUȚI, Lecturer, PhD, The Faculty of Nursing – Tg-Jiu of the Titu Maiorescu University - Computed tomography assessment of haematuria
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- Ion NEAMȚU, Associate professor / Radu-Ionut NEAMȚU, University assistant, Department of Healthcare, “Titu Maiorescu” University, București / Department of Obstetrics and Gynecology, “Victor Babeș” University Medicine and Pharmacy, Timișoara - Prevention of sequelae risks of premature infants with ROP and neurological disorders

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PART 1: LAW CHAPTERS

PRINCIPLES REGARDING RESPECT FOR DIGNITY AND PRIVATE LIFE IN THE CRIMINAL PROCESS IN THE DIGITAL ERA

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The present work has as its object of study the complex issue of the legal protection of the private life of the person as well as the respect of human dignity in the criminal process in the era of the digital revolution. The object of the investigation is article 11 of the Criminal Procedure Code.

The criminal process is an activity regulated by law undertaken by certain public authorities empowered by law, which must be carried out and carried out under the conditions and forms provided for by law. The rule of law implies to the highest degree legality in the activity of combating crimes and imposes not only the regulation by clear and effective rules of the criminal process in order to defend both the interests of society as a whole and the interests of each individual citizen, but and ensuring that these rules are respected in practice, so that criminal sanctions are only applied to those guilty of violating the criminal law and no innocent person is held criminally liable and convicted.¹

Through its rules, criminal procedural law contributes to the effective application of substantive criminal law rules. Under this aspect, the rules of criminal law appear as rules of general conduct, and those of the law of the criminal process as rules of particular conduct, because they are addressed only to those who participate in a certain capacity in the conduct of the criminal process.²

The fundamental principles of the criminal process refer to the most general rules, based on which the structure and conduct of the criminal process are regulated. Establishing what is the purpose of the criminal process and from here, what must be its characteristic features, the legislator opts, within the regulation, for those guiding rules that ensure in the best conditions the achievement of this purpose, so that the criminal process is fair and the settlement the case to be obtained within a reasonable time.³

Although the fundamental principles determine the entire regulation of the criminal process, some act within certain limits, caused by their interaction. The existence of such limits, however, does not transform them into principles of certain institutions or procedural phases, but remain fundamental principles, because, in their general action, they apply to the entire

¹ Eugen GUȚANU, MODALITĂȚI DE ASIGURARE ȘI PROTECȚIE A DREPTURILOR OMULUI ÎN PROCESUL PENAL, disponibil aici:

https://ibn.idsi.md/sites/default/files/imag_file/Modalitati%20de%20asigurare%20si%20protectie%20a%20drepturilor%20omului%20in%20procesul%20penal.pdf

² *Ibidem*

³ Grigore Gr. Theodoru, I P Chiș, Tratat de drept procesual penal, Ed Hamangiu, 2022, p. 67

criminal process. The action of a fundamental principle can limit the action of another fundamental principle, their coordination being necessary to achieve the purpose of the criminal process; thus, the discovery of the truth and the active role act on the development of the criminal process, but only within the limits in which respect for the law, the right to defense, dignity and private life are not affected.⁴

Article 11 C. proc. Pen. actually regulates two distinct principles: the principle of respect for human dignity and the principle of respect for private life.

1. Respect for human dignity

Para. (1) from art. 11 C. proc. Pen. stipulates that "any person who is under criminal prosecution or trial must be treated with respect for human dignity". Even if this legal text only refers to two phases of the criminal process, we believe that it should also be extended in terms of the preliminary chamber and the execution of criminal decisions.

We find this principle in art. 22 of the Romanian Constitution "(1) The right to life, as well as the right to physical and mental integrity of the person are guaranteed. (2) No one can be subjected to torture or any kind of punishment or inhuman or degrading treatment", in art. 3 of the European Convention on Human Rights "No one can be subjected to torture, nor to inhuman or degrading treatment or punishment" and in art. 4 of the Charter of Fundamental Rights of the European Union "Prohibition of torture and inhuman or degrading treatment or punishment"

The obligation to protect the dignity of the person by means of criminal law and criminal procedure. According to the established jurisprudence of the ECHR, states have the obligation to take measures to ensure that persons under their jurisdiction are not subjected to ill-treatment, including in the event that they are applied by individuals (ECHR A. v. the United Kingdom, judgment of September 23, 1998, paragraph 22).

In the case of M. and C. v. Romania, the ECtHR assessed that states have an inherent positive obligation, art. 3 of the Convention to criminalize sexual abuse whose victims are children and to apply the rules of criminalization within an effective criminal investigation.

Thus, the violation of art. 3 ECHR under the aspect of failure to comply with the obligations by not conducting an effective investigation in a case having as its object the accusation of committing a sexual assault by the father on his minor child. The ECtHR appreciated that, although in practice it may sometimes be difficult to resolve sensitive conflicts such as the one in question, the authorities had to analyze all the facts and decide based on the evaluation of all the circumstances of the case, especially in the presence of direct evidence such as traces of violence. Moreover, the investigation had to be focused on the issue of ensuring the best interests of the child. Therefore, it was found that the Romanian authorities failed to analyze all possible options to carry out a thorough investigation of the case. The authorities have also given little importance to the vulnerability of young people and the

⁴ *Ibidem*

psychological factors involved in child sexual assault cases. In the same way, the Romanian criminal prosecution bodies carried out preliminary acts before starting criminal prosecutions with a certain delay, there was a period of inactivity in gathering evidence of approximately one year and 10 months. Under these conditions, the European court assessed that the investigative acts carried out in the case and in particular the attitude adopted by the domestic authorities do not comply with the requirement of compliance by states with the positive obligation to establish the facts and apply the criminal law in the case of all forms of abuse sexual (ECtHR, M. and C. v. Romania, judgment of September 27, 2011, para. 116-123).

The transposition of the principle of respect for human dignity into domestic legislation is achieved through some provisions, such as those contained in art. 101 para. (1) C. proc pen according to which during the criminal process it is forbidden to use violence, threats or other means of coercion, as well as promises or exhortations in order to obtain evidence and those from art. 101 para. (2) C. Fr. pen., under which listening methods or techniques cannot be used that affect the person's ability to consciously and voluntarily remember and relate the facts that are the subject of the evidence, this prohibition applying even if the person listened to gives his consent to the use of such a listening method or technique.⁵

At the same time, this is achieved through art. 55 of Law no. 254/2013, introduced by Law no. 169/2017, as a consequence of the jurisprudence of the European Court of Human Rights, according to which, regardless of the punishment execution regime, when calculating the actually executed punishment, the execution of the punishment in inappropriate conditions is taken into account as a compensatory measure, in which case for each period of 30 days executed under such conditions, even if they are not consecutive, is considered executed, additionally, 6 days of the penalty applied. This algorithm is properly applied to the calculation of the sentence actually executed as a preventive measure in the center of detention and preventive arrest in inappropriate conditions.

Violation of the person's dignity can occur even after the conviction has become final, during the execution of the custodial sentence, because respect for human dignity must also be ensured in places of detention, in order to avoid violating the provisions of art. 3 of the European Convention.

Persons deprived of liberty must be held in conditions that are compatible with respect for human dignity, being at the same time necessary that the methods of execution of the sentence or measures of preventive arrest do not subject the person deprived of liberty to a suffering whose intensity exceeds the inevitable level of suffering on that detention entails and that the health of the detainee is adequately ensured. In this sense, in the Ciobanu v. Romania case (ECtHR, judgment of October 11, 2011, in the Ciobanu v. Romania case, para. 7) the European Court held that art. 3 of the European Convention, as the applicant was subjected to degrading treatment as a result of the overcrowding of the cell in which he was detained in the Craiova, Giurgiu and Jilava penitentiaries (on average, in the applicant's cell, between 2000 and 2006, the prisoners benefited from a space between 1.007 m and 3.62 m each) and the hygiene

⁵ G.Mateuț, Procedură penală, Partea generală, Ed. Universul Juridic, 2022

conditions in the places of detention, taking into account also the duration of the deprivation of liberty.

2. Respect for private life⁶

According to art. 11 paragraph (2) C. proc. Pen. "respect for private life, the inviolability of the domicile and the secrecy of correspondence are guaranteed. The restriction of the exercise of these rights is only allowed under the conditions of the law and if it is necessary in a democratic society."

This principle is taken from art. 8 of the Convention which provides in para. (1) "Every person has the right to respect for his private and family life, his home and his correspondence", and in para. (2) "The interference of a public authority in the exercise of this right is not allowed except to the extent that this interference is provided for by law and if it constitutes a measure that, in a democratic society, is necessary for national security, public safety, economic well-being of the country, the defense of order and the prevention of criminal acts, the protection of health or morals, or the protection of the rights and freedoms of others."

The need to create minimum standards for the protection of human rights and the development of a common system of fundamental rights and freedoms led to the creation, at the European level, of a remarkable legal architecture through the guarantees offered in this matter. Thus, considering that human rights are an integral part of the general principles of law, a European system of their protection has been developed, a true European *ius commune*.⁷

In this framework, the Convention for the Protection of Human Rights and Fundamental Freedoms has not only the role of making European norms compatible with national ones, but also that of fulfilling its own legitimizing function, starting from the set of values that are imposed both on the judge, as well as the legislator, who, having a legal force superior to the internal norms, constitutes a point of reference for them.⁸

The ECtHR has shown that it is neither possible nor necessary to try to define the notion of private life in an exhaustive manner. However, it would be too restrictive to limit the notion to an "intimate core", where the person could conduct his personal life as he wished and from which he could exclude the entire outside world.

⁶ Ghid privind jurisprudența Convenției europene a drepturilor omului, disponibil aici: https://www.echr.coe.int/Documents/Guide_Data_protection_ROM.pdf, p. 34-39

⁷ Ovidiu Predescu, SUCCINTE CONSIDERAȚII ÎN LEGĂTURĂ CU PROTECȚIA EUROPEANĂ A DREPTURILOR OMULUI ȘI PROCESUL PENAL ROMÂN, disponibil aici: https://www.mpublic.ro/sites/default/files/PDF/discurs_ovidiu_predescu_conferinta_drepturile_omului_15_noiembrie_2017.pdf

⁸ Ibidem

Due to its specificity, the criminal process is an activity that, under certain conditions, requires the performance of procedural acts of the nature of restrictions or interventions by judicial bodies in aspects that may be among the most intimate or personal, related to someone's family or private life.

Failure to comply with the procedural requirements for the authorization and execution of an evidentiary procedure that involves an interference with the right to private life may lead to the exclusion of unfairly administered evidence; in this framework, we emphasize the fact that the judge of the preliminary chamber must carry out an effective a posteriori control of compliance with the conditions under which the evidentiary procedure was ordered/prolonged, which implies an interference with the right to private life.

The interference represents a limitation of the exercise of the rights to private life, to correspondence or domicile and can only be allowed in situations where they are provided for by law, pursued a legitimate purpose, are necessary in a democratic society and are proportionate to the purpose pursued [Art. 11 paragraph (2) thesis II C. proc. Pen.) The first condition that must be satisfied is that the interference is provided for by a predictable and accessible law. For this purpose, the Code of Criminal Procedure has provided in detail the conditions under which home or computer searches, technical surveillance, etc. can be ordered, thus ensuring the protection of the person against arbitrary interference with the right to private life.

Likewise, the Constitution provides in art. 27 para. (2) the situations that may constitute interferences in the right to the protection of the inviolability of the domicile: a) the execution of an arrest warrant or a court decision; b) removing a danger regarding a person's life, physical integrity or property; c) defense of national security or public order; d) preventing the spread of an epidemic.⁹

Private life can also be affected by measures collateral to criminal proceedings, such as the leaking to the press of data resulting from technical surveillance mandates; thus, in the Cășuneanu v. Romania case, the ECtHR analyzed whether, in the context of criminal proceedings, the national authorities took the necessary measures to ensure the effective protection of the right to private life.

It was also noted that once the information was published, the plaintiff found himself in the situation of not having any means to take immediate measures to defend his reputation, since the case was not before a court of law, and the authenticity or accuracy telephone conversations and their interpretation could not be challenged. Thus, it was concluded that the defendant suffered damage as a result of the interference with the right to respect his private life by leaking to the press some fragments of his telephone conversations with a co-defendant. Consequently, the European court assessed that there was a violation of the right to private life, because the Romanian state failed to fulfill its obligation to ensure the safe keeping of the information it possesses, in order to ensure the applicant's right to respect of his private life and also that he failed to provide a remedy in which to challenge the infringement of his rights.

⁹ M. Udrioiu, Codul de procedură penală, Comentariu pe articole, Ed. C.H. Beck, București, 2020.

It should also be noted that by the decision of the Constitutional Court no. 244/2017 affirmed the positive obligation of the state to regulate a form of a posteriori control, which the person in question can access in order to verify the fulfillment of the conditions and, implicitly, the legality of the measures that presuppose an interference with the right to private life ; against the legislator's passivity in complying with the positive obligation to regulate the effective procedure for a posteriori verification of the legality of taking or of the ways of implementing the mandate of technical supervision, from which people who do not have the status of injured party in the chamber procedure will benefit preliminary, but who were the subjects of an interference in private life as a result of taking and executing the evidentiary procedure, the legal basis for access to justice is the provisions of art. 21 of the Constitution and art. 13 ECHR.

To date, the Court has examined a large number of operations carried out on personal data by authorities or private entities to examine whether the data subject's "private life", "domicile" and/or "correspondence" have been affected in a way incompatible with art. 8. In various contexts, it clarified the scope of several rights that the natural or legal persons concerned could avail themselves of to protect their personal data.

With the development of technologies, the collection, retention or disclosure of data take very different forms. In a number of cases, the Court examined whether one or all of these operations led to an unjustified interference with the data subject's right to private life.

The operation of collecting personal data has been examined by the Court in different contexts: in relation to the fight against organized crime and terrorism, through the various secret surveillance systems put in place by the authorities; in the judicial context, regarding personal data collected by the authorities to be exploited as evidence.

A) Targeted interception of telephone conversations

The Court found a violation of art. 8 in relation to: the interception of communications and the transmission to the police of telephone call count records (phone numbers dialed) (*Malone v. the United Kingdom*, 1984, paras. 63-89); listening and transcribing all commercial and private telephone calls of interested parties (*Huvig v. France*, 1990, paras. 24-35); the interception and recording of several of the applicant's conversations by tapping the telephone line of a third party (*Kruslin v. France*, 1990, paras. 25-36); interception of a person's telephone conversations through a third party's telephone line (*Lambert v. France*, 1998, paras. 21-41); telephone conversations intercepted in the context of criminal proceedings and subsequently broadcast to the press [*Craxi v. Italy* (no. 2), 2003, paras. 57-84]; the interception of telephone communications by the authorities in the absence of an authorization from the prosecutor issued in the name of the suspect and in the absence of a law that provides sufficient guarantees against arbitrariness [*Dumitru Popescu v. Romania* (no. 2), 2007, points 61-86]; listening to a lawyer's telephone communications in the context of criminal investigations (*Kvasnica v. Slovakia*, 2009, paras. 80-89).

In the context of prison detention, the recording and storage of a prisoner's telephone conversations by the prison authorities, actions that were not provided for by law and subsequently used as evidence to convict the prisoner for another crime, led to a violation of art. 8 in the case of *Doerga v. the Netherlands*, 2004, paras. 43-54.

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B) Audiovisual surveillance and video surveillance

In the judicial context, the Court concluded that art. 8 in relation to: the recording of the applicants' voices at the time of their arraignment and inside their police station cell (P.G. and J.H. v. the United Kingdom, 2001, §§ 56-63); the video recording by means of a hidden closed-circuit television camera, for the purpose of identification, of a suspect in a police station (Perry v. the United Kingdom, 2003, §§ 36-49); the recording by the police, through the installation of a listening device in the home of a third party whom the applicant had visited, of a spontaneous and unprovoked conversation during which the applicant had admitted to being complicit in a drug importation ring (Khan v. the United Kingdom, 2000, points 25-28); the installation of microphones by the police in a private home in the context of a judicial investigation (Vetter v. France, 2005, paras. 20-27); the recording of a conversation with the help of a listening device installed on the body by the police authorities and its subsequent use as essential evidence in the context of the criminal process, without being incriminating evidence alone (Heglas v. Czech Republic, 2007, paras. 71-76); the recording of communications by a private person in the context and for the benefit of an official, criminal or other investigation, with the complicity and technical assistance of public investigative authorities (Van Vondel v. The Netherlands, 2007, points 47-55).

In the context of detention in the penitentiary, the Court concluded that there was a violation of art. 8 regarding: the use by the authorities of video and audio recording devices placed without the applicant's knowledge in his cell and in the visiting area of the penitentiary, as well as on a fellow inmate which made it possible to record the applicant's spontaneous and unprovoked statements (Allan v. the United Kingdom, 2002, §§ 35-36); the recording of prisoners' conversations with their relatives on loudspeakers in prisons (Wisse v. France, 2005, paras. 28-34); secret surveillance of a detainee's consultations with his lawyer (R.E. v. the United Kingdom, 2015, paras. 115-143); continuous video surveillance of detainees in their cells using a hidden CCTV camera (Gorlov and Others v. Russia, 2019, §§ 83-100).

C) Geo - locating a vehicle via GPS

GPS surveillance of a person suspected of terrorism did not constitute a violation of art. 8 in *Uzun v. Germany*, 2010, paras 49-81. Conversely, in the case of *Ben Faiza v. France*, 2018, paragraphs 53-61, the placement of a geo-location device in a vehicle and the exploitation of the data resulting from this measure, which allowed the investigators to know, in real time, the movements of the applicant and then proceed to his arrest, were considered contrary to art. 8.

D) Mail monitoring

In the context of detention in the penitentiary, the Court concluded that there was a violation of art. 8 in relation to: confiscation and detention of a prisoner's correspondence (*Lavents v. Latvia*, 2002, §§ 136-137); opening the prisoner's mail, including in the case of a malfunctioning postal service in the penitentiary unit (*Demirtepe v. France*, 1999, paras. 26-28;

Valašinas v. Lithuania, 2001, paras. 128-130); the interception and censorship of the correspondence of a 6 See also above, the GPS Location Data part of this guide. Guide to Convention Case Law – Data Protection European Court of Human Rights 38/104 Updated on: 31/08/2022 held [Silver and others v. the United Kingdom, 1983, paras 84-105; Labita v. Italy (MC), 2000, paras 176-184; Niedbała v. Poland, 2000, §§ 78-84; Messina v. Italy (no. 2), 2000, §§ 78-83]; interception of letters from detainees to their lawyers (Ekinici and Akalin v. Turkey, 2007, §§ 37-48); the interception of prisoners' correspondence with the lawyer and the European Commission of Human Rights (Campbell v. the United Kingdom, 1992, paras. 32-54; A.B. v. the Netherlands, 2002, paras. 81-94); opening of correspondence addressed to a detainee by the Commission (Peers v. Greece, 2001, paras. 81-84); monitoring a prisoner's correspondence with the specialist doctor who was monitoring his state of health (Szuluk v. the United Kingdom, 2009, paras. 47-55); the practice of systematically scanning and recording the private correspondence of prisoners – both what they wanted to send and what was sent to them – in the computer system of the National Judicial Network (Nuh Uzun and others v. Turkey, 2022, §§ 80-99).

DIGITIZATION

The need to integrate technology based on artificial intelligence was found in the Romanian legal world with the establishment of the quarantine imposed by the pandemic in March 2020.

As far as the judicial system is concerned, initially the measures taken were drastic and aimed at the suspension of all non-urgent processes and the continuation of the others with the observance of social distancing measures, by using as much as possible digital means, such as video conference hearings or the transmission of documents via electronic mail, so that these measures can then be extended and applied to all processes.

Usual court tasks of subpoenaing, hearing witnesses or parties, or convening local deliberative public bodies have moved into the sphere of online work. With this forced digitization of a large part of the legal world, it was possible to find the need to turn to certain programs and software to make the work of lawyers and public authorities easier. For example, in the work of lawyers, a well-defined AI program could access the legislation in force from the source of the official publication and could even find solutions or at least indicate similar cases that would serve to draw up the procedural documents necessary to support the legal action in the interest of the client.

Although it is a field in its infancy, the digitalization phenomenon has gained considerable momentum in recent years. How soon will it be possible to talk concretely about digital rights

and a new branch of law will materialize - internet law. Reputable legal specialists are already taking significant steps in this direction.¹⁰

Thus, law faculties in the country are beginning to expand their curricula, introducing new disciplines adapted to generation Z. There are specialization programs that deal with newly emerging areas in the legal field regarding the protection of personal data and intellectual property, cyber law or electronic commerce.

Artificial intelligence ("AI") is any form of knowledge or information that does not come from humans, it is the intelligence that comes from machines that have the ability to imitate human functions such as reasoning, learning, planning and creativity.

Digitization has taken the place of classic methods, including in the activity of magistrates, who are offered a series of programs that allow them access to jurisprudence. There are several such computer programs dedicated to legal professionals such as ECRIS, EMAP or Legis.

In a broad sense, digitization means the process of transforming analog information that is played on physical media, such as documents, images, photos, sound reproductions, objects, etc. in a digital format where the information is organized in bits and can be accessed through computer devices.

From this perspective, we can say that at this moment the judiciary has taken certain steps towards the digitization of criminal processes, but they can only represent a beginning on the path to modernizing the judicial system. It needs an integrated system of rules, which will regulate all phases of the criminal process, taking into account their interdependence, the participation in the process in addition to the judicial bodies and parties and other procedural subjects, and which will affect as little as possible the substance of the principles specific to the process criminal and the rights and obligations provided by law.

Even though the legal field is largely based on logical and precise human thinking, in the future, computers and artificial intelligence will be able to provide public services and the administration of justice in a more efficient way than today. However, the human element will not be completely removed from the legal sphere, because the very main subject of rights and obligations recognized by positive law is man.

Digitization is not just video conferencing or an electronic signature or just electronic file. These are components of digitalization, they are means, they are benefits, at the same time, digitalization actually means a whole process of solutions, process of integrated solutions based on the information technology of storage, processing, analysis and use of data and information and documents in electronic form, in digital format.

So digitization also means instant data access to these information and documents in an integrated system. It means the creation, very importantly, the creation of new data and

¹⁰ Drepturile digitale fiind cele care permit indivizilor accesul, utilizarea, crearea și publicarea conținutului digital sau accesarea și utilizarea calculatoarelor, precum și a altor dispozitive electronice sau rețele de comunicații. – "Drepturi digitale" – ro.wikipedia.org

information based on those existing in the system, and so on, from these newly created others, in a practically uninterrupted, limitless process. In conclusion, I would say that digitization creates a universe of new data from some preliminary information.

Digitization in the judicial system can be described as consisting of larger or smaller islands where different streams or electronic registers have been introduced.

We have courts that have purchased their own internet domains and/or have implemented applications such as electronic filing.

From the point of view of infrastructure, all courts have a functional videoconferencing system, at the end of 2019, the last courts that did not have the system, namely 109 courts, were equipped.

Digitization raises the issue of guarantees for the parties in the criminal process, respect for the principle of publicity, dignity and private life, a more profound legislative elaboration is necessary, according to the procedures and customs, of public debate, of dialogue with the Superior Council of Magistracy, with the professions, with the associations of magistrates.

Abusive use of AI in law enforcement can cause harm, such as automatic discrimination and illegal treatment of citizens, while providing few remedies; urges member states to implement meaningful human oversight requirements and guarantee remedies when citizens are subject to decisions made by AI.¹¹

Today's digital revolution is characterized by its global scope, rapid convergence and the enormous impact of emerging technological advances on states, economies, societies, international relations and the environment.¹²

The most important changes implemented with the help of artificial intelligence, brought to the judicial system, which also reflected on the lawyer profession, as follows: the implementation of the electronic file, the digital communication of procedural documents, the use of video conferences, online communication with clients, checking solutions through the justice portal, online mediation platforms, and others.

The electronic file

The development of the electronic file application by IT specialists from the courts, lawyers and justice, the online platforms of intermediaries can view and download the documents scanned and uploaded to the court database, the file being constantly updated, depending on the newly registered entries. Thus, in order to study the documents in the file, to read the content of the conclusions from the previous terms or to find out if new entries were submitted before the court term, the lawyers or the justice, the online platforms of the

¹¹ https://www.europarl.europa.eu/doceo/document/A-9-2022-0088_RO.html

¹² Ibidem

intermediaries do not have to spend hours on end to the archives of the courts, nor to run from one courtroom to another, before the beginning of the court sessions.

Access to the electronic file can be achieved either with the help of a password that is communicated to the court, the online mediation platforms by means of a subpoena, or by formulating a request for access to the electronic file, sent to the court in charge of the file. Also, some courts respond with an automatically generated e-mail, which confirms your access to the electronic file, as well as the receipt and registration of the documents sent by e-mail. Moreover, some courts send the user, to encourage digital communication, the following prompt: "For better communication between the court and you, future communications will also be done electronically."

Communication of entries by means of electronic mail

Currently, the transmission of documents is no longer limited to the use of ordinary mail, but can be done much more easily, by means of electronic mail. Digital communication is accessible, fast and cheap. There is no longer any need to travel to a post office or to the headquarters of a courier company, as the entries can be sent from wherever you are.

Moreover, you are no longer obliged to fit into the working hours of the courts or post offices, since the procedural documents sent by e-mail, on the last day of the procedural term which is counted in days, after the time at which the activity ceases at court, are considered to have been filed within the deadline, as established by the High Court.¹³

Hearings via video conference

Hearing via video conference has become often used, mainly in the criminal process, in order to limit the direct contact between the judge, prosecutor, clerk, lawyer, on the one hand, and justice, the online intermediary platforms, on the other. Most often we meet with video - the conference in case the defendants/convicts are deprived of their freedom and are found either in detention centers and preventive detention, or in penitentiaries and the aim is to establish a connection without the need for them to travel to the headquarters the court.

In the criminal process, this method of communication was regulated, which allows the use of video-conferencing as a method of conducting judicial investigations, through art. 106 para. 2, art. 204 para. 7, art. 235 para. 3, art. 364 para. 1, art. 364 para. 4 and art. 597 para. 21 C. proc. Pen.

On the other hand, however, we believe that this technology of the hearing method must also be analyzed through the lens of respecting the right to defense, especially in relation to the lawyer-client relationship. In the hypothesis that the lawyer is in the courtroom and the client

¹³ ¹³ Decizia nr. 45/2020 a ÎCCJ privind examinarea sesizării formulate de Tribunalul Gorj – Secția I civilă, în Dosarul nr. 14.725/318/2019, în vederea pronunțării unei hotărâri prealabile, publicată în Monitorul Oficial al României, Partea I, nr. 961 din 20 octombrie 2020

is in the detention center, confidentiality of the discussion cannot be ensured most of the time. Although the lawyer can be allowed to remain alone in the courtroom, certainly justice, the online platforms of the intermediary is constantly watched and listened to. In these conditions, the confidentiality of the discussions is seriously affected or even non-existent, which leads to a violation of the right to a fair trial, as provided by art. 6 of the European Convention on Human Rights.

Moreover, not every time the connection made is exceptional, a discussion can be held without interruptions or communication difficulties. When there are connection problems or breaks in the sound transmission, we can no longer talk about effective communication between lawyer and client, these aspects often represent obstacles in the process of making an effective defense. Thus, we can witness the interruption of judicial investigation due to power outages or poor connection, circumstances that could have negative influences on the conduct of the judicial process.

Advocacy in the digitalization context

Digital platforms are practically mobile applications or websites where the offer meets the demand for services, being found in several fields of activity, including the legal field. As far as the legal market is concerned, online platforms represent a benefit both for lawyers who are registered and for people who need legal advice online, offering new opportunities for both parties.

For example, in one of the existing legal platforms on the Romanian market, legal consultations can be conducted both by video conference and by text messages. People who access the platform are looking for specialized lawyers who can provide them with answers depending on the legal problem they have encountered. Depending on the specialization of each lawyer, the area of the country in which they operate, as well as the reviews given, clients choose with whom to start an online conversation and, subsequently, a collaboration.

Another benefit offered to registered lawyers, as well as for people who need online legal advice, offered on the platform is the centralization of files and their updating after each court term, in sync with the court portal, portaljust.

In addition to online platforms for legal assistance and the wide spread of legal information in the online environment, another benefit that comes with digitization is represented by jurisprudence platforms.¹⁴ Some of these systems allow the free consultation of Romanian legislation in electronic form and even of anonymized jurisprudence in the conditions where more and more decisions become public.¹⁵ Lawyers have at their disposal databases with court decisions due to power outages or poor connection, circumstances that could have negative influences and which arts from all over the country, which can be consulted

¹⁴ Spre exemplu, rolii.ro, rejust.ro, jurisprudenta.com, lege5.ro, etc

¹⁵ ¹⁵ T. Ban, Viitorul digital al avocaturii între oportunitățile erei cibernetice și nevoia acută de securitate, Curierul Judiciar, Vol. XIX, nr. 6/2020, p. 342

online. Thus, a strategy for approaching the case can be built more easily, following the research of reasonings and solutions through the justice portal, the online platforms applied in similar files.

In agreement with another expressed opinion¹⁶, we believe that a software will never give a client a feeling of trust, but that technology will be able to make the work of the lawyer much easier, who will be able to focus more on his human relationship with the client.

In conclusion, it must be clarified how far we go with the digitalization of the judicial system so that we do not violate basic human rights in the criminal process. Because it is not only a technical problem of infrastructure, of software, of procedures or a legislative problem, after all, it is also a philosophical problem, because principles of the judicial process that are thousands of years old are called into question. Whether or not we abandon the classic style of the criminal process, turn everything into an online procedure or keep this tool only for the support part and certain procedures that require urgency, are undoubtedly questions to which the future will give us an answer.

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¹⁶ ¹⁶ Colțan Tudor, Viitorul profesiei de avocat în era digitală: între mituri și realitate, în Conferințele Baroului București: „Inteligența artificială, reconfigurarea sau sfârșitul profesiei de avocat?”, 15 iulie 2020

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The supremacy of national constitutions in the age of globalization

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Abstract:

The world order has over time been dictated by the interests of the most powerful actors in the international political scene. The evolution of humanity both in terms of technical-scientific conquests and in that of the collective mind were also reflected in transformations and recalibrations in the way international relations are organized and carried out.

The end of the First World War would bring to the forefront the institution of the nation state, as a cornerstone of the creation of a world order that created the premises of an international society based on the force of law, thus revolutionizing the way of relating based on the balance of powers and, implicitly, on the force of law. In this context, the principle of self-determination of peoples would gain crucial importance and, correlatively, national constitutions would become the emblematic legal element both for already established states and for each newly created sovereign state.

The Second World War added, by codifying the principle of cooperation, a new valence to the international architecture, opening wide the doors of cooperation between states, by deepening and diversifying multilateral relations. In this context, new influential actors appeared in international relations, transnational companies, but also regional integrationist processes, which smoothed the way for the globalization process.

In our study, we aimed to identify the main assets of national constitutions in the era of globalization and to present some topics for reflection regarding their relevance in the current stage, where concepts such as national sovereignty undergo nuances and interpretations, which have as effect diminishing the importance of national states in international relations.

Keywords: Sovereignty, national constitutions, international organizations, transnational companies, globalization

Since the period of modern history, the need to establish some principles of internal organization of states was felt, which would differ not only from one historical period to another, but also from state to state, depending on the collective mentality and the need to protect the population against the abuses of leaders from the period of absolute monarchs.

The idea of creating a Constitution as a fundamental law and as a supreme legal act was established in continental Europe since the time of Ferdinand Lasalle. The same concern was also noted in the British space, with the elaboration of the Magna Carta document, although with a certain degree of inconsistency, during the reign of Edward III of England.

The founding character and supremacy of written constitutions has acquired an axiomatic validity and prevails in the definition of what a constitution means.¹⁷

¹⁷ Leoni, Bruno, *Freedom and the Law*, Buffalo Law Review, no. 2, vol. 11, 1962, pp. 77-78; Cappelletti, Mauro & Cohen, William, *Comparative Constitutional Law*, Bobbs-Merrill, Charlottesville, 1979, pp.5-6.

The application of the principle of self-determination of peoples was the determining factor in the creation of new sovereign states, on the ruins of former empires, after the First World War, which continues to represent the foundation of the world order paradigm. In this way of reformatting international relations, two fundamental concepts have merged, both for the internal law of states and for international law, namely the *state* and the *nation* that determines it.

The constitution of a nation-state thus becomes the set of principles of formation and organization – political, economic, administrative, etc. – of the fundamental political-legal entity of international law, unanimously recognized by experts and jurists as the state. The existence of a state is reflected in the constitution that governs its organization and functioning, and the constitution, in turn, is the identity document of a state.

From a legal perspective, the constitution is the supreme act in the hierarchy of regulatory documents at the national level, it is at the top of the pyramid of legal sources and is elaborated by the constituent assembly, as the holder of the people's sovereignty, being adopted by the nation, by referendum. In the national legal system, the hierarchy of the sources of law is predetermined by the hierarchy of the institutions that adopted them.

In a legal analogy, we also find the characteristic features of sovereignty in the legal essence of a constitution, which is exclusive, indivisible, inalienable, original and plenary. The inherent supremacy has its origin in the generic character of the constitution. The content of the constitution is not determined by compliance with other national legal requirements or preceded by other mandatory national legal instruments.

The constitution is the main regulator of fundamental social relations.¹⁸ The constitutional norms have a *generic* character and are the result of the consensus reached following the debates within the constituent power, during its elaboration. The supremacy of the constitution in the contemporary nation-state represents a *constitutive* component of the constitutional state, which is based on the rules imposed by the rule of law.

Constitutional supremacy is the highest expression of popular sovereignty. This has a *plenary* effect, which is addressed to all subjects of internal law, to all natural and legal persons on the territory of the nation-state. This constitutional supremacy is based on the axiomatic vision in which fundamental constitutional values, norms and principles define the basic legal arrangement and are subsequently developed in laws and statutes issued by national and/or local authorities.

According to the *autopoiesis* doctrine of the legal system,¹⁹ constitutional supremacy supports the hierarchy and eliminates the contradictions that block the effect of legal acts. The constitution has a formal aspect, and its supremacy maintains the hierarchy in the system of sources of domestic law and defines the material content of laws and normative acts with lower binding legal force. The immediate effect of constitutional supremacy is the obligation of the existence of a *concordance* of all national legislation with constitutional principles and provisions.

Considering the mentioned, it is possible to identify a direct effect that the constitution has on national legislation and the application of domestic law. The practical implications of

¹⁸ Some authors even state that the constituent power creates a political and legal order ex nihilo. See Preuss, Ulrich K., "Constitutional Power-Making for the New Polity: Some Deliberations on the Relations between the Constituent Power and the Constitution", in Rosenfeld, Michel ed., *Constitutionalism, Identity, Difference and Legitimacy*, Durham, Duke University Press, 1994, pp. 143-164.

¹⁹ Luhman, Niklas, "Autopoiesis, Handlung und Kommunikation", *11 Zeitschrift für Soziologie*, 1982, pp.366-379; Teubner, Gunther, ed., *Autopoietic Law: A New Approach to Law and Society*, Berlin/New York, Walter de Gruyter, 1988; Teubner, Gunther, ed., *Dilemmas of Law in the Welfare State*, Berlin/New York, Walter de Gruyter, 1986.

this *direct effect* require clarification of issues related to the inherent hierarchy of the constitution itself, based on a legally binding force distinct from constitutional norms.

In constitutional theory, various criteria have been tried to establish a classification system applicable to the provisions of the constitution. Hierarchical schemes were also devised in order to interpret the fundamental laws.²⁰

The provisions of a specific nature in the text of the constitution, according to the logic of adopting such a fundamental law, must express the *reasons* for the existence of the constitution and must be *interpreted* in accordance with the norms that are of a more abstract nature and enshrine objectives, values and principles. The provisions related to the principles are more abstract and more difficult to specify by the authorities responsible for the application of the law.

In relation to this aspect, it should be noted that the hierarchy of values in constitutional philosophy, which largely defines the limits of constitutional regulation, as well as the logical sequence and subordination in the arrangement of fundamental and derived social relations, should not be interpreted as an attempt to introduce a hierarchy in the regulatory contents of the fundamental law.

Per a contrario, it would imply that more abstract provisions, which define the contents of specific provisions, should be given a higher priority in the direct application framework of the constitution. In this hypothesis, the wording contained in the preamble of the constitution should take precedence over the institutions that apply the law.

Analyzing the constitutional practice in Western democracies, it can be stated that the institutions and the majority of those entrusted with the application of the rules of the fundamental law, refer to the preamble only in the absence of more specific constitutional provisions. The same logic of application is also found in the case of the majority of specific constitutional norms. Due to their technical and dispositive nature, the final and transitional provisions of the constitution should not automatically be assigned a higher priority than the rest of the constitutional norms.

In relation to the *immediate effect* of constitutional norms, there is the certainty that all norms are supreme in relation to all other legislative acts, they have the same priority and must be respected by all legal subjects.

However, the immediate and direct effect of the constitution requires the identification of some distinctions between the legal power of the constitutional provisions, in accordance with their objectives, contents and place within the constitution.

Depending on the specific content of each constitutional provision, the direct effect of the constitution will manifest itself in a different way, thus achieving a distinction between the provisions that refer to the form of government and the operation and structure of state institutions, which are charged with the application the principle of separation of powers in the state, and the fundamental rights and freedoms of citizens.

Consequently, when establishing the legal hierarchy of norms, it is particularly important to take into account the arguments underlying the logical structure of the constitution.

In some constitutional systems, clauses that are not amendments impose restrictions on the legislative, executive and judicial branches of power, but also on the constituent authority.²¹

²⁰ Some may be based on the differentiation between constitutional provisions. See Schloer, Bernhard, "Categories of Constitutional Norms", available at <http://www.uepala.kiev.ua/eng/law/99>. pdf.

²¹ A typical example would be the prohibition of revision of the form of government, which dates back to the Constitution of the Third French Republic and which was included in Article 83 of the current French Constitution of 1958, Article 139 of the Italian Constitution of 1947 and Article 110 of the Greek Constitution from 1975. The Basic Law of the German Republic from 1949 stipulates that federalism, the democratic and social character of the Republic; the main principles of the nation's sovereignty; the supremacy of the

A rigid constitution, built on the foundation of separation between the constituent authority and the constituted authorities, implicitly introduces a restrictive regime and procedures for constitutional amendments.

Prohibitive norms, especially those related to the violation of fundamental human rights, have precedence in the direct effect of the constitution.

At the same time, the general theory of law indicates the relationship that must exist between international and domestic law, which gives self-executing constitutional norms and provisions related to international treaties a superior binding legal force and, therefore, they must be treated preferentially compared to constitutional provisions, leaving the legal interpretation to the legislator.

Procedural constitutional norms, which have a secondary and formal character compared to substantive norms and substantive provisions, are equally binding.

The preamble of the fundamental law in which its objectives and goals are stated, as well as the final and transitional provisions created to implement the constitution in the legal order at the time of its adoption, are particularly important, but their effect is significantly limited in terms of the impact that the constitution has on the application of the law.

In the era of globalization, constitutional supremacy evolves in the context of the transformations that the contemporary nation-state undergoes.²² This must be based primarily on the imperative of *legitimacy*. Along with the progress of modern civil society, of the evolutions produced in the collective mind, constitutions appear as the foundation of state law and legality, but only if they meet the democratic criterion of legitimacy.²³

From a constitutional point of view, legitimacy has *formal* and *substantive* dimensions. In terms of content, constitutional democracy must reflect a specific system of values, which provides the philosophical and moral foundations on which society is built, and which, at the same time, strengthens the conviction of public opinion regarding the fact that existing institutions correspond to the interests of legal subjects.²⁴

The high level of correlation between the existing constitution and the legal one raises the issue of the legitimacy of its substance, which according to constitutional supremacy ensures the practical aspects of legality in the political and legal system.²⁵

The formal dimensions of legitimacy are related to compliance with rational, legally institutionalized procedures, which channel the constitutional consensus generated within a free public debate, when abstract, impartial constitutional provisions are drawn up.²⁶

The legitimacy of democratic institutions is a precondition for their supremacy and legality, which is defended in constitutional states.

Constitution before the legislative, executive and legal power; the right to resistance against any attempts to destroy the established constitutional order; the sanctity of human dignity; the inalienability and inviolability of constitutional rights; and the immediate effect of the fundamental rights are not the subject of the amendment. The Romanian Constitution of 1991 seems to have introduced the longest list of prohibitions regarding the amendment through the provisions of Article 148. The national, independent, unitary character of the state; republican form of government; territorial integrity; judicial independence; political pluralism; official language; human rights; and guarantees for the execution of these rights are not subject to fines.

²² Venice Commission, "The Transformation of the Nation State in Europe at the Dawn of the 21st Century", Science and Technique of Democracy Report No. 22, Strasbourg, Council of Europe, 1998.

²³ The distinction between traditional, charismatic legitimacy and judicial legitimacy of political behavior dominates the content of political and social sciences. Weber, Max, *Economy and Society*, Vol. I, New York, Bedminster Press, 1968, p.215.

²⁴ Schmitt, Carl, "The Legal World Revolution", in 72 Telos (1987) [ediție specială despre Carl Schmitt]; Lipset, Seymour Martin: *Political Man, The Social Bases of Politics*, Garden City, N.Y., Doubleday, 1960, p.77.

²⁵ For more details, see Tanchev, Evgeni, "Constitutional Safeguards of Legality and Legitimacy", Report to the 1999 Civil Service Forum, European Institute of Public Administration, Maastricht.

²⁶ Habermass, Jürgen, *Morals, Law and Democracy*, Sofia, 1999, pp. 279-308.

The classic principle of constitutional supremacy is to *assume new dimensions* with the development of relations between the national legal system and the international legal order. Contemporary constitutional states recognize the supremacy of international law. However, the mechanisms for implementing the obligations arising from the signed treaties are different, due to the choice of reference to which the national constitutions refer, *monism* or *dualism*.²⁷

The incorporation of the provisions of the treaty is done through two types of procedures.²⁸ According to the monistic system, which is *predominant in Europe*, international treaties become an integrated part of national law *after they have been ratified*. In the dualist system, the implementation of treaties is not done by ratification, but by *drafting a special law* or by *amending existing national legislation*.

A comparative analysis of European systems reveals another type of difference related to the position of international treaties in the national legal order. In some countries, such as Belgium, Luxembourg and the Netherlands, the provisions of international treaties are placed *above* the national legal system, *replacing* the authority of constitutional norms.

In the case of other countries, such as Austria, Italy and Finland, treaties that have been ratified by a special parliamentary majority have the *same binding legal effect* as the constitutional provisions.

A third approach to the obligations arising from the signing of international treaties, according to the monistic system in Europe, places them *above ordinary or organic parliamentary legislation*, but *below national constitutions*, consistent with their binding legal effect. This is the current practice in countries such as Bulgaria, Germany, France, Greece, Cyprus, Portugal, Spain and other countries.

In the Czech Republic, Liechtenstein, Romania, Russia and Slovakia, only human rights treaties take precedence over parliamentary legislation.²⁹

The legal relations that are established between the European Union and the member states are different compared to the process of implementing international treaties. Due to the attribution of legislative powers to the Union, the member states *delegate* the temporary exercise of some sovereign attributes, and the provisions of community law prevail over national constitutional norms, when they are not in normative content conflict, and have binding legal effect *after* the member states have been notified.

Problems can arise when the European norm is in normative conflict with the constitutional one, of course only in situations where the fundamental law does not expressly regulate the superiority of the European norm over the constitutional one.

Expert opinions differ on how to resolve such a conflict. Some authors consider that the implementation of international treaties is not similar to the obligation to transpose the *acquis communautaire* when the adaptation of national legislation takes place to provide a

²⁷ Regarding the different legal orders in the dualist system and the integration of both legal orders in monism, see Kumm, Mattias, "Towards a Constitutional Theory of the Relationship between National and International Law (Part I): International Law, National Courts and the Arguments from Democracy", Colloquium in Legal, Political and Social Philosophy, NYU School of Law, 30 October 2003, pp.1-2, available at: <http://www.law.nyu.edu/clppt/program2003/readings/kummland2.pdf> ; Wildhaber, Luzius, *Treaty-Making Power and the Constitution*, Basel, Helbing & Lichtenhahn, 1971, pp.152-153.

²⁸ Pieter van Dijk and Godefridus J.H., van Hoof, *Theory and Practice of the European Convention on Human Rights*, Boston 1990, pp. 11-12.

²⁹ See Kellermann, Alfred E & Zwaan, Jaap & Czuczai, Jenö, *EU Enlargement: The Constitutional Impact at EU and National Level*, The Hague, T.M.C. Asser Press, 2001, pp. 525-557; Economides, Constantin, *The Elaboration of Model Clauses on the Relationship between International and Domestic Law*, Strasbourg, Council of Europe Press, 1994, pp. 91-113 to pp. 101-102; Erades, Lambertus, *Interactions between International and Municipal Law*, The Hague, T.M.C. Asser Institute, 1993; West, Andrew, et al. al., eds. *The French Legal System: An Introduction*, London, Formal Publishing, 1992, p. 45.

supranational, direct, immediate and horizontal effect to the primary and secondary law of the EU.³⁰

At the opposite pole are those who believe that there is no supranational effect and that the validation of such a hypothesis represents a violation of national sovereignty, which *ab initio* cannot recognize any higher authority than that of the state. *Per a contrario*, the political-legal entity can no longer be integrated into the category of sovereign states, but possibly of those federated states from the logic of the federal state.

Analyzing the latter approach, it can be argued that the difference between the mechanisms for implementing treaties and the *acquis communautaire* is only a *formal* one, given by the procedures mentioned in a multilateral treaty - TL -, and the applicability of any of these two categories of international norms in domestic law it must be done in accordance with the constitutional provisions

We believe that the provisions of the Treaty of Lisbon are not sufficiently clear or coherent in terms of resolving such a conflict of rules. On the one hand, since the Preamble of the Treaty, the signatories recognize that the European Union is an international organization, according to all the rules of International Law, and in its provision mentions the superiority of the legal force of the European norm over the internal law of the states, without specifying anything about the relations with national constitutions.

This lacuna in the text of the Treaty leaves room for interpretation by the magistrate, who sees himself in the situation of applying only one of the norms in conflict, either the constitutional one or the European one.

In such a situation, we believe that we must resort to the origins of EU Law, namely to the regulations of International Law, to which it claims to be subject, according to the UN Charter.

Thus, the constitution represents the fundamental law of each state, determining its very existence as a subject of international law. The European Union is based on the will of the states, operating on the basis of the *powers* granted by the signatory states of a multilateral treaty, so *not on the basis of sovereign attributes*, which, by the way, it cannot have.

The constitution is the result of the same national will, but which regulates the principles of organization and operation of the state, based on its sovereign attributes. As such, both the Constitution and the Treaty of the European Union and the Treaty on the Functioning of the European Union have the same foundation, the will of the free and unadulterated state expressed.

The difference in application of one of the norms in conflict resides in the very norms of International Law, to which any European norm must be subordinated. The delegation of the exercise of some sovereign attributes of the states to the European institutions is *not equivalent to the transfer* of these attributes to the Union, which is based precisely on the sovereign agreement of the states. The operative part of the Treaty itself assigns *exclusive powers* to the state in the fields of national security and public order, which are the fundamental expression of sovereignty.

In conclusion, we believe that, in the situation of a normative conflict between the European norm and the provisions of the constitution, the latter prevails. *Per a contrario*, the

³⁰ These indisputable characteristics of European law were formulated by the Court in the early 60s: Case 26/62 N.V. Algemene Transport- en Expeditie Onderneming van Gend & Loos v. Netherlands Inland Revenue Administration [1963] ECR 1; Case 6/64 Costa v. ENEL [1964] ECR 614. For details see Stein, Eric, "Lawyers, Judges and the Making of a Transnational Constitution", 72 *American Journal of International Law*, 1981, pp. 1-27; Pescatore, Pierre, "The Doctrine of 'Direct Effect'", 8 *European Law Review*, 1983, pp. 155-157; Weiler, Joseph, "The Community System: The Dual Character of Supranationalism", 1 *Yearbook of European Law*, 1981.

application of the European norm violates both the imperative norms of International Law and the axiomatic paradigm of the current international order.

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HISTORICAL VIEW OF THE ADMINISTRATIVE ORGANIZATION OF ROMANIA UNDER THE EMPIRE OF THE CONSTITUTION SINCE 1923

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Abstract: *The union of Transylvania and the other lands left under foreign occupation with Romania is the most important event in the history of the Romanian nation, accomplished under particularly difficult conditions, being the work of the entire Romanian people. The adoption of the Constitution of 1923 constituted the main legislative theme of Romania as a whole, giving the Romanian state a monarchical form of government, but based on the parliamentary-constitutional democratic regime. Having a new constitution, it was necessary to draft the law for the administrative unification of Romania of June 14, 1925.*

Keywords: *Constitution, administrative reform, law, unification, decentralization*

General considerations

After the establishment of the Great Union, the Constitution of 1923 represented the main legal establishment, on the basis of which the fundamental institutions of the entire Romania functioned.³³ Although the Constitution enshrines, in its eight titles, prescriptions related to the constituent elements of the state, the organization and functioning of the state powers, the composition and functioning of the electoral system, social organization, organization of the army, financial and administrative organization, etc., it was imperative to adopt the Law for the administrative unification of June 17, 1925.

The 1923 Constitution established and developed the principles of national sovereignty and the separation of powers in the state, predicting and ensuring the participation of citizens

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³³ Paul Negulescu, *Curs de drept constituțional român*, Facultatea de Drept, București, 1927, p. 127

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in the exercise of political rights and in the management of public affairs.³⁴ Through this constitution, which was the supreme law of great value of the Romanian state, the Romanians perfected their institutions and legislation.³⁵

Administrative unification - an essential element of the legislative unification process

In the context of unified Romania, administrative unification was the main component of the legislative unification process. The existence of four different administrative systems endangered not only the stability of the Romanian state, but also the spiritual unification, the synthesis of the historical development of a given era, in the life of a people.³⁶ Constantin Hamangiu's statement regarding the "unification of legislation" with the axiomatic vocation cannot be reduced only to the sphere of civil law, it must be understood as the essential objective for the consolidation of national consciousness. Andrei Rădulescu, for the same purpose, described the importance of adopting a new unitary legislation, for the "soul unity of the nation".³⁷

Similarly to other major components of the legislative unification process (civil legislation or criminal legislation), administrative unification was a difficult process, due to the heterogeneity of the existing legal system on the territory of Romania, in the first years after the achievement of political unification. The administrative system on the territory of the old kingdom was of Western inspiration, predominantly French, an essential foundation of modernization from the second half of the 19th century, but which at the beginning of the interwar period required numerous adjustments.

In Transylvania, the legal order was formed by the rules of Hungarian law, and in Bucovina Austrian law was applied, while in Bessarabia the legal system was made up of tsarist legislation and partially of some fragments of the old Romanian law of Byzantine inspiration.³⁸

In relation to this normative background, Paul Negulescu specified that there is a complex, a set of traditions and public mentalities, which made "the public spirit of these provinces to be so different from ours, that we are facing a serious obstacle in the work of

³⁴ Ioan Muraru, *Drept constituțional și instituții politice*, ediția a VIII-a, Editura Actami, București, 1997. P- 275

³⁵ Victor Popa, *Dreptul public*, Editura AAP, Chișinău, 1998, p. 101

³⁶ Constantin Hamangiu, *În preajma viitorului Cod civil. Problema unificării lui*. În: *Pandectele române*, an VII, caietul 1, 1928, p. VI

³⁷ Andrei Rădulescu, *Unificarea legislativă*, Editura Cultura Națională, București, 1927, p. 6-7

³⁸ Traian Ionașcu, *Le Conseil législatif en Roumanie*. În: *Introduction à l'étude du droit comparé. Recueil d'Études en l'honneur d'Eduard Lambert*, Tome II, LGDJ, Paris, 1938, p. 768

administrative unification to which the national and political unity of the Romanian state is linked."³⁹

Anibal Teodorescu, during a public lecture in April 1922, drew attention to the fact that one of the most important reforms, which must be carried out, was the administrative reform. Considering that there was no compatibility between the four existing administrative organization systems on the territory of Romania at that time, Anibal Teodorescu raised the issue of their unification.⁴⁰

There were numerous controversies regarding the legislative and administrative unification, but in accordance with the provisions of the 1923 Constitution, it had to be taken into account that it provided, similarly to the fundamental law of July 1, 1866, that the territory of Romania is divided into counties and communes. The regulation in Article 4 of the 1923 Constitution also had a series of specific elements, determined by the criticisms that appeared in the doctrine or in the political discourse regarding the administrative organization of the old kingdom. It was expressly provided that the territory of Romania is divided, from an administrative point of view, into counties, and the counties into communes. Although this addition seems unnecessary in a text that precisely regulated the administrative division of the state, it was considered necessary because the territory of Romania is indivisible from a political point of view, but divisible from an administrative point of view.⁴¹ Thus, the mistake committed in 1866 was corrected, giving up the highlighting in the constitutional text of the nets, whose mention in the contents of art. 4 of the 1866 Constitution caused long controversies regarding their legal status.⁴² Considering that the provisions of articles 106 and 107 of this Constitution recognized the independence (in the sense of local autonomy) only of counties and communes, it was concluded that the counties had no legal personality, being only simple administrative subdivisions of the counties.⁴³

³⁹ Paul Negulescu, *Descentralizarea administrativă și organizarea regională a țării*. În: revista de drept public, anul I, nr. 1, 1926, p. 81-82

⁴⁰ Anibal Teodorescu, *Viitoarea organizare administrativă a României*. În: *Noua Constituție a României, 23 de prelegeri publice organizate de Institutul Social Român*, Tiparul Cultura Națională, f.a., p. 285

⁴¹ A. Lascarov-Moldovanu, Sergiu D. Ionescu, *Constituțiunea României din 1923 adnotată cu dezbateri parlamentare și jurisprudență*, Editura Tipografiei Curierul Judiciar, București, 1925, p. 15

⁴² Anibal Teodorescu, *Tratat de drept administrativ*, vol.II, Institutul de Arte Grafice „Mârvan”, București, 1935, p. 288

⁴³ Angela Banciu, *Istoria constituțională a României*, Editura Lumina Lex, București, 2001, p. 138-139

Principles of administrative organization in the Constitution of March 29, 1923

In all the debates, comments and projects regarding the principles to be the basis of the administrative organization of Romania as a whole, two immediate imperatives were addressed in an almost identical manner: the depoliticization of the Romanian public administration and decentralization. The two imperatives showed the deficient structure of the Romanian public administration both regarding the composition of the attributions of the administrative bodies and regarding the qualification and conduct of the public administration personnel. Analyzing the provisions of the Constitution of March 29, 1923, it was observed that four principles relating to public administration were included:

- the administrative division of the territory;
- decentralization;
- the representative principle in the constitution of county councils and communal councils;
- the establishment of administrative disputes within the jurisdiction of the courts.⁴⁴

Removing politics from the administration was one of the great expectations of the administrative reform, according to the March 1923 Constitution, and this meant tying the civil servant to his position, recognizing his stability.⁴⁵ The lack of stability of civil servants determines the purge campaigns after the elections and encourages corruption, political clientelism, lack of vision, etc. Anibal Teodorescu emphasized the need to remove the administration from political influence and proposed decentralization, for the administrative organization of the country. After the achievement of national unity, the problem of decentralization acquired a new dimension, in the context in which each of the new Romanian provinces brought a different administrative organization, with its own forms of decentralization.⁴⁶

Decentralization was seen as the starting point for a new stage in the evolution of Romanian society. The idea of renewing the Romanian society determined the adoption of the Law for the administrative unification of June 14, 1925. Centralization served the ideal of the

⁴⁴ Romul Boilă, *Organizația de stat. Considerațiuni teoretice. Organizația statului român în comparație cu organizația altor state*. Tipografia Cartea Românească, Cluj, 1927, p- 583

⁴⁵ Anibal Teodorescu, *Viitoarea organizare a României*, op.cit., p. 288-289

⁴⁶ Anibal Teodorescu, *Tratat de drept administrativ*, vol. I, ediția a III-a, Institutul de Arte Grafice „Eminescu”, București, 1929, p. 246-247

political unity of the state, and decentralization perfected the cultural ideal, science, art and Romanian civilization.⁴⁷

After the entry into force of the Law for administrative unification, its limits were also noticed, as the centralizing tradition of the old kingdom continued.⁴⁸ As Victor Onișor, professor of administrative law at the Cluj Faculty of Law, observes, "Although the 1923 Constitution provided for communal institutions as the organizing principle, administrative decentralization in Article 108", the 1925 legislator did not deviate from the basic principles of the laws above.⁴⁹ Also, the law preserved the prefect in his double capacity, as the representative of the government, but also as the executive authority of the county administration.

The law for administrative unification was repealed on August 3, 1929, and the law for the organization of local administration entered into force, by which the dual role of the prefect was renounced, by regulating the role of the president of the county delegation as the head of the county administration.⁵⁰

Moreover, the Minister of the Interior I.G. Duca, in his statement from 1928, specified: "In the interval of almost three years, since the Law for administrative unification of June 14, 1925 came into effect, we could find that the strict application of some provisions of this law often encountered great difficulties and it was really impossible."⁵¹

After the union of Bessarabia with Romania, for a better administrative organization, seven regions were established, namely: Upper Moldova, with the residence in Iasi; Lower Moldova, with residence in Galati; Upper Bessarabia, with residence in Chisinau; Lower Bessarabia, with residence in Izmail; Dobrogea, with residence in Constanta; Muntenia, with residence in Bucharest; Oltenia, with residence in Craiova. Each region was represented by a regional council composed of prefects, the presidents of the county councils, one delegate of these councils and the mayors of the county residences that were part of the region.⁵²

In 1921, during the second government led by Alexandru Averescu, the best draft law for the organization of public administration appeared, initiated by the Minister of the Interior

⁴⁷ Iuliu Pascu, *Organizarea puterii executive*. Partea întâi. Imprimeria Statului, Chișinău, 1928, p. 8

⁴⁸ Paul Negulescu, *Tratat de drept administrativ. Volumul I. Principii generale*. Ediția a IV-a, Institutul de Arte Grafice „Mărvan”, București, 1934, p. 620

⁴⁹ Victor Onișor, *Tratat de drept administrativ român*, Ediția a II-a, Editura Cartea Românească, București, 1930, p. 208-209

⁵⁰ Idem, p. 119

⁵¹ P. Negulescu, R. Boilă, G. Alexianu, *Codul administrativ adnotat*, Institutul de Arte Grafice „Vreamea”, București, 1930, p. 182

⁵² Idem, p. 578

Constantin Argetoianu, which created nine administrative regions by merging several counties. Each region was led by a regional council made up of members delegated by the county councils and municipal councils in the region and by legal members (the heads of the decentralized public services and one delegate each of the public institutions based in the region's residence, which carried out activities in the cultural field , agricultural, commercial, industrial or labor). The decisions of the Regional Council were implemented by a one-person administrative body, appointed by the president of the region.⁵³

By establishing the regions, the aim was not to undermine the autonomy of the communes or counties, but precisely to develop the public life in these administrative-territorial units by coordinating efforts in order to achieve larger objectives, because the region could coordinate efforts to carry out major works of general interest.⁵⁴ Although the arguments invoked by the doctrine and by a part of the political class were scientifically substantiated, there was no constant political will in the sense of establishing regions as intermediate units from a territorial administrative point of view. Therefore, the administration bill of August 3, 1929 renounced the region to appease the fear of the state's unity.⁵⁵

Although both the law for administrative unification of June 14, 1925 and the law for the organization of public administration of August 3, 1929 had opted for the notion of general county association, this phrase was abandoned in order not to create confusion and to avoid the word region in order to not to create a legal person with a political-administrative and territorial character superimposed on the counties and communes with their own powers as their tutelary body. It was considered that this association was nothing more than the region, as it had been provided for in the draft law of 1929, published.⁵⁶

We must mention that the liberal and later the national-peasant governments were extremely reluctant to accept the notion of region, citing an alleged violation of some provisions of the Constitution of March 29, 1923, which provided for the administrative division of Romania's territory into counties and communes (art. 4), the achievement of exclusively county or communal interests by county councils and communal councils (art. 41) or the possibility of establishing taxes only for the benefit of the state, counties, communes and public institutions that performed state services.

⁵³ Idem, p. 579; Constantin Argetoianu, *Descentralizarea administrativă și regionalism*. În: *Revista de drept public*, anul I, nr. 1, 1926, p. 23

⁵⁴ Paul Negulescu, op.cit., p. 612

⁵⁵ P. Negulescu, R. Boilă, G. Alexianu, op.cit., p. 569

⁵⁶ Ibidem, p. 209

In addition to these constitutional reservations, there was also the fear, repeatedly expressed from the parliament's rostrum, that the administrative regionalization of the entire Romania could be speculated by the partisans of the irredentist discourse. Under the 1929 law, general county associations were bodies created on a voluntary basis, for a limited period, by reuniting counties from a directorate in order to execute, create or maintain works or institutions of sanitary, economic, cultural or works benefit public and for any other act of creation or exploitation of services or institutions that fall under the attributions and competence of the counties.⁵⁷ The general county associations were legal entities under public law, having as governing bodies the Association Council, the Association Council Delegation and the President of the Association Council Delegation. The seven local ministerial directorates created were "local administration and inspection centers", based in the cities of Bucharest, Chernivtsi, Chisinau, Cluj, Craiova, Iasi and Timisoara. These bodies were led by a local ministerial director, appointed at the proposal of the Council of Ministers, by royal decree, having under him the heads of all the ministerial services in the directorate and the prefects of the arrondissement counties. Since the organization and functioning of this complex administrative body through general county associations and directorates proved extremely difficult in practice, until the repeal of these legal provisions in 1931, no general county association had been established.⁵⁸

The First Constitution of Romania from 1866 reinforced the sense of local autonomy for county and communal institutions, which carried out their activity based on administrative decentralization (art. 107 and 108). Later, the Constitution adopted in 1923 through articles 41 and 108 fixed, in turn, the principle according to which "county and communal institutions carry out their activity on the basis of administrative decentralization and the members of the councils are elected by Romanian citizens, through their universal, equal vote, direct, secret, mandatory and with the representation of the minority."⁵⁹

The creation of a modern administration after the reunification of Romania was based on the preeminence of several fundamental principles:

- decentralization;
- deconcentration;

⁵⁷ P. Negulescu, R. Boilă, G. Alexianu, op.cit., p.568

⁵⁸ Paul Negulescu, *Tratat de drept administrativ*, vol 1, op.cit., p. 613

⁵⁹ I. Muraru, Gh. Iancu, M.-L. Pucleanu, C.L. Popescu, *Constituțiile române. Texte. Note. Prezentare comparativă*. Regia autonomă „Monitorul Oficial”, București, 1993, p. 78-87

- consulting citizens on local issues of particular interest;
- local autonomy;
- the eligibility of local authorities.⁶⁰

From a political point of view, decentralization represents a liberal institution called to formulate and guarantee the exercise of local freedoms. This liberalism belongs to political liberalism, being nothing more than a democratic system, which involves the participation of citizens or their representatives, in order to achieve public interests. From an administrative point of view, decentralization represents an effective principle for managing local interests.⁶¹

Regarding the decisions adopted by the devolved bodies, they are adopted on behalf of the state, which maintains its hierarchical control over the legality and appropriateness of the adopted acts.⁶²

CONCLUSIONS

The Romanian constitution adopted in 1923 was a constitution with centralist tendencies, but it also had fundamental democratic principles and managed to establish the foundations of the administrative organization of Romania as a whole. The constituent legislator elaborated a balanced regulation within the framework of permissiveness offered by the social and political context of the early 1920s.

The constitution of March 29, 1923 represented in many aspects the upper limit of what could be accepted at that time. There was no provision of this constitution that would complicate the decentralization process or block the course of administrative regionalization, but the political class of that period contributed to the application of the principles regarding the administrative organization of Romania.

Decentralization really represents democracy applied in the administration of local affairs, and deconcentration shifts the place of decision-making power, because local state authorities are the territorial extensions of the central administration

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Some considerations relating to the suspension of the individual employment contract in the event of the granting of carers' leave under the updated labor legislation.

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Abstract: In this topic, the issue of suspending the individual employment contract on the employer's initiative for the granting of carers' leave is analyzed, according to the new amendments to the national labor legislation. This way of suspending the individual employment contract was introduced in the provisions of the labor legislation by Law no. 283/2022 amending and supplementing Law no. 53/2003 - Labor Code. According to this amendment of the updated Labor Code [Article 1521 paragraph (1)], the employer has the obligation to grant carers leave to the employee or to provide personal care or support to a relative or a person living in the same household as the employee who needs care or support as a result of a serious medical problem.

Also in the content of this topic is analyzed the issue of another type of leave, namely medical leave for the care of the patient with oncological diseases. This type of leave was introduced by Law no. 24/2022 amending and supplementing the Government Emergency Ordinance no. 158/2005 on sick leave and social insurance allowances, also belonging to the field of labor legislation.

This type of leave benefits the insurance for the care of the patient with oncological affections over 18 years old. The duration of this leave is no more than 45 calendar days at one year interval for a patient.

Keywords: Carer leave, suspension of the individual employment contract, patient with oncological diseases, sick leave.

It is stated that during the suspension there may continue to exist other rights and obligations of the parties (employee and employer), if these rights are provided for by special laws, by the applicable collective agreement, by individual employment contracts or by internal regulations. It is also mentioned that, in case of suspension of this employment contract, all the deadlines related to its conclusion are suspended, except in cases where the individual employment contract ceases by right according to the updated employment legislation.

Regarding the leave for the carer, this case of suspension was introduced in the provisions of the Labor Code by Law no. 283/2022⁶³ amending and supplementing Law no. 53/2003⁶⁴, being a new case of suspension of the individual employment contract on the employee's initiative. Thus, according to Article 152 paragraph (1) of the updated Labor Code, the employer is obliged to grant carer leave to the employee in order to provide personal care or support to a relative or person living in the same household as the employee and who needs

⁶³ Published in the Official Gazette no. 1013 of 19 October 2022.

⁶⁴ Law no. 53/2003 published in the Official Gazette no. 75 of 5 February 2003 2019, republished in the Official Gazette no. 345 of 18 May 2004 updated by Government Emergency Ordinance no. 57/2003, Government Emergency Ordinance no. 36/2021; Law no. 283 of 2022 (published in the Official Gazette no. 1013 of 19 October 2022) amended and supplemented.

care or support as a result of a serious medical problem, with a duration of 5 working days in a calendar year, at the written request of the employee.

Therefore, by virtue of this mandatory law, the employer is obliged to grant the employee, where appropriate, a “carer’s leave” so that he can also provide personal, care or support to another person living in the same household. However, the employer has the obligation to grant carers leave to the employee, but only at the written request of the respective employee.

Regarding the duration of 5 working days that can be granted in a calendar year at the written request of the employee, it is shown that, by special laws or the applicable collective agreement of work, a duration of more than 5 working days can be established for carers’ leave. This period of 5 working days (or longer if provided for by other normative acts) is not included in the duration of the annual leave and constitutes seniority in work and in the specialty.

At the same time, by way of derogation from the provisions of Article 224 paragraph (2) of Law no. 95/2006⁶⁵ on health reform, employees who benefit from carers’ leave are insured, during this period, in the health social insurance system, without paying the contribution.

The period of carers’ leave shall constitute a contribution stage for determining the right to unemployment benefit and temporary incapacity for work allowance granted in accordance with the legislation in force.

In other words, the employer is not obliged to pay an allowance to the employee during the carer’s leave, but during the carer’s leave the employee will remain insured in the health social insurance system without paying the contribution. The text of Article 1521 paragraph (5) of the Labor Code republished and updated was introduced by Law no. 283/2022. As mentioned above, it is mentioned that the serious medical problems mentioned in paragraph (1), as well as the conditions for granting carers’ leave, are established by a joint order of the Minister of Labour and Social Solidarity and the Minister of Health.

Indeed, the conditions for granting carers’ leave were established by order of the Minister of Labour and Social Solidarity no. 2172 of 25 November 2022⁶⁶ and of the Minister of Health no. 3829 of 19 December. 2022 .

With regard to serious medical problems referred to in Article 1521 paragraph (1) of the updated Labor Code, They are defined in Article 1 of the order of the Minister of Labour and Social Solidarity and of the Minister of Health no. 2172/3829/2020 as those conditions or complications affecting the functional status of the patient for certain periods or permanently, respectively they significantly limit the possibility of carrying out basic activities and daily instrumental activities, it is impossible to do so, requiring the support of another person.

It is mentioned that the employer has the obligation to grant carers leave to the employee. However, within no more than 30 working days from the time of submission of the application, the employee has the obligation to submit to the employer documents proving that the person to whom he has provided care or support is a relative or a person living in the same household with him, and the existence of serious medical problems that led to the request of the carer’s leave by the employee.

By relative is understood, according to Article 1531 paragraph (4) of the Labor Code amended by Law no. 283/2022, son, daughter, mother, father or husband/wife of an employee.

In other ways, the documents proving that the person to whom the care or support is provided lives in the same household as the employee are, as the case may be, the identity document of the person requesting care from which the same domicile or residence with the

⁶⁵ Published in the Official Gazette no. 652 of 28 August 2015, amended and supplemented later.

⁶⁶ Order published in the Official Gazette no.1241 of December 22, 2022

employee results, the act by which the person was taken into space, the certificate from the association of owners/tenants or the employee's own responsibility statement showing that the person to whom the employee has provided care or support lives in the same household with him at least during the period of care leave.

The medical document proving the existence of the serious medical problem that will be represented by the discharge ticket from the hospital or, as the case may be, by the medical certificate issued by the attending doctor or by the family doctor of the person with serious medical problems. It is mentioned that the list of serious medical problems based on which the employee can apply for care leave is provided in the Annex of order no. 2172/3829/2022 (about which I spoke) and includes 22 chapters referring to various diseases such as: Ophtamological, psychyatricks, nephrological, endocrinological, diabetes, urology, rheumatism, etc. With regard to the analysis of this topic, further clarifications should be made.

By Law no. 24 of 15 February 2022⁶⁷ amending and supplementing the Government Emergency Ordinance no. 158/2005 on sick leave and social insurance allowances, was introduced in Art. 2 paragraph (1) letter d1 "Medical ciconceias and allowances for the care of the patient with oncological diseases".

Also in this regard, order of the Minister of Health and of the President of the National Health Insurance House, no. 1166/217/20226, amending and supplementing the rules for the application of the provisions of the Government Emergency Ordinance no. 158/2005 on sick leave and social insurance allowances, amended and supplemented, provides, 7 lit. d) "medical leave and allowances for the care of the patient with oncological diseases".

Although both normative acts (the updated Labor Code and the Government Emergency Ordinance no. 158/2005 amended and subsequently supplemented) are part of the national legislation of labor law. We will find that among these normative acts there are essential differences regarding the work issue. Thus, in the Government Emergency Ordinance no. 158/2005, amended by Law no. 24/2022, chapter V1 on leave and allowance for the care of the patient with oncological diseases was introduced, which provides, in article 301 paragraph (1) that "benefit from leave and allowance for the care of the patient with oncological diseases aged over 18 years the insured who, with the patient's consent, accompanies him to surgical interventions and treatments prescribed by the specialist doctor."

Of course, the patient with oncological diseases can express his consent only to the sole person at each surgery, respectively treatment. On the other hand, both the insured person who takes care of the patient with oncological diseases and the patient are entitled to a minimum of one clinical psychological assessment session and a minimum of five clinical psychological counseling sessions

The duration of the leave is no more than 45 calendar days at an interval of one year for a patient, and the gross monthly amount of the allowance granted in this case is 85% of the calculation base for health insurance, Being fully supported from the budget of the National Single Health Social Insurance Fund, according to the provisions of the framework contract on the conditions of providing medical assistance within the health social insurance system and the methodological norms for its application.

In other terms, the insured persons benefit from medical leave if cumulatively some conditions are met, such as: They meet the minimum insurance period of minimum 6 months; they present the certificate issued by the Health Insurance House at which the oncological patient is taken into account, From which to show the number of days of leave for the care of the patient with oncological diseases that have been granted in the last 12 months regardless of the Health Insurance House where the companion is taken into account. It can also be shown

⁶⁷ Order published in the Official Gazette no.1241 of December 22, 2022

that this certificate of medical leave for the care of the oncological patient can be issued at a later date, but only for the current month or the previous month.

It was also mentioned that this leave for the care of the patient with oncological diseases, as well as the clinical psychological evaluation and clinical psychological counseling sessions are granted based on the medical leave certificate issued by the specialist doctor. However, if the patient is accompanied to treatment in the territory of a Member State of the European Union, the European Economic Area and the Swiss Confederation, The leave for the care of the patient with oncological diseases is granted on the basis of the medical leave certificate issued by the health insurance company at which the employer of the insured person submits the declaration provided by the Fiscal Code⁶⁸ or by the one with which the insured person has concluded an insurance contract for holidays and Health social insurance benefits, as the case may be, based on the translated and authenticated supporting documents, according to the law for the maximum duration provided by the ordinance, but not later than 15 days from the date of return of the patient with oncological diseases. The documents are sent to the health insurance company that issues the medical leave certificate by the insured person on paper or by electronic means of remote transmission.

The Health Insurance House shall transmit the medical leave certificate on paper or by electronic means of remote transmission to beneficiaries and employers, respectively, as the case may be.

It is mentioned that the number of days of sick leave for the care of the patient with oncological diseases is managed by the health insurance houses that have in their records these patients. The certificate is requested and transmitted to the patient or caregiver, including by electronic means of remote transmission. At the same time, the beneficiary of the leave has the obligation to immediately send a copy of the sick leave certificate to the insurance company that has in the record the patient with oncological diseases, including by means of remote transmission. In conclusion, it can be stated that between the two normative acts there are certain similarities, but also some differences. As similarities, it is mentioned that both normative acts are part of the labor legislation (the leave for the carer is provided by the Labor Code – Law no. 53/2003 amended by Law no. 283/2022, And leave for the care of the patient with oncological diseases is provided by the Government Emergency Ordinance no. 158/2005 amended by Law no. 24/2022.

Both normative acts provide for a certain duration of care leave, respectively 5 working days in a calendar year, and leave for care of the patient with oncological diseases is no more than 45 calendar days at an interval of one year for a patient. The essential difference is that this leave for the carer is compulsory by the employer to the employee or for personal care or support to a relative or person living in the same household as a result of serious medical problems, and leave to care for the patient with oncological diseases aged over 18 years is granted to the insured (who may or may not be employed) with the consent of the patient by the health insurance company that has in view the patient with oncological diseases, It is supported by the National Health Insurance Fund.

⁶⁸ Art. 147 paragraph (1) of the Law no. 227/2015 on the Fiscal Code (published in the Official Gazette no. 688 of 10 September 2015) amended and supplemented successively by the Government Emergency Ordinance no.16/2022.

Selective bibliography:

- Law no. 53/2003-Labor Code, amended and supplemented successively, including by Law no. 283/2022, subsequently amended;
- Law no. 95/2006 on health reform, republished and updated in 2023;
- Law no. 227/2015 on the Fiscal Code, amended and supplemented later;
- Government Emergency Ordinance no. 158/2005 on sick leave and social insurance allowances, amended and supplemented successively, including by Law no. 24/2022, amended and supplemented later; - Order of the Minister of Labour and Social Solidarity and of the Minister of Health no. 2172/3829/2020 on the conditions for granting carers' leave;
- Order of the Minister of Health and of the President of the National Health Insurance House no. 1166/217/2022, amending and supplementing the rules for the application of the Government Emergency Ordinance no. 158/2005, amended and subsequently completed.

THE SCIENCE AND VALUES OF LAW

Emilian CIONGARU*

Abstract: *As a science, the object of study of law is the existence of legal values exclusively from the point of view of the existence, form and constitution of these values. The very definition of law shows that the meaning of the approach is that of the existence of all the legal norms that are developed or recognized by the state power and that aim to organise and discipline the behaviour of all citizens within the most important social relations in society, according to all the social values specific to the respective society, rules which establish the legal rights and obligations whose compliance is ensured, in case of necessity, by the coercive force specific to the state. As the foundation of the science of law, legal norms aim to establish and clarify, through abstract notions, a series of fundamental problems specific to human existence as well as legal relations between individuals in society. Likewise, interpersonal relationships themselves involve certain moral, material or spiritual values specific to the social climate studied as a reference. Thus, the adoption of all the legal norms necessary for the legal system aims to protect certain values that the respective socio-economic and political system respects and promotes.*

Keywords: *legal system; science of law; legal values; value of law; axiology of law.*

1. The Science of Law - general and historical considerations

As social-historical existence, the concept of law - understood lato sensu as the totality of legal norms, together with all institutions and the activity of creating, developing and applying legal norms - had and still has a double meaning and a double determination: in one sense, law was created over time as an accumulation of legal norms, customs and practices that were imposed by the socio-political experience of initiation, organization and exercise of state power throughout social life and, in another sense, it appeared as a human creation based on the knowledge and doctrinal generalization of the rules of life, of the activity of their development, interpretation as well as their application in all social life. It can therefore be said, in other words, that law appeared over time both as a product of a relatively anonymous social-historical experience and practice, as well as of the creation and theoretical and doctrinal creations of various legislative institutions, of some jurists or doctrinaires of the time.

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Law as a science is essentially characterized by the object of study, i.e. the study of the legal phenomenon taken as a whole, centred on the set of legal norms that actually form the objective law. This set of norms is not considered an existence in itself that is isolated from the rest of the social context and on the contrary, it is considered that law, that by its nature and destination, represents a phenomenon that has profound and multiple connections and also human and social interferences. For these reasons, the science of law will inevitably and absolutely necessary expand its area of knowledge also on those areas of interference where legal practice taken in all its complexity, the purpose and finality of law occupy an important place.

However, it is necessary to note that a series of issues such as, for example: establishing the finality and purpose of law or, developing the process of creation, interpretation or application of law, etc. in fact, they do not constitute direct functions specific to the science of law, but also from specific fields of action or knowledge, as you might remember, the field of ideology, politics, or those of the philosophy and sociology of law and legal logic. Therefore, the science of law does not implicitly have the direct function of creating or applying law, but also that of researching, studying, interpreting and generalizing it.

Law as a science and as a value represents the art of reason, a fact that indirectly gives man great power of self-control and for that reason, just the idea of justice and its awareness in the minds of all people are not enough to regulate coexistence in a democratic society, a legal value being necessary to regulate the course of things in that society. In this sense, that practical role of law⁶⁹ is needed, namely, on one hand to offer a certain security to people's actions and to know the legal effects of these actions and on the hand to protect their rights.

Each person as an individual has a certain personality and defines their own personal conduct, a fact that gives them a certain individual freedom, but at the same time they must be aware of the consequences of all their actions. Thus the law brings an addition regarding the knowledge of the rights, duties and obligations of each person according to which a person must organize their own social life.

A number of values are protected and promoted in the fundamental principles of law, such as: homeland, life, freedom, health, property, work, bodily integrity, dignity, honour, family relations, relations in society, etc.

What is value and how can it be defined?

⁶⁹ Schröder, R. (1992), *Rechtsgeschichte*, Juristische Lehrgänge Alpmann und Schmidt Verlagsges. GmbH&CO. KG, Münster, pp. 28-29.

Value can be defined as a social relationship through which the appreciation given to some facts - natural, social, psychological - or to some objects is expressed, based on the existence of a correspondence of their characteristics with the social necessities and needs specific to a human community and implicitly with its ideals.

Although value is made up of the relation of objects to social necessities and needs, determined by practice from a historical point of view, the name of value has been assigned *even* to things, ideas, facts or actions that certain human communities cherish and to which they aspire or have as a model.

Value can also represent the embodiment of certain goals, ideas, projects, desires, in other words it represents the objectification of the human essence from and in the products of the creative activity specific to each type and typology of human attitude.

2. The science of value - general concepts

The scientific discipline that deals with the study of values is called *axiology*⁷⁰, it is part of philosophy and is applied in all human specializations that are oriented towards the production of values and goods but also towards educational, cultural and selection activities. Axiology as a term comes from the Greek language *axios* - value, to cherish, to value, to select; *axia* - value, so the science of the study of *values* (*axios* = value; *logos* = theory), i.e. *the general theory of values*. As a component part of philosophy, axiology has as its object the study of values from a general and multilateral perspective, thus making as specialized an analysis as possible of what they have in common - their origin, nature, genesis and functions - beyond the specific characteristics of each and their field.

Due to the fact that there is also a diversity of other social sciences that study only certain types of values such as: political economy - which studies economic values, aesthetics - which studies artistic values, ethics - which studies moral values, the science of law - which studies legal values etc., thus appearing a series of other "branch axiologies", such as: moral axiology, legal axiology, social axiology, etc.

The philosophy of law could not be completed if the field of its concerns were reduced only to the epistemological and ontological fields⁷¹, and on the contrary, it must also investigate the world that was created by man, namely, the world of legal *values*, with the same necessity.

⁷⁰ Cucos, C. (1995). *Pedagogie si axiologie*, Didactica si Pedagogica Publishing House, Bucharest, p.160

⁷¹ Eliade, M. (1992). *Istoria credintelor si ideilor religioase*, vol. I, Universitas Publishing House, Chisinau, p. 8.

In this sense, the specialization and the main theme of legal axiology are represented by the issues of approaching, understanding and treating *law as a value* - as a goal, obligation, imperative requirement, legal conduct, etc. - as well as the respective evaluations, the value reasoning about the legal importance, i.e. the value meaning - from the point of view of the science of law, of the laws in force that form the positive and implicit law of the state.

Thus, the finality of law as an obligation in relation to positive law, the state and the behaviour of the subjects of law can be formulated as a legal-value imperative in the sense that *the law in force - the positive law, the state and the behaviour of the subjects of law must have a legal character*.

Regarding this axiological aspect, the connection between *obligation* and *reality* more clearly expresses the idea of a need for the permanent perfection of the forms that positive law takes, the state and the conduct of people, created empirically and which, as normal phenomena of reality, develop historically, share its achievements and shortcomings and are almost always quite far from the ideal state.

Furthermore, the process of historical evolution is renewed, enriched and materialised the very meaning of legal obligation, as well as the entirety of legal goals, values and requirements, to which it is necessary for the existing laws, the state and the behaviour of people to comply.

Based on these arguments, it can be said that *legal values* can always be the object of a science of law, of an applied legal sociology as well as of a specialized philosophy of law.

3. Law as a science

Law as a science studies legal values⁷² exclusively from the point of view of the form and constitution of these values. As a science, the philosophy of law studies the birth, evolution and justification of legal values; and sociology deals with their application and adaptation to the entirety of social life. Law represents a totality of rigours, rules, norms, which are created by that organized will of a social personality, of the state as a fundamental political institution.

Law must be studied more and more from a global perspective⁷³, as a highly articulated system, with specific rules; from a historically determined perspective, as a phenomenon that preserves certain permanencies and traditions over time, which, however, are in permanent

⁷² Andrei, P. (1945). *Filosofia valorii*. Fundation "Regele Mihai – I", Publishing House, Bucharest, p. 247.

⁷³ Micu, G. (2022). *The conflict of international rules devices*, in Journal of Law and Administrative Sciences No.18/2022, Edited through the Publishing House Petroleum and Gas University of Ploiesti, pp.25-26.

transformation; from a structural perspective, as a phenomenon that is created by a series of fairly well-determined elements and sequences that are in turn in a state of continuous interference.

The very definition of law is given in the sense of the totality of the legal norms developed or recognized by the state power, which aim to organize and discipline the conduct of citizens within the most important relationships in society, according to the *social values* of the respective society, establishing legal rights and obligations whose compliance is ensured, if necessary, by the coercive force of the state.

The theory of legal dualism⁷⁴, which distinguishes legal value from legal reality, has also been addressed in history. True law represents nothing but the law that contributes to the achievement of a society of people with free will manifested as the will of the state, thus to the achievement of the general social ideal. The law establishes and manages only norms, and as attributes of positive law it can formulate imperatives, but both the legal norm and the imperative help and serve to achieve the absolute value of the law, and absolute value which is established by legal philosophy, and the achievement of the absolute value is the object of positive law.⁷⁵

In the sense of *positive law*, the concept of law is defined as the totality of legal norms in force at a given time, in a given society. Concretely, *positive law* is the law that applies immediately and continuously, being mandatory and liable to be achieved, when it is disregarded, by the coercive force of the state.

The process of knowledge but also of valuation of legal values consists in seeing legal culture as a measure of the legal value, in order to establish the positive law value of the set of laws that want to materialize the legal values in reality.

Legal values do not make sense of their existence only in the reference society because their foundation is the idea of community of social life in the community. The idea of just, or unjust, due to a legal norm appeared with society, a fact that leads to the identification of legal values as social values.

Legal values manifest the will of the legislator.

Legal values are based on specific powers, powers that, if they escape control and tend to exceed their own axiological domain, can become tyrannical.

⁷⁴ Fuerea, A. (2006). *Dreptul Uniunii Europene al afacerilor*, Universul Juridic Publishing House, Bucharest, pp.79-81.

⁷⁵ Craiovan, I. (1995) *Finalitatile dreptului*, Continent XXI Publishing House, Bucharest, pp. 236-238

From the realities of social life⁷⁶ it can be seen that the idea of value does not apply to those who do not follow the law, because they disavow and disregard even the basic values of society. The individual who commits an illegality certainly acts in contempt of the values that are contained in the rule of law, but non-value cannot be and is not equal to non-existence in nature, but is a concept to which value as such is related, so that in the situation where the individual chooses an illegality, through this choice they manifest the choice of their own model by which they want to rank their choices and nothing more.

In this context, the role of the judge does not consist of initiating a series of rigid mechanisms of juxtaposition of legal norms on the facts, but only of capitalizing on the particularities of the case brought to judgement, so that the judgement they will issue, in relation to the given particularities but also by the idea of justice that must guide them, is recognized and respected as a true holder of legal truth. The legal norm has as its conceptual core the value in its entirety, while the criterion by which an act is judged as just or unjust is classified as compliance with a command, a provision, an order, a law, which allows or stops or disposes refraining from performing an action.

4. Law and the Values of Law

As the foundation of law, the legal norms aim to establish and clarify, through abstract notions, a series of fundamental issue of human existence as well as the relationships between individuals. In turn, all interpersonal relationships aim at certain moral, material or spiritual values. The adoption of the legal norms of the legal system aims to protect certain values that the respective socio-economic system follows and promotes.

Legal norms, components of law, having their character as general, impersonal and binding rules, guide human behaviour and aim to be a defining presence of social life, general and individual, being required and imposed by objective requirements, by the emergence of the need to meaning, purpose, effectiveness and efficiency of human actions.

The legal norm provides a conduct⁷⁷, gives a directive, indicates a limit, can reconcile, provides criteria and specificities, indicates a scenario or an action to follow, can crystallize and develop a social experience.

In the totality and unity of the features of the legal norm⁷⁸, it acquires a series of defining characteristics such as: violability, typicality, impersonality and generality, the imperative character, aims at the existence of an inter-subjective relationship, is in quite complex relationships with the value in the sense that the very process of the development and constitution of the legal norm implies the existence of an inherent value dimension, because it relates to the entirety of possibilities and of virtuality, from which something from the field of possibility can be selectively retained, the will being able to relate to that which does not yet exist, towards an ideal to which every reality must aspire.

Only thus can the selection of circumstances evoked by the hypothesis of the legal norm

⁷⁶ Niemesch, M. (2019), *Teoria generala a dreptului*, Hamangiu Publishing House, Bucharest, pp. 196-197

⁷⁷ Hegel, G.W.F. (1996). *Principiile filosofiei dreptului*, IRI Publishing House, Bucharest, p. 207.

⁷⁸ Popescu, S. (2002). *Teoria generala a dreptului*, Lumina Lex Publishing House, Bucharest, p. 348.

have a value basis, not being a mere presentation of some elements of a factual nature, the provision is given only in the name of the existence of some values, which are meant to legitimize it, and the sanction is also closely related to axiological reasons as the finality of the application of the legal norm by the state.

In ancient times⁷⁹, legal norms were seen as commands given by the head of a tribe, who was respected as the emissary of divinity on earth. and the norms were only commands of the divinity, which had to be imposed on the people, but for modern times the legal norms are no longer divine commands or results of a mystical soul of the people, but are imperatives, which express the will of the social community imposed as the will of the state.

Law, taken as a social fact⁸⁰, does not and cannot automatically take over the facts, the meaning being allocated exclusively by reference to social values because only the value examination can prevent and mitigate the possible consequences of some situations, in which legal norms do not or may not assess social facts at their true value, i.e. to what extent they correspond to the needs, interests and aspirations of the people of a particular historical period.

Thus, the science of law can assign a certain meaning and, most of the time, certain legal consequences, favourable or unfavourable, to certain social facts, outside the balance they can support, but it should be specified that the legal system that is no longer in touch with reality will not be able to subdue it and, as a result, the revolt of some facts against the law can from time to time shake and even overthrow, with or without violence, the institutions that cannot adapt to the new situations of a society framed in the globalised legal system and adapted to it.

5. Conclusions

It can therefore be concluded that law as a science and value represents the indissoluble link with the supreme values of human society and the research, evaluation and knowledge of law can be studied from three perspectives: as a science of values, as a science of norms and as a science of reality which emphasizes the complex nature of the concept of law. It is also possible to issue the opinion that the law and social values acquire the recognition of being developed to fulfil needs and utilities only within the framework of social relations and only in this context can the social values that represent a particular importance for a certain social group

⁷⁹ Draghici, C. (2021). *Unele consideratii privind influenta dreptului roman asupra formei actului juridic din dreptul civil roman*, published in Antemeridian/Postmeridian Magazine, Constantin Brâncusi Tg-Jiu University, Academica Brancusi Publishing House, Tg.Jiu, 2021, Year 7, No.18, New series, Tg.Jiu, 2021, pp. 56-57.

⁸⁰ Micu, G. (2007), *Ordinea juridica institutionala comunitara*, Paideia Publishing House, Bucharest, p.15.

and whose protection must be ensured by the existence of imperative forms of coercion, by social values that represent a much lower importance, or by social values that present a strictly individual interest. The law and the legal value, therefore, do not necessarily represent an intrinsic quality of a certain good or certain interests, but even an external assessment of them, and are the expression of the appreciation that the law gives to the good, the interest in relation to the needs and necessities of the general interest of society.

Furthermore, it should also be noted that there is not always a certain connection or a strict and direct correspondence between the branches of law and the branch of the science of law, in the sense that the specific branches of the science of law are generally much more numerous than the specific branches of law analysed from several approaches namely: as a first approach, on a certain structure specific to a branch of law, several fields and branches of social and human sciences can be developed, depending on the research methodology or perspective. As an example, the sciences specific to administrative law can be developed on the branch of administrative law, at a national, regional or universal level, as well as historical sciences on this type of branch or on legal institutions of administrative law, etc.; In a second approach, in the field of legal sciences, the fields of general theoretical sciences, historical sciences and border sciences, as well as the field of auxiliary sciences that do not have a direct correspondent in a certain branch of the study of law, have appeared; In the third approach, some socio-human sciences came into being on the pattern of some sub-branches of law that evolved faster and more pronounced, acquiring a relative autonomy from the branch of law from which they emerged, an example being the branch of insolvency law, family law, corporate law or commercial law that emerged from the branch of civil law, or the division of the branch of international law into two branches: public international law and private international law and, implicitly, the sciences corresponding to these respective branches.

As a consequence, it can be said that the science of law studied as a unitary system of knowledge of the general legal phenomenon does not represent an existence in itself, but is very closely related to the social-historical practice of the development, achievement and application of law and therefore, the entirety of the legal sciences has as its final goal the development and improvement of the law system as a whole, as well as legal practice in general, legal practice that helps legal sciences to be taken as a criterion for verifying the concepts, theses, principles and ideas that they develop.

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EXPANDING AND UPGRADING THE USE OF DIGITAL TOOLS AND PROCESSES BY COMPANIES IN DIGITAL ERA

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Abstract. In the last few years, a series of measures have been adopted by EU, with the stated purpose of facilitating public access to information about companies and their branches established in the European Union, as well as the effective development of cross-border commercial relations. Thanks to their business activities and investments, including on a cross-border basis, companies play a leading role in contributing to the EU's economic prosperity, competitiveness and in carrying through the EU's twin transition to a sustainable and digital economy. To this end, companies need a predictable legal framework that is conducive to growth and adapted to face the new economic and social challenges in an increasingly digital world. While companies are established under national law, EU company law lays down a legal framework that enhances legal certainty across the single market and predictability for them. This company law framework, which encompasses the roles and responsibilities of the business registers, needs to keep abreast with new developments and challenges.

The COVID19 pandemic crisis clearly demonstrated the need for increased resilience of cooperation across the EU, as well as the importance of continuing to facilitate and simplify procedures for the business of traders, an important component of a society based on European values and a more resilient economy.

Key words: digitalisation, cross-border cooperation, trade registers, companies, legal certainty.

Globally, at different rates in each country, digitization takes place as a necessity of integration into the infrastructure frameworks established by new technologies. These new technologies not only take over from humans tasks that once, in the not-too-distant past, were done manually and repetitively, but they can even create entire specific, fully automatic processes by themselves, which do not need the intervention of people.

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The need for digitization is increasingly present among companies, and they are constantly looking for solutions that make their work more efficient, faster and that bring them the desired results. An investment in digitizing processes can prove to be a good idea in the long run, as it will help the firm save time and financial resources needed to carry out manual processes.

The accelerated development of commercial relations, the need for rapid interconnection and the collection of information in real time are realities of recent years that have proved the need for digitization, simplification of procedures in commercial matters and more. The COVID-19 pandemic was the catalyst that triggered the rapid implementation of digitization procedures in all areas, clearly demonstrating the essential role of digital tools, for example, in judicial procedures, in ensuring the continuity of companies' interactions with commercial registers and authorities, etc.

Businesses need digital tools to access information, interact with national authorities and enjoy effective access to justice. Digital access to justice can facilitate operations, reduce costs and regulatory burden, while improving access to the single market for all businesses, especially SMEs. Legal practitioners must be able to provide the highest level of support to their clients, particularly by communicating with the courts and transmitting documents safely and efficiently. It is important that national and European authorities have the appropriate tools for secure communication with other countries and to exchange evidence and documents. EU justice and home affairs agencies need effective means to support national authorities and cooperate effectively with each other⁸².

One area where a slow rate of digitization was noted is that of registers and databases. Individuals, businesses and legal practitioners face difficulties in accessing the information to which they are entitled. In many cases, this access is not available online, actually creating a number of inefficiencies.

Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law brought together a large part of the European Union (EU) company law rules in a single directive. The directive covers matters such as incorporation, capital and advertising requirements, as well as company operations (such as mergers and divisions).

This Directive has the merit of codifying the names of the system of interconnection of trade registers, which interconnects national trade registers and makes information on joint-stock companies available to the public through a single point of access, the European e-justice portal, and which provides secure means for the exchange of information between trade registers (for example, on branches, cross-border operations, persons who have been denied the right to exercise a management function)⁸³.

Subsequently, this Directive was amended by Directive (EU) 2019/1151 of the European Parliament and of the Council of 20 June 2019, as regards the use of digital tools and

⁸² Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and The Committee of the Regions, Digitalisation of justice in the European Union. A toolbox of opportunities, COM(2020)710 final

⁸³ https://eur-lex.europa.eu/legal-content/RO/LSU/?uri=CELEX:32017L1132#keyterm_E0002

processes in company law and by Directive (EU) 2019/2121 of the European Parliament and of the Council of 27 November 2019, as regards cross-border conversions, mergers and divisions.

Based on Directive (EU) 2017/1132, the BRIS - Business Registers Interconnection System - was implemented in the matter of trade register cooperation at the European level. Thus, since June 2017, the trade registers of all EU countries are interconnected, allowing access to information about companies registered in any EU country, Iceland, Liechtenstein or Norway, information about foreign branches and cross-border mergers of companies. Information on the name and legal nature, place of business and country of registration, as well as the identification number of a corporate entity or an entity equivalent to companies, is made available through BRIS, free of charge. In addition, it is possible to obtain, electronically, information and documents related to the commercial registration documents of the companies, such as the members of the corporate bodies, the statute, the annual accounts and the subscribed share capital.

The purpose of BRIS is to facilitate public access to information about companies and their branches established in the European Union by: ensuring the interconnection of trade registers from the EU member states and from the European Economic Area, thus facilitating cooperation and electronic communication between the registers; increasing confidence in the single European market by ensuring transparency and access to up-to-date information; a higher degree of legal security regarding the information contained in the trade registers at the European level.

In our country, the Ministry of Justice, through the National Trade Register Office (ONRC), as the implementing body, ensures the interconnection with BRIS - Business Registers Interconnection System according to the provisions of Law no. 152/2015 for the modification and completion of some normative acts in the field of registration in the trade register regarding the implementation of European Directive no. 17/2012/EU regarding the interconnection of central, trade and company registers⁸⁴.

BRIS is made up of the following components:

- the European e-Justice portal, which provides the interface for electronic access to information on companies registered in the trade registers of EU member states and the European Economic Area;
- European Central Platform (ECP) – The central service platform that interconnects the trade registers of the member states to be able to use the e-justice portal;
- Trade registers from the EU member states and from the European Economic Area.

The Romanian Electronic System for the interconnection of the trade register of the National Trade Register Office (ONRC) with BRIS has become operational since September 2019 and can be accessed on the European e-justice portal, <https://e-justice.europa.eu/>.

Through BRIS, the following information registered in the trade register kept by the ONRC is available free of charge: the name and legal form of the person registered in the trade register, the registered/professional headquarters of the person registered in the trade register and the member state in which it is registered, order number from the trade register of the

⁸⁴ <https://www.onrc.ro/index.php/ro/despre-onrc/proiecte-finantate-din-fonduri-ue/bris>

registered/registered person, the unique identifier at European level (EUID) and the unique tax registration code, the state of the company.

The new law on the Trade Register⁸⁵ transposes Directive (EU) 2019/1.151 of the European Parliament and the Council of 20 June 2019 amending Directive (EU) 2017/1.132 regarding the use of digital tools and processes in the context of company law. According to the statement of reasons, this normative act, necessary and mandatory, moreover, as a result of Directive (EU) 2019/1.151, brings the following new elements⁸⁶:

- Online accessibility of all formalities for setting up a company and registering a branch by using electronic means of identification and electronic means of communication;
- Simplification of the registration procedure in the trade register to allow the submission of documents in electronic format, the verification of the fulfillment of the conditions provided by the law by communication between the authorities and the use of information/documents already at their disposal;
- Regulation of the registration procedure in the trade register based on the legality control, carried out by the registrar;
- Regulation of the status of the Trade Registry registrar;
- Regulation of online access to information on companies, including information on companies registered in other member states of the European Union and, in order to improve the accessibility of the public service of the trade register, ensuring the availability of extended and updated information on the establishment and operation of companies;
- The codification of the legislation in the field of registration in the Trade Register and its systematization, in relation to the regulations in the field of companies, in the matter of preventing and combating money laundering, of the protection of personal data.

Ever since its publication, the law has sparked numerous controversies. Practitioners and theoreticians in law have opined that online prevails in connection with the registration procedure in the Trade Register, the concept of a listed company is not regulated in the legislation, nor in the new regulatory act, there is a lack of a definition and regulation of the emblem⁸⁷. One thing is certain, however: The new law lays the foundations for an intensified digitization of the Trade Register.

In the same context of the acceleration of the digitization procedure and the expansion of digital tools, recently, on March 29, 2023, the European Commission adopted the Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2009/102/EC and (EU) 2017/ 1132 regarding the extension and further improvement of the use of digital tools and processes in the field of company law⁸⁸.

The proposal aims to facilitate the cross-border operations of businesses and increase

⁸⁵ Law no. 265/2022 regarding the Trade Register and for the modification and completion of other normative acts affecting registration in the trade register, published in MO no. 750/26.07.2022, in force from 26.11.2022

⁸⁶ <https://www.cdep.ro/proiecte/2022/100/30/3/em154.pdf>

⁸⁷ <https://www.bursa.ro/noua-lege-a-registrului-comertului-intre-digitalizarea-institutiei-si-problemele-agentilor-economici-23263846>

⁸⁸ Bruxelles, 29.3.2023 COM(2023) 177 final 2023/0089

transparency and trust in businesses by making more information about them publicly available at EU level. The proposal will contribute to the further digitization of the single market and help businesses, especially small and medium-sized enterprises, to operate in the EU space.

According to the statement of reasons⁸⁹, the proposal aims to increase transparency in the single market on companies through the use of digital tools such as BRIS, improve the reliability of company data and build trust between Member States' registers and their authorities, including by creating the conditions for public authorities to be more connected.

The proposal also aims to eliminate and reduce formalities related to the use of company information in cross-border situations, to shorten the duration of the procedure for setting up subsidiaries and branches in other Member States and to make it more cost-effective, including by the use of the "once only" principle (according to which companies should not be required to submit the same information to the commercial registers several times). In this way, it seeks to reduce the overall administrative burden for companies and other stakeholders in cross-border situations and facilitate the expansion of SMEs across the EU.

To reduce bureaucracy and administrative burden for cross-border businesses, the proposed rules include:

- applying the "*once only*" principle so that companies do not have to provide information again when setting up a branch or company in another Member State. Relevant information can be exchanged through the trade register interconnection system;
- an EU company certificate, containing a set of basic information on companies, which will be available free of charge in all EU languages;
- a standard multilingual EU digital power of attorney model that will authorize a person to represent the company in another member state;
- eliminating formalities, such as the need for an apostille or certified translations for company documents.

The proposal updates existing EU rules for companies to further adapt them to digital developments and new challenges and to boost economic growth and competitiveness in the single market.

To ensure greater transparency and trust in businesses, the proposed rules also aim to ensure that important information about companies (for example, about partnerships and groups of companies) is made available to the public, in particular EU level, through BRIS. At the same time, according to the proposal for the Directive, it is aimed to facilitate searches for information about EU companies, allowing searches to be carried out through BRIS and, at the same time, through two other EU systems that interconnect the national registers of beneficial owners and insolvency registers, but also ensuring that the data on companies appearing in the trade registers is accurate, reliable and up-to-date, for example⁹⁰ by carrying out checks on the information on companies before they are entered in the trade registers in all Member States.

⁸⁹ <https://data.consilium.europa.eu/doc/document/ST-7953-2023-INIT/RO/pdf>

⁹⁰ <https://data.consilium.europa.eu/doc/document/ST-7953-2023-INIT/RO/pdf>

Conclusions:

The legislative initiatives adopted or proposed at the European level, also transposed into national legislation, are the natural consequence of the evolution of commercial relations in the current social, economic and legal context and are intended to significantly reduce administrative barriers when companies use information about the company from the registers commercial in cross-border situations, including in administrative or judicial proceedings. Small and medium-sized companies benefit, thanks to these legislative changes, from the reduction of administrative burden and increased legal security, as well as easier access to information. The new regulations aim to improve the safety and reliability of company information in commercial registers across the EU, and also to increase access to company information, especially at EU level, and to remove administrative barriers when companies and public authorities use such information in cross-border situations, through the use of digital tools and processes.

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BRIEF CONSIDERATIONS ON THE LEGAL REGIME OF THE TRANSMISSION OF SHARES IN A LIMITED LIABILITY COMPANY BY SUCCESSION

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Abstract:

The succession debate by the Romanian notary public, which has as its object the social parties in a company, can lead to various practical notarial problems.

A first problem would be the qualification of the deceased's contribution to the social capital of a company as own property or common property. This qualification can be made taking into account the application of the civil law over time and having as a temporal barrier the adoption of the new Civil Code, respectively Law no. 71/2011 on the application of Law no. 289/2009. The implications that such a qualification can have are diverse, especially in the case of a limited liability company that has a considerable patrimony, which can lead to the increase or decrease of the estate and thus to the modification of the emolument for the successors of the deceased.

Another issue is whether or not the company continues its activity with the successors of the deceased. In the hypothesis in which the transmission of the ownership of the company will be achieved through the issuance by the public notary of the Certificate of Heir, he is not obliged to make a concrete analysis on the continuation or not of the company's activity, such formalities will be carried out after the establishment of the quality of heirs of the heirs of the deceased with the rest of the company's associates.

The situation in which the deceased owns shares in a foreign legal person company established on the territory of a member state of the European Union, the provisions of EU Regulation no. 650/2012 of the European Parliament and of the Council on jurisdiction, applicable law, recognition and enforcement of court decisions and acceptance and enforcement of authentic acts in matters of succession and on the creation of a European certificate of heir.

Keywords :social partners, transfer of ownership, succession, deceased, notary public

1. Introductory aspects. In the doctrine⁹² it was stated that the permanent migration of the labor force and the freedom of movement of capital, which is at the foundation of the European construction, have determined in the last two decades the emergence of legal relations with foreign elements both in terms of commercial relations, those of family law, and in the matter of successions.

The right to inherit is a human right guaranteed by the Constitution. Fundamental rights and freedoms are the common legal heritage of humanity, because they refer to universal values

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⁹² DIMA Carmen, "Transmission of shares by succession, between *lex successions* and *lex societatis*", Law 9 Magazine of 2022; article consulted online, online source <https://sintact.ro/#/publication/151025070?keyword=succesiunea%20privind%20partile%20sociale%20ale%20unei%20societ%C4%83%C8%9Bi&cm=SREST>, accessed on 07.06.2023.

in international relations⁹³. The objective realities have led to the need to establish common Community rules, which would give the European citizen predictability and uniformity in terms of the transfer of assets by inheritance, whether or not there is a will. Beyond the fiscal aspects, which are not to be neglected in the process of establishing the rules that will govern the transfer of the patrimony to the successors, but which go beyond the scope of the Regulation and are related to the tax legislation of each state on whose territory the assets that make up the successional estate are located, it is appropriate to carefully weigh the legal aspects specific to the national legislation.

Referring to the situations after August 17, 2015, the practical importance of the applicable laws may arise, for example, if the deceased's patrimony contains *shares in a company* incorporated on the territory of another state (we will hypothetically choose the case of Romania and France): a French citizen who is the holder of *shares* in a *company* with limited liability, legal person Romanian, had the last habitual residence in Romania, did not make the choice of the law applicable to his succession and the devolution of the succession will be made according to the Romanian law, as *lex successionis* or in the case of the Romanian citizen with the last habitual residence in France, who will have as the law applicable to *the succession* the French law, and has *shares* in a *company* limited liability with headquarters in Romania, but also in a limited liability company (S.A.R.L.) with its real headquarters in France, or in the event that the foreign citizen residing in a Member State of the European Union chooses as the law applicable to *the succession* the law of his citizenship, provided that he holds *shares* in a *company* established on the territory of Romania or France, or in the situation in which the deceased is not a member citizen of a Member State of the European Union and has not had his last residence in a Member State of the Union, but the competence to settle *the succession* lies with an authority of a Member State (in our case either Romania or France).

Beyond the discussions on the temporal application of the provisions of Regulation (EU) No 650/2012 of the European Parliament and of the Council on jurisdiction, applicable law, the recognition and enforcement of judgments and the acceptance and enforcement of authentic instruments in the field of *succession and on the creation of a European certificate of succession*, which in essence establish as a rule that the Regulation applies both *the successions of the deceased persons* starting with August 17, 2015, the date of its entry into force, but also if the law was chosen before the entry into force of the Regulation, but in accordance with its provisions, the question arises what law will govern the transfer by *succession of the shares of a company*.

2. What is the legal nature of the shares – own or common property? In order to be able to determine the legal nature of the shares to be transferred by inheritance, that is to say, their character as separate or common property, we will refer to the date of making the contribution, to the capacity of associate of one or both spouses and to the legal nature of the assets contributed, in exchange for which the shares were acquired.

In the case of limited liability companies, the contributions of the shareholders may be in cash or in kind: contributions in immovable property or tangible movable property (materials, goods, etc.) or intangible (claims, goodwill, trademarks, patents, bills of exchange, debt securities, etc.). The asset which is the subject of the contribution in kind will be valued in cash⁹⁴. The limited liability company does not fall strictly into one of the two categories, being a mixed-use, which borrows from the characters of both categories of *companies*. The similarity with *individual companies* is reflected, for example, in the fact that *the* limited liability

⁹³ T. Corlăţean, European and International Protection of Human Rights, 2nd edition, Universul Juridic Publishing House, Bucharest, 2015, p. 7.

⁹⁴ Stanciu D. Cărpenu, "Tratat de drept comercial român", ed. Universul Juridic, Bucharest 2019, p. 354.

company has an *intuitu personae* character, the trust between the shareholders being a key element, so that the maximum number of shareholders in a *limited liability company* is 50, and *the shares* can be transmitted under certain conditions. Precisely in order to protect this *intuitu personae* character of the limited liability company and not only, in the idea that *lex successionis* would contradict the *lex societatis* and thus disturb the unitary rules of operation of *the company*, the Regulation will not apply to the transfer of ownership of the "shares". We consider, like other authors, that the reference to shares, *lato sensu*, actually includes the participation titles in the share capital of *the companies*, regardless of their name: shares, *shares*, parts of interest, securities⁹⁵.

I shall therefore establish the legal nature of the contribution as its own good or as a common good, following the legal criteria from the date on which the contributions were made (*tempus regit actum*).

Thus, if the contribution (regardless of whether it was an initial contribution, to the establishment of the company, or subsequently, for the increase of the share capital) was brought before October 1, 2011, the date of entry into force of the new Civil Code (NCC), according to the rules of law in force on the date of payment to the share capital, we will apply the rules of the Family Code, which in art. Article 31 expressly establishes the categories of own assets, and in Art. Article 30 states that 'the assets acquired during the marriage, by either of the spouses, are, from the date of their acquisition, the joint property of the spouses. [...] The quality of a common good does not have to be proven.'

In previous NCC doctrine, the qualification of securities as the spouses' separate or common property was a controversial topic, with no express legal qualification or consensus of doctrine.

In an opinion⁹⁶ stated in the doctrine, it is considered that when the company is formed, even if the spouse or spouses bring as a social contribution a common asset, the title of value constitutes the own property of one of the spouses (n.n. – of the one who becomes an associate).

I consider that the solution provided for by the current legislation corresponds to a correct legal reasoning and does not harm the interests of either of the spouses, so that we consider, for the sake of reason, that even in the case of a common good contribution brought before the entry into force of the NCC, we can classify the shares as separate or common property (there being no legal criterion in the previous legislation), according to the criteria established by the NCC.

The argument could be art. 5 of Law. 71/2011 for the implementation of Law no. 287/2009 on the Civil Code, according to which:

"Art. 5. – (1) The provisions of the Civil Code shall apply to all acts and deeds concluded or, as the case may be, produced or committed after its entry into force, as well as to legal situations arising after its entry into force.

(2) The provisions of the Civil Code are also applicable to the future effects of legal situations arising before its entry into force, derived from the condition and capacity of persons, from marriage, parentage, adoption and legal maintenance obligation, property relations, including the general property regime and neighbourhood relations, if these legal situations persist after the entry into force of the Civil Code.'

If the contribution was made after the date of entry into force of the NCC, we will consider art. 339 on common property and art. 340 which establishes the categories of own property.

⁹⁵. I-L. Vlad, *International Successions*. Regulation No 650/2012. International Treaties in the field, Universul Juridic Publishing House, Bucharest, 2016, p. 92.

⁹⁶ Ion p. Filipescu, "*Tratat de drept familie*", Ed. All Beck, Bucharest 1996, p. 169.

They must be read in conjunction with Art. 348 ("Contribution of common property") and art. 349 NCC ('The arrangements for contributions').

Unlike the old regulation, the NCC establishes clear rules for the qualification of the legal nature of the contributions, respectively of the shares.

Thus, if the property contributed is common property, but only one of the spouses is an associate in the limited liability company, the status of shareholder is conferred on the spouse who contributed the common property (and who had the consent of the other spouse), but the shares are common property.

If both spouses have opted to acquire the status of associate, each will have the status of associate corresponding to a share of one half of the value of the property or in other shares, according to the agreement of the parties. In this case, the shares of each spouse are separate property.

It was considered in the doctrine⁹⁷ that in this case there operates "a true ad-hoc division" of the common assets constituted as a contribution, without the need to carry out in advance a division in authentic notarial form, according to the requirements of art. 358 C. civ.

Depending on these qualifications, in the act of liquidation of the matrimonial property regime, the respective shares will be highlighted as separate or common property, and if they are common property, after determining the spouses' shares in the common property, the shares will be mentioned in the inheritance certificate, under "movable property".

3. The shares are indivisible. The shares will be highlighted in the certificate of succession as a number and not as a share. For example, if their character as a common property has been established, in the deed of liquidation of the matrimonial property regime concluded between the surviving spouse and the heirs, the total number of shares held by the two spouses will be mentioned, the share of each spouse in the joint property will also be established in the act of liquidation of the matrimonial property regime, and in the certificate of succession, the number of shares of the deceased will be mentioned directly.

4. Determination of the taxable amount of shares. According to Article 258 of the Implementing Regulation of Law No 36/1995, 'if shares are included in the estate ..., for the purpose of determining their value, the value to be included in the estate shall be the amount resulting from the financial and accounting records of the company ...'.

Their value, in order to establish the inheritance asset for the calculation of the notary fee, will be determined either by consulting the last approved balance sheet and submitted to ANAF and the Trade Register, section "Net assets", or by presenting by the parties a certificate emanating from the company, showing that value⁹⁸.

5. Determination of the law applicable to successions with a foreign element in which there are shares of an S.R.L. having its registered office in a Member State and the issuance of the European Certificate of Succession of Successions with a foreign element in which there are shares. In the case of a Romanian citizen with the last domicile (last habitual residence) in Romania, holder of shares in a company having its registered office in a Member State that applies Regulation (EU) No 650/2012 of the European Parliament and of the Council on jurisdiction, applicable law, recognition and enforcement of judgments and the acceptance and enforcement of authentic successional documents and on the creation of a European Certificate of Succession (Regulation), the law applicable to the succession (*lex successionis*) will be the law Romanian.

According to art. 2.636 C. civ., the law applicable to the succession establishes: the time and place of the opening of the succession, the persons entitled to inherit, the qualities required

⁹⁷ C. Nicolescu, "Family Law", Solomon Publishing House, Bucharest 2020, p. 278.

⁹⁸ "Collection of notarial practice. Cases commented", Ed. Notarom, Bucharest 2013.

to inherit, the exercise of possession over the assets remaining from the deceased, the conditions and effects of the option of succession, the extent of the heirs' obligation to bear the liability, the substantive conditions of the will, the modification and revocation of a testamentary disposition, the special inability to receive or dispose by will, division of the estate.

The law Romanian will therefore regulate only the transfer of shares by way of succession, not the acquisition by the heirs of the status of associate, this aspect being regulated by the law on the organic status of the company, which governs its constitution and functioning.

The notary public issuing the certificate of succession under national law will also be competent to issue the European Certificate of Succession, at the request of the heirs, so that they can prove their right to those shares in the country where the company has its registered office.

The continuation of the company with the heirs as associates will depend on the provisions of the *lex societatis*.

6. Continuation of the company with the heirs according to the Romanian law. The limited liability company is a sui-generis company, which borrows characters from both personal and capital companies. In the matter of the continuation of the company with the heirs after the death of one of the associates, the similarity with the societies of persons is obvious.

The limited liability company is generally constituted by a small number of shareholders (the law limits to 50 the maximum number of shareholders), but in practice it is constituted by a much smaller number of people. The trust between the associates is very important for the proper functioning of the company, so if by succession the shares are automatically acquired, the same cannot be said about the quality of associate, which will be acquired or not by the heirs, according to art. 202 of Law nr. 31/1990, depending on the provisions of the articles of incorporation.

Thus, if the articles of incorporation provide for the impossibility of continuing the company with the heirs, they will be entitled to the value of the share according to the last approved balance sheet. However, the articles of incorporation may provide for the need to approve the continuation of the company with the heirs, with the vote of the shareholders representing at least three quarters of the share capital.

In all cases, these are formalities following the issuance by the notary public of the certificate of legal heir and will be carried out by the associates of the company. The notary public will mention in the inheritance certificate the shares, under "Movable property", following that the company, after the presentation of the certificate of succession by those entitled, will proceed to the fulfillment of the legal and statutory formalities that will result either in the payment to the heirs of the value of the shares, or the registration of the transmission of the shares in the trade register and in the register of shareholders of the company.

7. Reducing the number of associates by the death of one of them. Art. 229 of Law no. 31/1990 provides that in the event of the death of one of the shareholders, if the number of shareholders has been reduced to a single one, the limited liability company is dissolved.

As an exception, if the articles of incorporation provided for the possibility of continuing the company with the heirs of the deceased associate or if the remaining shareholder decides to continue the company in the form of S.R.L. with sole shareholder, the dissolution will no longer take place.

Also in these situations, I consider that the transfer of the shares will usually take place, within the framework of the probate procedure, following that depending on the provisions of the articles of incorporation or the will of the associate, as the case may be, either the payment of the value of the shares to the heirs, or the continuation of the company with the heirs, or the dissolution of the company will be carried out.

In all cases, the shares will be mentioned in the certificate of succession, being able to mention the existence or not of the continuation clause with the heirs in the instrument of incorporation.

8. Exceeding the maximum number of 50 members after the transfer of shares by inheritance (instead of conclusions). We have previously indicated that the law limits the number of associates in a limited liability company to 50. If, after the heirs have acquired the status of associates, the number of associates would exceed the limit of 50 allowed by law, they will be obliged to designate a number of holders that will not exceed the maximum allowed by law. The heirs acquire by right *the shares* at the time of the opening of *the succession*, but depending on the provisions of the articles of incorporation, of the statute of *the company*, corroborated with the provisions of Law no. 31/1990 *on commercial companies*, they will be able to capitalize this right either by acquiring the quality of associate, successors of the personality of the deceased, with all his rights and obligations within the framework of *the company* (if the articles of incorporation expressly provide for the possibility of the *continuation* of the company in the person of the heirs or in the absence of any reference in the articles of incorporation, or following the approval of the general meeting with the vote of three quarters of the share capital, if the articles of incorporation provided for the necessity of approval), either by the right to acquire the value of the *shares* from the *company*, according to the last approved balance sheet, if the articles of incorporation expressly provided for the impossibility of continuing *the company* with the heirs of the deceased associate or, following the vote, the continuation of the *company* with the heirs of the deceased associate was not approved.

The obligation of the *payment institution* of the value of *the shares* to the heirs is automatically born, *ope legis*, upon the death of one of the associates, if in the articles of incorporation of the *company* it is mentioned the impossibility of continuing *the company* with the heirs of the deceased associate or at the moment of rejection by vote of the acquisition of the quality of associate by the heir / heirs.

According to art. 202 para. (2) of Law no. No 31/1990 *on companies*, the transfer of *shares* to third parties is allowed only if it has been approved by the shareholders representing at least three quarters of the share capital. As regards the transfer of *shares* by *succession*, it takes place by right, as I have pointed out, by virtue of the principles of inheritance law, and not subject to any provision in the articles of incorporation of the *company* or the approval of the other associates.

The acquisition of the quality of associate and implicitly the continuation of *the company* with the heirs are conditioned by the approval of the other associates, who have given their consent in principle, either in advance, implicitly, by not mentioning the necessity of an agreement of the other associates of continuation with the heirs of the deceased associate, or expressly - at the establishment of the *company* or, possibly, subsequently, by amending the articles of incorporation, or, if the articles of incorporation expressly provide for the necessity of the agreement, by vote, in general meeting, the decision may be adopted by the vote of the shareholders representing at least three quarters of the share capital, thus a qualified majority, exception to the unanimity rule, provided by art. 192 para. (2) of Law no. 31/1990, with subsequent amendments, applicable for decisions having as object the amendment of the articles of incorporation. Although also by the acquisition of the quality of associate by the heirs there is an amendment of the articles of incorporation, the respective law expressly provides for the exception to the unanimity rule regarding the vote of the general meeting and moreover, being of strict interpretation, the majority will *concern only the share* of the share capital, and not the majority of the associates. In the doctrine it was considered that this share of three quarters will be calculated not from the entire share capital, but after subtracting the share-parts

belonging to the deceased associate⁹⁹. De lege ferenda, it would be useful that Law no. No 31/1990 expressly provides for the method of calculating the three quarters.

The question has arisen of the legal nature of the relationship that is established between those who will acquire the status of associates and the other heirs, those who appointed them. The doctrine considered that those appointed by them would act in their own name, but also on behalf of the other heirs, being trustees with indirect or imperfect representation¹⁰⁰. Here again, I consider that it is not the notary who will have to check and have a role in the appointment of the holders, these being internal matters of the organisation and functioning of the company. The notary public will only determine the number and quality of the heirs in the notarial succession procedure.

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⁹⁹ S. Bodu, *The Law of Societies commented on and annotated*, Rosetti International Publishing House, Bucharest, 2017, p. 1000, 1006; M. Șcheaua, *Law of commercial companies nr. 31/1990 commented and annotated*, All Beck Publishing House, Bucharest, 2000, p. 411.

¹⁰⁰ I. Schiau, T. Prescure, *"Company Law No. 31/1990. Analyses and comments on articles"*, Ed. Hamangiu, Bucharest 2009, p. 547.

IDENTIFICAREA CRIMINALISTICĂ- LATURILE PROCESULUI DE STABILIRE A ÎMPREJURĂRILOR DE FAPT

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SUMMARY

Judicial investigation aimed at establishing the truth out of all the circumstances in which a criminal act was committed, as well as the persons involved, almost always implies the identification of persons and objects.

The most important way to establish judicial identification is criminalistic identification. Their relationship may be defined as whole-part relation, criminalistic identification being both a stage and a premise for judicial identification.

The former regards particular individual aspects whereas the latter is comprehensive, as it has to judge all the evidence presented.

Although „identity” and „identification” seem simple words at first sight, jurisprudence proves that in legal proceedings they get different meanings and are sometimes misinterpreted.

“Cele nevăzute se pot vedea prin cele văzute” ANAXUGORAS.

Stabilirea adevărului în justiție se realizează prin intermediul probelor.

Potrivit art.63 Cod de procedură penală românesc constituie probă orice element de fapt care servește la constatarea existenței sau inexistenței sau inexistenței unei infracțiuni, la identificarea persoanei care a săvârșit-o și la cunoașterea împrejurărilor necesare pentru o justă soluționare. Obiectul probațiunii (thema probandum) este deci ceea ce trebuie dovedit (factum probandum): fapte, împrejurări, stări sau situații legate de existența faptului prohibit de lege și de participarea persoanei la comiterea infracțiunii.

Sarcina administrării probelor revine organului de urmărire penală și instanței de judecată, legislația noastră consfințind prezumția de nevinovăție a învinutului sau a inculpatului (art.66 C cod de procedură penală) în sensul că orice persoană este considerată inocentă atâta timp cât vinovăția sa nu a fost dovedită cu certitudine. Suspectată la început, apoi învinuită și deci socotită ca autor posibil, ea nu va fi condamnată decât dacă se va face proba completă a elementelor constitutive ale infracțiunii săvârșite și a participării sale. Importanța deosebită a probei pentru ajungerea de la necunoscut la cunoscut, „pentru a face lumină în chestiunile nebuloase”, cum spunea Traian Pop, l-au determinat pe acesta să o denumească „nervul principal al procesului penal”.¹⁰¹ Identificarea criminalistică reprezintă numai unul dintre mijloacele de probațiune admise de lege, una dintre laturile procesului de stabilire a împrejurărilor de fapt. Cu alte cuvinte, probațiunea include identificarea ca pe una dintre componentele sale, fără a se confunda cu acesta și, cu atât mai mult, fără să se reducă la acesta. Convingerea organului judiciar se formează, în cele din aceasta. Convingerea organului judiciar se formează, în cele din urmă, prin analiza totalității probelor administrative în cauză, evaluate critic, obiectiv și multilateral.

Conținutul principal al probațiunii cu ajutorul identificării criminalistice constă în detașarea obiectului sau a persoanei implicate în fapta cercetată dintr-un ansamblu nedeterminat de obiecte sau persoane posibile. Scopul final îl constituie individualizarea persoanei (infractor, victimă, martor, tănuitor, etc.), fie direct după urmele lăsate de părți ale corpului, fie indirect, prin intermediul obiectelor. În cazul în care obiectul servește ca mijloc de descoperire a posesorului, de pildă instrumentul care a servit la comiterea infracțiunii, identificarea criminalistică apare ca o etapă intermediară a procesului general de identificare judiciară. Valoarea probantă poate fi desprinsă numai din corelarea celor două forme de identificare. De aceea după unii autori chiar includ în noțiunea

¹⁰¹ Lucian Ionescu și Dumitru Sandu *Identificarea criminalistică* București, 1990 Editura Științifică pag.10,42,43

de identificare criminalistică, pe lângă obiectul concret, și legătura acestuia cu cauza cercetată. Considerăm că stabilirea unei asemenea conexiuni excede actul propriu-zis al identificării. Competența expertului trebuie să se limiteze la constatările de ordin tehnic, iar organul judiciar, aflat în posesia concluziei expertului, este singurul competent și obligat să facă legătura menționată.¹⁰² Din punct de vedere legal nu se face o ierarhizare a probelor. Valoarea lor este prestabilită, urmând a fi determinată de măsura în care fiecare contribuie la soluționarea problemelor ce formează obiectul probațiunii. Referitor la valoarea probantă a urmelor care sunt investigate de criminalistică, unii disting pe cele care constituie probe, prin care se dovedește un adevăr, de cele care constituie doar indicii, adică semnul aparent din care se deduce existența unui lucru, fenomen sau ființă. Probele sunt date de ceea ce s-ar putea numi urme probante, constând cel mai adesea din amprente care, prin studierea formei și particularităților, permit stabilirea unui raport de cauzalitate, respectiv identificarea cauzei (obiectul creator) în funcție de efectul produs (urma).

Trebuie remarcat că distanța dintre probe și indicii nu este întotdeauna clar delimitată. De exemplu, identificarea autorului după impresiunile digitale reprezintă o probă în ce privește identitatea persoanei, iar în problema autorului infracțiunii ea constituie doar un indiciu, întrucât nu dovedește decât că persoana a atins obiectul corp-delic și nu însăși comiterea faptei. Sau, expertul grafic poate proba că pe documentul contestat a fost radiată o cifră și apoi scrisă alta, dar nu poate stabili – și nici nu este abilitat procedural să o facă – dacă această dublă intervenție constituie o modificare frauduloasă, deci un fals, sau o simplă corectare, a unei erori materiale.¹⁰³ Împărțirea în probe și indicii este deci o chestiune de circumstanță, căci practic ea depinde de condițiile în care s-a produs urma, de calitatea imprimării (întindere și claritate), precum și de gradul ei de individualizare. Oricum ar fi, urmele – cercetate și interpretate corect – au valoarea absolută numai în ceea ce privește existența unui fapt, lucru, fenomen etc., și o valoare relativă în ce privește participarea unei anumite persoane la comiterea faptei.¹⁰⁴

În România, ca știință autonomă, criminalistica s-a conturat relativ recent, la începutul secolului XIX.

Apariția târzie a acestei discipline s-a datorat nu numai nivelului scăzut al științelor naturii, dar și lipsei de interes pentru aportul acestora în materie de probațiune, sistemele de justiție fiind dominate de practici mistico-formale. Începuturile criminalisticii sunt strâns legate de medicina legală. Necesitatea rezolvării unor probleme de identificare a persoanei, a cadavrului și a instrumentului vulnerat a determinat elaborarea unor metode specifice criminalisticii de mai târziu. Înființarea la 20 decembrie 1893 a Institutului de medicină-legală din București de către prof. Mina Minovici a constituit o veritabilă premieră mondială, care a stârnit admirația unor somități ale vremii, cu ar fi P. Brouardel și P. Balthazard din Paris, S. Ottolenghi din Roma, F. Strassmann din Berlin, F. Djan din Ankara etc.

Putem spune că întemeietorii criminalisticii românești se consideră a fi cei trei frați Minovici.

Printre primii aderenți la sistemul de identificare a lui A. Bertillon, bazat pe măsurători antropometrice, se numără și Mina Minovici, care la 15 martie 1892 a înființat Serviciul antropometric ce a funcționat ca unitate a Ministerului Justiției. Servicii similare au existat în Franța din 1879, în Anglia din 1891, în Germania și Argentina din 1893, în Anglia din 1891, în Germania și Argentina din 1893, în Olanda din 1894, în Austria și Bulgaria din 1895. Fiecare fișă antropometrică întocmită în acest serviciu cuprindea datele de stare civilă, antecedentele penale, măsurile corpului, datele referitoare la conformația gurii, nasului, buzelor, bărbiei, urechii drepte, conturul capului și sprâncenelor, culoarea feței și semnele particulare.¹⁰⁵

Prin publicarea lucrării „Identificarea antropometrică, metoda Bertillon” prin participarea activă la al VI-lea Congres internațional de antropologie criminală de la Torino din 1906, dar mai ales prin bogata cazuistică, Mina Minovici a avut o valoroasă contribuție – în ciuda limitelor metodei, datorată impreciziei măsurărilor și modificărilor pe care le suferă în timp scheletul uman – la descoperirea infractorilor recidiviști care încercau să-și

¹⁰² - Colectiv, *Tratat practică de criminalistică*, vol II, Serviciul Editorial, București, 1978, p.369.

¹⁰³ - Z. Ciopinski, B. Zwiatkiewicz, Special kind criminalistic traces and their influence on legal qualification of facts, Comunicare Simpozion Popowo, 1988.

¹⁰⁴ J. Widacki, Polygraph examination as a method of the emotional traces identification, Comunicare Simpozion Popowo, 1988.

¹⁰⁵ C. Suciu, Dezvoltarea învățământului Criminalistic în România, Școala Românească de criminalistică, Serviciul Cultural, presă și editorial, 1975, p.29.

însușească o identitate falsă. În 1982 Mina Minovici preconizează înființarea cazierului judiciar bazat pe datele antropometrice ale deținuților, intitulat „Catalog de condamnați din toată țara”. Dintre preocupările ulterioare ale lui Mina Minovici mai sunt de reținut: lucrarea „Diagnosticul medico-legal al rănilor prin examenul hainelor” (1899), broșura „Medicina legală aplicată în arta dentară” (1930), utilizarea și perfecționarea identificării după semnalmente (portretul vorbit), studierea particularităților date de cicatrici și tatuaje, fotografierea cadavrelor și a obiectelor, cercetarea impresiunilor digitale, tehnici și relevare a acestora, executarea mulajelor, localizarea și analiza petelor de sânge, ridicarea, ambalarea și expedierea corpurilor purtătoare de urme. La scurt timp după înființarea institutului, Mina Minovici a organizat cursuri de medicină legală și de tehnică criminalistică. De altfel, după extinderea institutului, printre serviciile anexe figura și o „Școală de poliție științifică”, inaugurată la 4 iunie 1931.

Întreaga activitate științifică și practică a profesorului Mina Minovici este sintetizată în „Tratatul complet de medicină Legală” (1929-1930) care cuprinde și aspecte criminalistice. Încununarea unei cariere de excepție și de mari sacrificii, această operă nu numai că a atras aprecieri elogioase ale tuturor specialiștilor de atunci – printre care și Edmond Locard, directorul Laboratorului de poliție Științifică din Lyon-, dar rămâne și astăzi un material de referință valabil.¹⁰⁶ Un alt exponent de seamă al medicinei legale românești, care a avut preocupări și în domeniul criminalisticii a fost Nicolae Minovici. Pasionat și el de ingeniosul sistem antropometric, a întocmit numeroase fișe în Europa și Africa de Nord, care i-au arătat însă cât de diferite pot fi valorile obținute pentru aceeași persoană. Comunicate lui Vucetich, aceste date au servit ca un puternic argument în combaterea sistemului Bertillon. După ce în 1900 publicase „Școala Antropologică Bertillon”, în 1904 editează un „Manual tehnic de medicină legală” în care sunt descrise și tehnici de lucru criminalistice. În capitolul IX, „Fotografia judiciară”, Nicolae Minovici aduce importante îmbunătățiri fotografierii post-mortem, în vederea eliminării posibilităților de eroare în identificare ce ar putea fi determinate de modificările cadaverice: utilizarea ochilor artificiali, corijarea diformităților cauzate de relaxarea mușchilor masticatori prin folosirea unui dispozitiv de închidere a gurii, evacuarea prin incizii a gazelor la înecați. Acest sistem a fost premiat cu medalia de aur la Expoziția internațională de igienă socială de la Roma din 1912. Totodată, într-o expunere din 1931, Nicolae Minovici a diferențiat pentru prima oară fotografia operativă de cea de examinare, precizând și posibilitățile pe care le oferă aceasta din urmă, cum ar fi evidențierea modificării unui text sau relevarea petelor invizibile de pe obiectele de stofă spălate. Dezamăgit de sistemul antropometric, Nicolae Minovici se ocupă intens de studierea impresiunilor digitale utilizate în identificarea persoanelor de Henry Faulds și William Herschel (1880), Francis Galton (1886), Ioan Purkinje (1893), Edward Richard Henry (1900), Ioan Vucetich (1904) ș.a. Sistemul de clasificare al lui Vucetich a fost adoptat nu numai în Argentina, dar și în numeroase țări din America Latină și din Europa, inclusiv de Bertillon care în 1904 descoperă autorul unei crime după impresiunile digitale de pe geamul spart al dulapului din care s-au furat lucrurile victimei.¹⁰⁷

În scrisoarea adresată lui Vucetich și publicată la Montevideo în „Revista de Policia” din 15 aprilie 1906, Nicolae Minovici expune cercetările făcute prin compararea impresiunilor digitale de la 40 de criminali condamnați la muncă silnică pe viață, luate pentru prima oară în 1894 și apoi în 1906, și care erau identice după 12 ani. În continuare, citează două cazuri de descoperire a infractorilor. În primul este vorba de un furt de bani comis în 1896 în biroul directorului unei tipografii, al cărui autor a fost identificat în persoana unuia dintre ucenici, după o urmă digitală rămasă pe hârtia dintr-o condică. Al doilea caz în 1906, se referea la un individ care furase cauciucuri de la o roată de trăsură; grație impresiunii digitale găsite pe roata proaspăt vopsită s-a putut descoperi autorul în persoana unui vecin. Ca pretutindeni în lume, justiția a admis cu reticențe desenele papilare ca probă de vinovăție. Concludent în acest sens este cazul furtului de bijuterii din str. Știrbei Vodă, nr.39, București în 1914. Expertiza efectuată de Nicolae Episcopescu stabilea că urma palmară rămasă în colțul din stânga sus al casei de bani fusese lăsată de mâna dreaptă (regiunea hipotenară) a arhitectului Christu Sotiriu. Pe baza raportului de expertiză Sotiriu a fost reținut preventiv, dar apoi achitat de Tribunalul Ilfov pe motiv că „știința dactiloscopiei...nu poate preciza nici aproximativ data unei impresiuni, pentru ca din aceasta să se poată deduce dacă este serioasă sau nu afirmarea inculpatului că a pus mâna pe casa de fier la 31 august și nu la 27 august când se pretinde că s-a produs furtul. În 1918 Sotiriu este prin vânzând bijuteriile sustrase; condamnarea sa „a marcat un triumf al

¹⁰⁶ - M. Terbancea, Institutul de medicină-legală „Prof.dr.Mina Minovici” în pragul unui secol de activitate(1892-1982), p.60.

¹⁰⁷ M. Terbancea, C.Turaj, L.Cotuțiu, A.Simionescu, Istoricul descoperirii făptuitorului după desenele papilare în România, în Școala Românească de criminalistică, Serviciul cultural, presă și editorial, 1975, p.45.

amprente digitale ca factor de probă în stabilirea adevărului”.¹⁰⁸ Introducerea masivă a dactiloscopiei ca metodă de identificare în România se datorează în special lui Andrei Ionescu, șeful serviciului de antropometrie din 1892 și până în 1914. El are marele merit de a fi înlocuit sistemul desuet și ineficient al lui Bertillon cu cel al impresiunilor digitale. Din cele aproximativ 30 de metode de clasificare a fișelor dactiloscopice existente atunci, Andrei Ionescu a optat pentru sistemul Vucetich cu modificările aduse de Oloriz, ceea ce permitea găsirea unei amprente în cel mult două minute din peste un milion de fișe.¹⁰⁹

Tot în această perioadă apare și lucrarea „Dactiloscopia și portretul vorbit”, autor D.Călinescu.

În anul 1914 conducerea Serviciului de identificare a fost preluată de dr.Valentin Sava, care în 1925 l-a transformat într-un serviciu central, fiecare arest preventiv sau penitenciar având obligația să completeze arhiva cu fișele tuturor deținuților. Valentin Sava se remarcă și printr-o bogată activitate publicistică, cea mai cunoscută lucrare fiind „Manualul de dactiloscopie” din 1943. În 1952, prin contopirea cartotecilor dactiloscopice care funcționau la poliție și la parchetele de pe lângă tribunalele județene, s-a organizat la poliție un cazier unic, a cărui reglementare a fost perfecționată în 1972. Al treilea membru al familiei Minovici, Ștefan șeful secției de chimie și toxicologie a Institutului de medicină legală începând din anul 1894, poate fi socotit în materie de criminalistică drept părintele expertizei științifice a înscrisurilor. Chiar în perioada studiilor în Germania el se familiarizează, paralel cu cercetarea otrăvurilor, a petelor de sânge etc., cu depistarea falsurilor prin reacții chimice. În 1900 dr. Ștefan Minovici publică broșura „Falsurile în documente și fotografia în sistemul justiției”, iar în 1905 concepe un aparat pentru fotografierea înscrisurilor, invenție publicată în 1915 în Buletinul Academiei Române sub denumirea de „Aparat general macro și microfotografic pentru identificarea grafică și a falsului în înscrisuri”. El este cel care, pentru prima dată în România, a introdus metode obiective de examinare a înscrisurilor, procedee fizico-chimice de evidențiere a falsificării actelor și bacnotelor. Printre altele, a studiat vechimea cernelurilor și comportamentul lor atunci când sunt atacate cu reactivi, având și preocupări în ceea ce astăzi s-ar chema „prevenirea prin mijloace tehnice”. Astfel, într-o circulară a Ministerului Justiției, inițiată de el, se preciza că cerneala albastră și violetă întrebuințată în scrierile oficiale și ale autorităților judiciare se alterează foarte repede și se pretează ușor la fraude, fapt care generează prejudicii intereselor justițiabililor și activității normale a instanțelor. În consecință, se propunea ca, la întocmirea actelor oficiale, autoritățile să folosească numai cerneală neagră. În ceea ce privește expertiza grafică, pe care Ștefan Minovici o denumea „grafologie judiciară”, un deosebit interes prezintă circulara din 15 martie 1905, difuzată tot de Ministerul Justiției, prin care se dădeau indicații asupra felului cum trebuie recoltate probele grafice destinate examenelor comparative în cadrul expertizelor ordonate. În acest sens, se cerea ca probele să fie suficiente și să fie luate pe același fel de hârtie, cu aceeași cerneală și același instrument scriptural ca și actul incriminat. Instanțele judecătorești erau prevenite asupra stării emoționale care poate afecta execuția scrisului. Deosebit de valoroasă este indicația - care nu se respectă nici astăzi - de a se constatat printr-un proces-verbal detaliat starea materială a actului, mai ales degradările pe care le prezintă. În același domeniu mai pot fi notate următoarele contribuții: M.D.Moldoveanu, „Tratat de grafologie și expertiză în falsuri”(1910), Traian Ulic „Expertiza grafică”(1914), Mihail Kernbach „Expertiza grafică științifică și expertiză caligrafică”(1928), Al.Dumitrescu „Descoperirea falsurilor în acte și documente cu ajutorul fotografiei”(1928), „Recunoașterea falsurilor în administrație și prevenirea lor” și „Contribuțiuni la expertiza grafică. Studiul chimic și fizic al cernelurilor și creioanelor, Hârtia”(1939). De asemenea, trebuie subliniată în mod deosebit activitatea lui Henry Stahl, profesor la Școala superioară de arhivistică și paleografie, care a format experți grafici diplomați, autor al mai multor lucrări, cum ar fi „Grafologia și expertizele în scrieri. Anonimul- falsul”(1926), „Falsuri, fraude și raze ultraviolete”(1933), „Biletul de bancă. Cum se falsifică. Cum se descoperă falsul”(1934), „Expertiza grafică”(1940), „Tratat de grafologie și expertiza în falsuri”.

În 1934 ia naștere „Societatea română de grafologie” având două secții: psihologie grafică și expertiză grafică, care, după moartea lui Ștefan Minovici, a fost condusă de C.I.Parhon. Între 1946 și 1957 în cadrul Institutului medico-legal a funcționat „Corpul experților grafici” al cărui președinte a fost Aurel Boia, autorul lucrărilor „Scrișul orbilor”(1943), „Exercitarea funcției de expert grafic”(1943) și „Introducere în grafologie și expertiza grafică”(1944). Identitatea constituie deci de la începuturi, unul dintre conceptele fundamentale ale gândirii și, în același timp, un mijloc important de cercetare a obiectelor lumii materiale, cu largă aplicare la cele

¹⁰⁸ - V. Sava, *Manual de dactiloscopie*, Imprimeria și legătoria penitenciarului Văcărești, București, 1943, p.23

¹⁰⁹ - A. Lalonde, *Vocabulaire technique et critique de Philosophie*, Presses Universitaires de France, ed.a 12-a, Paris, p.454.

mai diverse domenii ale științei: criminalistica, fizica, chimia, biologia, etc. Aproape că nu există proces al gândirii care să se situeze în afara principiului identității. Cunoașterea nu se reduce însă la identificare, dar o înglobează ca element constitutiv al unui proces complex.¹¹⁰ Identitatea este caracterul a ceea ce este identic (unic) sau „proprietatea unui obiect de a fi și a rămâne cel puțin un anumit timp ceea ce este, calitatea sa de a-și păstra un anumit timp caracterele fundamentale”. Sub aspectul său cel mai general, prin identitate se înțelege deci categoria care exprimă concordanța, egalitatea obiectului cu sine însuși. Ca urmare, cercetarea criminalistică nu este chemată să determine obiectul în sine, ci să ajungă la o identitate probantă. Astfel, nu interesează că încălțăminte infractorului este identică cu sine însăși într-un anumit moment, ci faptul că datorită reflectării caracteristicilor sale în urma găsită la locul faptei, ea poate fi identificată și servi ca mijloc de probă. Analiza conceptului de identitate ar fi incompletă dacă s-ar omite o a doua latură, și anume identitatea dintre obiecte. În identificarea criminalistică conținutul principal al examinării îl constituie evidențierea și aprecierea asemănărilor, o totalitate suficientă de caracteristici individuale similare conducând la identificarea obiectului creator de urme și implicit la deosebirea totalității acestor caracteristici asemănătoare de cele ale altor obiecte.¹¹¹ Dacă două obiecte, urme, fenomene, etc. se aseamănă, trebuie să se caute în ce sunt identice și în ce nu sunt, putându-se astfel spune că asemănarea este indiciul unei identități ascunse. Pe de altă parte și deosebirile pot avea un rol cognitiv, neconcordanțele dintre obiectele sau urmele comparate contribuind la individualizarea și delimitarea lor. În literatura de specialitate această modalitate este chiar denumită identificare prin diferențiere.

Judecata de asemănare de tipul „acesta este la fel ca celălalt” are o mare importanță, în activitatea de expertiză și, în general, în procesul probațiunii, fără să echivaleze însă cu judecata de identitate.¹¹² A identifica înseamnă a discerne, a izola, a „extrage” un obiect dintr-un ansamblu de obiecte asemănătoare sau de obiecte prezumtiv creatoare de urme în condițiile săvârșirii faptei penale. Identificarea criminalistică este obiectiv posibilă datorită individualității, stabilității relative și reflectivității lucrurilor și ființelor. Prin individualitatea unui obiect se înțelege, în sens ontologic, ca acel obiect este determinat prin proprietățile sale specifice. În sens gnoseologic termenul de individual desemnează singularitatea unui obiect în raport cu alte obiecte din clasa sa, faptul că este singur în speța sa, adică se bucură de proprietatea unicității și se deosebește de orice alt obiect. Obiectele și ființele suferă în timp schimbări sub acțiunea factorilor interni și externi. Doar în mod abstract acestea pot fi omise, considerându-se identitatea ca o stare permanentă. Continua mișcare și transformare a lumii materiale nu contravine proprietății unui obiect de a fi individual. Pentru anumite intervale de timp identificarea rămâne posibilă, când schimbările nu sunt esențiale. În acest context individualitatea apare ca relativ stabilă.

În sens epistemologic, reflectarea - indisolubil legată de precedentele, exprimă esența relației cognitive dintre subiect și obiect, dintre conștiință și existență. Mișcarea lumii materiale se realizează prin interacțiunea obiectelor și ființelor, într-un proces de influențare reciprocă. Însușirea materiei de a se reflecta este cu atât mai complexă cu cât forma de mișcare este mai evoluată, mergând de la cele mai simple forme de reflectare mecanică din lumea anorganică și până la complicatele procese din materia superior organizată, cum ar fi creierul uman care reflectă realitatea prin intermediul percepțiilor, reprezentărilor, noțiunilor și celorlalte modalități de cunoaștere. Reflectarea corpurilor aflate în interacțiune reproduce structura exterioară (reflectare fizică). Formele multiple de reflectare conturează, două genuri de identificare distincte: identificarea după imaginile fixate material și identificarea după imaginile fixate în memorie. Primul reprezintă modalitatea cea mai des întâlnită și se obține, în principal, prin compararea urmelor cu obiectele presupuse a le fi creat sau cu reflectările acestora. Al doilea gen de identificare se bazează pe puterea de memorizare a subiectului care, în anumite condiții spațiale și temporale, a perceput caracteristicile unui obiect, ființe sau fenomen. La identificarea după reflectările materiale se ajunge prin cercetarea științifică efectuată de către specialiști, iar constatările se materializează într-un raport de expertiză sau de constatare tehnico-științifică. Identificarea prin descriere și recunoaștere se realizează prin activități de anchetă, în conformitate cu normele procesuale și cu recomandările tacticii criminalistice (audieri, confruntări, reconstituiri) iar rezultatele se consemnează în diverse acte, cum ar fi declarații, procese-verbale, bandă de magnetofon, planșe fotografice, fișe cartoteci colecții.¹¹³

¹¹⁰ - Colectiv, *Dicționar de filozofie*, Editura Politică, București, 1978, p.341.

¹¹¹ - E. Gobot, *Traité de logique*, Librairie Armand Colin, Paris, 1937, p.50.

¹¹² - J. Gayet, *Manuel de police scientifique*, 1961.

¹¹³ - M. Triebault, Procède automatique de reconnaissance des empreintes digitales, în « Rev.int.pol.crim », nr.234,1970,p.2.

Dintre procedeele automate de recunoaștere a impresiunilor digitale, trebuie știute următoarele:

1. Sistemul comparativ bazat pe desen și pe punctele de oprire, elaborat de E.Angst, K. Frieden, M.W.Frun și M.P.Grop pornește de la datele clasificării deca și monodactilare cuplate. Pentru colectarea datelor se pornește de la fișa dactiloscopică clasată după metoda Galton-Henri. Pentru fiecare amprentă se stabilește formula mono-1 și mono-2, consemnate într-un formular de bază și, apoi, sunt transpuse pe cartele perforate. Acestea primesc un număr de ordine, sânt citite și prelucrate de computer și înmagazinate pe banda magnetică. La fel, urmele incriminate sânt clasificate cât mai detaliat posibil, datele obținute fiind trecute pe o matrice de cercetare. Simultan se determină cu ajutorul unui cod condiția de bază a urmei. Datele intră în computer pe cartele perforate și se compară cu cele ale impresiunilor reunite pe banda magnetică, după un program adecvat situației. Rezultatele comparării automate sânt consemnate într-un proces - verbal.

2. Sistemul bazat pe relevarea topografică propus de H. Thiebault are în vedere reprezentarea schematică a punctelor caracteristice ale unei amprente, prin simpla reperare a poziției lor relative pe un plan. Două amprente vor proveni astfel de la același deget dacă imaginile punctelor reprezentative se suprapun, respectiv dacă configurația „norului” punctelor singulare ale amprente incriminate se regăsește într-o parte oarecare a „norului” de puncte, mult mai numeroase, ale amprente mai complete de proveniență certă. Selectivitatea poate fi considerabil mărită dacă se compară în plus orientarea tangentei la linia papilară. Ampretele care alcătuiesc banca de date se obțin prin fotografiere cu un aparat special conceput pentru obiectele având o suprafață bombată.¹¹⁴

3. Sistemul IMDOC se bazează pe înregistrarea datelor într-o memorie cu acces selectiv. El se folosește la fișele de semnalmente, modus operandi și de cazuri, dar și în dactiloscopie. Elementele informației sânt denumite „documente”. Informația este găsită prin referire la cuvintele din documente, fiecare cuvânt fiind deci considerat ca un element de căutare. „Cuvântul” este definit ca un lanț alfanumeric de caractere. În domeniul amprentelor digitale se operează cu 9 tipuri de desene: arcuri piniforme, bucle simple radiale, bucle simple cubitale, bucle speciale, desene circulare, desene elipsoidale, desene compozite, amputații și desene distruse. Numerotarea dă cheia în cod a diferitelor tipuri de desene, reprezentând valoarea lor calitativă. Numărul liniilor constituind valoarea cantitativă, este determinat prin trei factori: dimensiunea zonei nucleului, grosimea creștelor și spațierea creștelor. Valoarea cantitativă se stabilește după anumite reguli și se exprimă prin patru cifre. De regulă, valoarea cantitativă este independentă de cea calitativă, cu excepția arcurilor, care au valoarea 0000. Pentru arcurile piniforme se utilizează valoarea înălțimii în mm. În informatică valoarea cantitativă este divizată în două: primele două cifre formează secțiunea A și ultimele două secțiunea B. Se adaugă ordinea înregistrării fiecărei persoane dactiloscopate, data nașterii, un număr de înmatriculare civilă, numărul casetei și al filmului.

4. În sistemul japonez computerul detectează automat particularitățile (opriri și bifurcații ale creștelor papilare) pe care le pune în memorie și le compară. Pentru detectarea particularităților computerul consideră amprenta ca o imagine ale cărei axe X și Y au ca origine centrul imaginii, respectiv nucleul amprente. Fiecare particularitatea este definită prin distanța față de cele două axe și prin direcție, indicată prin unghiul care îl formează axa X. Computerul stabilește apoi raporturile dintre particularități după numărul de creste care le separă. Poziția, direcția și raporturile particularităților sânt traduse în date numerice. Mașina detectează în medie 100 de particularități pe imaginea unui deget. Impresiunile incriminate fac obiectul unei lecturi automate. Viteza de intrare este de circa 1,5 secunde pentru un deget, de 15 secunde pentru fișa decadactilară și de 6 secunde pentru o urmă latentă. Viteza de comparare a două impresiuni de deget este de 1,3 milisecunde. Concret aparatul compară poziție, direcția și raporturile particularităților și, când constată similitudini, selecționează „perechile” de particularități identice.¹¹⁵ Atunci când numărul de particularități reperabile sub formă de perechi depășește numărul prescris, posesorul creează o stare conform a ceea ce are în memorie, făcând să se rotească sau să se deplaseze axele de coordonate ale amprente extrase. Apoi, se calculează gradul de similitudine între particularitățile celor două amprente de comparat și decide asupra gradului lor de concordanță.¹¹⁶

¹¹⁴ - S.A. Erikson, J. Jorgensen, *Recherches d'empreintes par ordinateur*, în « Rev.int.pol.crim. », nr.300,1979,p.194.

¹¹⁵ - V. Klement, FISH – a forensic information system for the computer assisted identification of handwritings, Comunicare Congr. IAFS, Oxford, 1984.

¹¹⁶ Service nationale de l'Identité Judiciaire du Japon, *Le système d'identification des empreintes digitales*, în « Rev.int.pol.crim », nr.385,1985.

5. Sistemul AFIS („Automated fingerprint identification systems”) include un echipament computerizat care baleiază amprenta digitală. Automat se obține o reprezentare geometrică cartografiată a creștelor papilare (formă, direcție, detalii). Raporturile spațiale sânt transpuse în cod binar și cercetate algoritmic de computer. La amprente de bună calitate sânt codificate circa 90 de minuții pentru fiecare deget. Cele latente oferă mai puține detalii, dar sistemul poate lucra numai cu o parte a hărții de baleiaj, stabilind corespondența cu o amprentă certă pe baza unei medii de 15-20 elemente. Un avantaj important al sistemului îl constituie posibilitatea de „curățare” a unei amprente fragmentare, prin completarea lipsurilor datorate îmbăcșirii cu sânge și impurități sau cauzate de cicatrici și arsuri. Pe de altă parte, sistemul este capabil să evalueze calitatea amprentelor și să le „descalifice” pe cele inapte identificării. Computerul nu compară imaginile amprentelor, ci procedează la o cercetare matematică din care rezultă lista amprentelor având un cod binar asemănător celei incriminate. Această cercetare este realizată de o componentă a sistemului AFIS denumită „matcher”, a cărei capacitate este de 500-600 amprente pe secundă. Matcherul poate lucra și în paralel, astfel că se pot utiliza mai mulți matcher, fiecare prelucrând o parte din banca de date. Timpul este de câteva minute la un volum de până la 500 000 amprente clare și de circa o jumătate de oră pentru cele latente. În vederea determinării corespondenței matematice, computerul recurge la un sistem numeric. Tehnicianul dactiloscop definește parametrii cercetării și stabilește un număr de intrare care să asigure criteriul suficient pentru obținerea egalității necesare identității. Pe baza parametrului de căutare, sistemul citește lista de egalități, adică a amprentelor (degetelor) „candidate” a fi creat pe cea în discuție. Un număr mare indică identitatea ca posibilă; la un număr mic probabilitatea este scăzută. Dacă toți candidații sânt inferiori numărului de intrare, atunci este foarte probabil ca amprenta căutată să nu fie în sistem. Ca o precauție împotriva identificărilor greșite sânt prevăzute anumite măsuri de siguranță. Astfel pentru amprente latente cu puține detalii de valoare, comparația se va face în mod obligatoriu cu minimum 3-5 amprente certe.¹¹⁷

Deși extrem de performant, sistemul AFIS, ca de altfel orice alt sistem, nu dă decizia finală. Numai ochiul experimentat al specialistului va hotărî dacă există identitate între amprenta căutată și cele propuse de computer. Privind în ansamblu problema utilizării informaticii în criminalistică, trebuie subliniate, fără nici o rezervă, avantajele imense pe care le oferă înmagazinarea la zi a datelor și extragerea lor, căci volumul, exactitatea și rapiditatea operațiilor depășesc cu mult posibilitățile umane.

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¹¹⁷ - P.E. Baier, W. Toder, Verisign II - *Ein Great zur Personen Identifizierung dar Unterschrift*, în “Manheimer Hefte fur Schriftvergleichung”, nr.8, 1982, p.161.

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ATIPYCAL SITUATIONS FOUND IN THE PRELIMINARY CHAMBER PHASE. PROCEDURAL REMEDIES

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Abstract

The analysis of the compensatory mechanisms by the preliminary chamber judge must consider the verification of the evidence administered by the criminal investigation body during this procedural phase. When these means of evidence were submitted after the court was notified, they must be considered to have been administered in violation of the functional competence of the criminal investigation body. In such cases there is a procedural sanction and that can only be absolute nullity, given the violation of the fundamental principle of the criminal process provided by art. 3 of the Criminal procedure code, which bears the marginal name "Separation of judicial functions".

The circumstance according to which the prosecutor did not remedy all the irregularities found by the judge of the preliminary chamber, namely the removal from the indictment and from any other criminal investigation documents of certain procedural documents found to be invalid, (even partially), including their informative content and the means of evidence whose legal and physical exclusion were ordered and the reference to them, attracts the restitution of the entire case to the prosecutor's office.

Keywords: *Criminal procedure code, judge, preliminary chamber, procedural sanction, return of the case to the prosecutor*

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Preliminary considerations

After almost 10 years since the entry into force of the Criminal procedure code, the institution of the preliminary chamber has been subject of control for the Constitutional Court¹²⁰ for approximately 280 times, and the sub-institution "solutions of the judge of the preliminary chamber" 80 times.

Today we notice that the legal reality has given rise to situations that were not considered by the legislator, especially generated by the behavior of the criminal investigation bodies.

In what follows, we aim to analyze certain situations which, lately, tend to proliferate in the practice of prosecutor's offices, and which have received different jurisprudential solutions.

We bare in mind the hypothesis in which part of the evidence was excluded or some procedural or procedural acts were annulled, respectively in the situation where the irregularity of the notification act found (even unremedied) affects or not the possibility of establishing the object and the limits of the judgment.

The presentation of the case

Through the conclusion pronounced in the council chamber meeting on October 10, 2022 by the Gorj County Court in file xx/2022/a1, the requests and exceptions formulated by the defendants P. A. C., P. D., B. I., M. A. and R. T. were admitted, the irregularity of the indictment no. xx/P/2022 dated 15.07.2022 of the Prosecutor's Office attached to the Gorj Court was found, in terms of the way of describing the facts for which the defendants were sent to court and it was ordered that the prosecutor describe the criminal activity, indicating the temporal and spatial coordinates, the objective and subjective content for each deed, the forms of the plurality of crimes charged to each defendant.

At the same time, the absolute, partial nullity of the delegation ordinance no. xx/P/2022 of 27.05.2022 (point 2), of the minutes drawn up on 27.05.2022, of ordinance no.

¹²⁰ Regarding the creation and development of legal principles through the interpretation of the constitutional norm, see A.D. Bobaru, „Relevant aspects regarding the interpretation of the norm in the jurisprudence of the Constitutional Court of Romania, study published in the volume of the scientific conference Legal order and justice in the European space organized by the Legal Research Center "Grigore Iulian" within the Faculty of Education Sciences, Law and Public Administration of the "Constantin Brâncuși" University from Târgu-Jiu in partnership with the Legal and Administrative Sciences Research Center within the Scientific and Multidisciplinary Research Institute of the "Valahia" University from Târgoviște, 31st of May 2022, Sitech Publishing House, Craiova, 2022, p.129-138.

xx/P/14.06.2022, of ordinance no. xx/P/15.07.2022 were found and their removal was ordered from the indictment and any other criminal prosecution documents and the informative content of these evidence, as well as the exclusion from the criminal prosecution material of the minutes drawn up on of 27.05.2022 and the photographic plates, the forensic report no. xx/14.07.2022 and the means of evidence consisting of boot-type footwear with the inscription 43, boot-type footwear with the logo xx and the text xx inscribed, and inside the label with size Eu 45, boot-type footwear with the logo inscribed xx and the text xx, and inside the label with the size Eu 44, boot-type footwear with the brand xx inscribed, and inside the label with the size Eu 441/2 and the inscription xx and boot-type footwear with the brand xx inscribed, and the label with the size Eu 421/2 and the inscription xx, which were unavailable.

The conclusion of the prosecution and the defendants was communicated according to art. 345 para. (2) Criminal procedure code, with the mention that within 5 days from its communication, the prosecutor must comply with the provisions of art. 345 para. (3) Criminal procedure code.

The case was registered in the Gorj County Court under no. xx/2022 on 15.07.2022, being randomly assigned to the judge of the preliminary chamber.

Regarding the issue under analysis, the judge also found that the case prosecutor, before the completion of the criminal investigation, drew up the indictment. Thus, considering that the factual situation is not fully clarified, INEC ordered the performance of a trace logical expertise but also the completion of the medico-legal expertise report no. xx/25.05.2022 issued by SML Gorj, means of evidence which, until 15.07.2022, the date of referral to the court, had not been drawn up, appreciating that the simple justification that the result of the expertise cannot influence the legal framework given to the facts, does not justify the lack of a the prosecutor's own examination of the evidentiary material, nor the impossibility of the judge to truly perform the act of justice.

The verification of the legality of the evidence and means of proof requires, at the stage of the preliminary chamber, an analysis of the conformity of all the means of evidence and the existing evidentiary procedures to the criminal investigation file, from the perspective of the principle of legality and loyalty of the administration of evidence, a check that cannot be made in the case.

Therefore, it was concluded that, with regard to these omissions of the case prosecutor, but also the lack of description of the facts in a way likely to invest the court, constitutes a violation of the right to defense, a fundamental principle of criminal procedural law, the defendants being put in the impossibility of formulating defenses regarding the crimes for which they were sent to court, so that their right to be informed about the nature of the accusations and the legal qualification of the facts was violated, a circumstance that attracts the irregularity of the indictment no. xx/P/2022 of the Prosecutor's Office attached to the Gorj Court.

Regarding the verification of legality, including loyalty - an intrinsic component of legality - of the administration of evidence by the criminal investigation bodies, it was held that this involves the control carried out by the judge of the preliminary chamber regarding the manner/conditions of obtaining and using/administering the evidence. With reference to the evidence obtained illegally, the Constitutional Court ruled, in Decision no. 383 of May 27, 2015¹²¹, that "evidence cannot be obtained illegally unless the means of evidence and/or the evidentiary procedure through which it is obtained is illegal, this presupposing the illegality of the disposal, authorization or administration of the evidence".

Examining the criticisms made regarding the legality of the administration of evidence in the criminal investigation phase, within the limits provided by art. 342 Criminal procedure code, the judge found that the issues reported by the defendants P. A. C. and M. A., in relation to the legality of the prosecutor's order on the basis of which the defendants' footwear items were removed on 27.05.2022, from the premises of the S. A. S. building within IPJ Gorj, are established.

Thus, it was found that by ordinance no. xx/P/2022 dated 27.05.2022, the case prosecutor from the Prosecutor's Office attached to the Gorj County Court delegated the research bodies from the IPJ Gorj - Criminal Investigation Service to pick up, based on a report, the articles of footwear used by the suspects from that moment and the witness A. C. in the evening of 20.05.2022 and the fixing, through photo plates, both of the aspects regarding the footwear, as well as the clothing and equipment provided. According to the minutes drawn up on 27.05.2022 by the research bodies, the previously mentioned ordinance was implemented, being identified in the premises of the S.A.S. building within the IPJ the files specially intended

¹²¹ Published in Official Journal nr.535/17 July 2015.

for the storage of the equipment belonging to the investigated persons. In order to lift the articles of footwear, it was necessary to cut and remove the closing systems - the locks with which the checked compartments were secured. The judge referred to the provisions of art. 170 and art. 171 Criminal procedure code, by which the legislator regulates the institution of the collection of objects and documents, distinct from the home search. He showed that: art. 170 para. (1) Criminal procedure code provides that, "if there is a reasonable suspicion regarding the preparation or commission of a crime and there are grounds to believe that an object or a document can serve as a means of evidence in the case, the criminal investigation body can order the natural person or legal entity in whose possession he is to present and hand them over, under taking evidence", and "if the requested object or document is not handed over voluntarily, the criminal investigation body, by order, or the court, by conclusion, orders the forced lifting", pursuant to art. 171 para. (1) of the code.

As a result, it was shown that the law provides that these judicial bodies have the obligation to pick up the objects and documents that can serve as evidence in the criminal process, the forced collection of objects and documents being the regulated remedy for the situation in which the objects or documents are not handed over voluntarily following the order of the authorities, which means that it is preceded by a procedure that allows avoiding interference in the private life of individuals, in the broadest sense of this right protected by art. 8 of the Convention.

The rule is that of obtaining evidence in the criminal process without coercion, the objects or documents that can be used to prove the criminal facts must be handed over by the persons who have them at the request of the competent bodies. The remedy provided by law for the situation in which the surrender obligation is not fulfilled is forced removal or home search. As long as it is necessary to penetrate into private spaces and to remove the systems for ensuring the access ways, the judicial bodies are obliged to request the judge of rights and liberties to approve the search and the issuance of a warrant in this regard. Although, art. 171 Penal Code, which regulates the institution of the forcible removal of objects and documents, does not indicate a procedure to be followed to achieve this goal, from para. 3 it appears that the ordinance of the criminal investigation body does not authorize the entry into private spaces, this right being ensured by the search procedure by art. 159 para. (17) Criminal procedure code.

The judge assessed that those compartments used to store the defendants' equipment and goods represent private spaces that can be assimilated to the notion of "home", which could

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only be entered with their consent, without the judge's approval, and that the home search is the evidentiary procedure that consists in the search of the home or any space delimited in any way, which belongs to or is used by a natural or legal person, for the discovery and collection of evidence regarding the crimes for which the criminal investigation has been started, for the preservation of the traces of the commission of the crime or the apprehension of the suspect or the defendant. In essence, the home search procedure represents an evidentiary procedure appropriate to the situation in which objects or documents are hidden, and their removal is carried out against the owner's will. It does not represent an alternative to the forced removal of objects or documents, to the extent that, previously, voluntary surrender was not requested.

As a result, the court assessed that the prosecutor's order is illegal, and the evidence obtained without an authorization from a judge of rights and freedoms cannot be used, following that their illegality is sanctioned by the provisions of paragraph 102. (3) Criminal procedure code.

On 17.10.2022, the Prosecutor's Office attached to the Gorj County Court submitted to the file ordinance no. xx/P/2022 of 17.10.2022 by which he ordered the remedy of the irregularities found in the contents of the indictment.

Through the conclusion pronounced in the meeting in the council chamber on October 27, 2022 by the Gorj County Court in file xx/2022¹²², , it was found that by ordinance no. xx/P/2022 of 17.10.2022, the prosecutor complied with what was ordered by the conclusion of the council chamber of 10.10.2022, making, in a reasonable manner, a description of the criminal activity of each defendant, indicating the coordinates temporal, spatial, of objective and subjective content for each deed, the forms of the plurality of crimes charged to each defendant, thus the reported irregularity being remedied. The manner in which the objective side of each of the crimes for which the criminal prosecution was carried out against the defendants was described, the fact that the prosecutor did not adopt a way of drafting the statement of facts as is usually done, does not mean that the indictment is drawn up in violation of legal provisions. At the same time, it was noted that the procedure of the preliminary chamber is limited to analyzing the legality of the evidence administered during the criminal investigation, and not to verifying the validity of the evidence, its ability to lead to the

¹²² Gorj County Court, Criminal conclusion nr. 114/2022, unpublished.

pronouncement of a solution, the relevance, conclusiveness or usefulness of the evidence administered during the criminal investigation.

The judge maintained his point of view regarding the fact that the notification to the Gorj Court was made before the completion of the criminal investigation, as long as, although he ordered INEC to carry out a trace logical expertise, but also to complete the medico-legal expertise report no. xx/25.05.2022 issued by SML Gorj, the prosecutor did not wait for the preparation of the expert reports and issued the indictment. Since there is no procedural sanction applicable in such cases, the forensic report no. xx/18.10.2022 prepared by INEC- Bucharest Forensic Expertise Laboratory and medico-legal expert report no. xx/11.07.2022 drawn up by SML Gorj cannot be excluded by the preliminary chamber judge, but they cannot be used in the criminal process either.

In relation to these considerations, the judge of the preliminary chamber ascertained the regularity of the act of referral and indictment no. xx/P/2022 of 15.07.2022 drawn up by the Prosecutor's Office attached to the Gorj County Court whose irregularity was remedied by ordinance no. xx/P/2022 dated 17.10.2022, which forms a joint body with it, of the administration of evidence and the execution of criminal investigation documents during the criminal investigation phase, except for those annulled, respectively excluded by the conclusion no. 2/10.10.2022 pronounced in the case and ordered the start of the trial in the case concerning the defendants mentioned above.

We mention that the prosecutor's office and the defendants appealed against both decisions, which were rejected by the appeal panel¹²³.

Reception and commentary on the issue addressed

We believe that the solutions pronounced in the case are at least questionable, and we are going to present another point of view regarding the existence of the criminal procedural sanction, applicable in the case and the solution that should have been pronounced in the case.

Making a peritextual excursion, we recall that criminal competence is the ability recognized by law to a judicial body (judge of rights and liberties, judge of the preliminary chamber or the court of law), to rule on requests, proposals, complaints, appeals or any other referrals regarding the acts and measures that restrict the fundamental rights and freedoms of the person and on the

¹²³ Craiova Court of Appeal, Criminal conclusion no.8/2023, unpublished.

legality of the act of referral to court, the evidence on which they are based or the acts carried out during the criminal investigation, as well as on the legality and validity of non-referral solutions in court, to judge and resolve a certain criminal case¹²⁴. The competence of the judicial bodies is an essential element that derives from the principle of legality, a principle that constitutes a component of the rule of law¹²⁵.

Regarding the functional competence (*ratione officii*), we note that this is given by the specific functions conferred on the judicial bodies in relation to the various phases or stages of the criminal process. Each phase or stage of the criminal process also corresponds to a specific function of the judicial organs active in that phase or stage. In order to fulfill these functions, the judicial bodies were given appropriate powers, hence the name of competence by powers¹²⁶. Regarding the functional competence (*ratione officii*), we note that this is given by the specific functions conferred on the judicial bodies in relation to the various phases or stages of the criminal process. Each phase or stage of the criminal process also corresponds to a specific function of the judicial organs active in that phase or stage. In order to fulfill these functions, the judicial bodies were given appropriate powers, hence the name of competence by powers. It follows from the above that this kind of competence mainly results from the principle of the separation of judicial functions. The precise determination of the scope of the functional competence helps to avoid the risk of the cumulation of judicial functions or the usurpation of judicial functions that lead to the incidence of the sanction of absolute nullity¹²⁷.

In relation to the functional competence of criminal prosecution bodies, we remind you that criminal prosecution involves (in the narrow sense of the expression) a complex and multilateral activity - gathering the necessary evidence regarding the existence of crimes, identifying the perpetrators and establishing criminal liability - preparing the court phase, it is carried out by specialized bodies specified by law.

¹²⁴ Regarding the court's possibility to verify territorial competence, see I.R.Mălăescu, „Considerations regarding the court's possibility to verify territorial jurisdiction during trial”, The International Conference „Education and Creativity for a Knowledge-Based Society”, 2020, ISSN 2248-0064.

¹²⁵ R. Ionescu, A point of view in relation to the material competence of the judge of rights and freedoms to resolve the proposal of preventive arrest, *Law Review*, no. 3/2019, p. 150-151.

¹²⁶ V. Rămureanu, *Criminal jurisdiction of judicial bodies*, Scientific and Encyclopedic Publishing House, Bucharest, 1980, p. 59.

¹²⁷ M. Udrioiu, *Synthesis of criminal procedure. General part*, Ed. III, vol. I, C. H. Beck Publishing House, Bucharest, p. 339.

The criminal investigation bodies carry out the criminal investigation, and the prosecutor's office, through the prosecutors, supervises the criminal investigation of the criminal investigation bodies, carries out any act of criminal investigation in the cases whose criminal investigation it supervises (exclusive functional competence of the prosecutor) and carries out the criminal investigation in the cases provided by law.

We also note that, in this regard, the prosecutor has a dominant position in the criminal investigation phase, leading the entire criminal investigation activity. The leading role of the prosecutor manifests itself in different forms, the main ones consisting in his right to authorize, approve or confirm some acts or procedural measures of the criminal prosecution body; to deny any act or procedural measure of the criminal investigation body that is not given in compliance with the legal provisions; to give mandatory provisions to the criminal investigation bodies.

With regard to the functional competence of the judge of the preliminary chamber, in the context of the separation of judicial functions, he has the function of verifying the legality of sending or not sending to court and that, in the legislator's conception, this new procedural institution does not belong either to the criminal investigation or to the trial, being equivalent to a new phase of the criminal process. The procedure of the preliminary chamber was entrusted, according to art. 54 of the Criminal procedure code, to a judge - the preliminary chamber judge -, whose activity is limited to the same material, personal and territorial competences of the court of which he is a part, giving this new procedural phase a jurisdictional character.

Regarding the role of the prosecutor in the preliminary chamber procedure, it is noted that he has only a limited participation in this procedural stage.

The functional competence as well as the material and personal competence has an absolute character in the sense that it cannot be transgressed in any way from the provisions that regulate it, the violation of these provisions being sanctioned with absolute nullity, the most energetic sanction. This, because there is a substantial relationship (and not a formal one, as in the case of territorial competence) between the powers of a certain criminal investigation judicial body or preliminary chamber, as is the case in the present case, and their ability to establish them.

As noted, both in the older¹²⁸, and newer specialized doctrine¹²⁹, the functional competence has an even stricter character than the material one, in the sense that some legal facilities that are provided for the material competence are not also provided for the competence functional. In these coordinates, in case of violation of the powers established by law in favor of a judicial body by another judicial body (*ultra vires*), to which the law has reserved another power in the criminal process, it is obvious that the procedural sanction must be one of the most vigorous.

Returning to the commented case, we find that the judge of the preliminary chamber held that the prosecutor of the case drew up the indictment before the completion of the criminal investigation and that the verification of the legality of the evidence and the means of proof requires, at the stage of the preliminary chamber, an analysis of the conformity of all the means of evidence and of the existing evidentiary procedures in the criminal investigation file, from the perspective of the principle of legality and loyalty of the administration of evidence, verification that cannot be done in the case.

Given that there is no procedural sanction applicable in such cases, the forensic report no. xx/18.10.2022 prepared by INEC- Bucharest Forensic Expertise Laboratory and the supplement to the medico-legal expertise report no. xx/11.07.2022 drawn up by SML Gorj, cannot be excluded by the preliminary chamber judge, but they cannot be used in the criminal process either.

In the case, the forensic expert report was drawn up on 18.10.2022 and submitted to the preliminary chamber judge on 20.10.2022, and the completion of the medico-legal expert report was submitted by the prosecutor's office to the preliminary chamber judge on 22.07.2022.

Arriving at this point of analysis, we note that, in disagreement with what was held by the judges of the preliminary chamber, during the criminal investigation the prosecutor is sovereign in assessing the necessity of the criminal evidence that must be administered and

¹²⁸ G. Leone expressed himself as follows: "The functional competence in terms of the intention to ensure for some phase or for some acts a determined judge, refers to a substantial relationship, between the activity to perform and the suitability of the judge; that is why it has an absolute character". See G. Leone, *Criminal Procedure Diritto*, ed. VI, Unione Tipografica, Editrice Torinese, Turin, 1968, p. 138

¹²⁹ I.P. Chiş, Competence of enforcement courts. Functional competence. Exclusive jurisdiction., *Law Review* no. 8/2018, p. 182

their sufficiency and therefore he is the only one who can assess with regard to the full status of the prosecution.

In our opinion, the judge of the case did not make an analysis of absolute or relative nullity, limiting himself to stating that in such cases there is no procedural sanction, and that the two expert reports cannot be excluded by the preliminary chamber judge, but they cannot be used in the criminal process either, considering that, proceeding in this way, the rights of the defendants were affected.

We find that, in the case, it is an atypical situation, but which lately is found more and more often in the case of criminal prosecution files, in the sense that evidence is administered after the completion of the criminal prosecution.

Regarding the geometry of the compensatory mechanisms, in the case it was precisely determined the illegal ways of administering the evidence and the extent of the damage to the defendants' rights, explicitly establishing the illegality in the administration of the evidence, also establishing the remedy to be adopted in the case in the sense that the evidence does not will be used in the criminal process.

At the risk of seeming pretentious, as far as we are concerned, the adopted solution is wrong because the analysis of compensatory mechanisms must be considered when checking the evidence administered by the criminal investigation body during this phase. As in the case, these means of evidence were submitted after the referral to the court, we believe that, in the case, they were administered in violation of the functional competence of the criminal prosecution body.

Or, as I have shown before, in such cases there is a procedural sanction and that can only be absolute nullity, given the violation of the fundamental principle of the criminal process provided by art. 3 of the Criminal procedure code, which bears the marginal name "Separation of judicial functions".

In fact, the Craiova Court of Appeal ruled in this regard, in a recent case decision¹³⁰, which ruled that the prosecutor of the case, after the completion of the criminal investigation, proceeded to the administration of evidence in the sense of drawing up a report on the hearing of a suspect, a report of forensic psychological expertise, noting that in the case the provisions

¹³⁰ Craiova Court of Appeal, Criminal conclusion no. 55/2022, unpublished.

of art.3 paragraph (1) lit. a) from the Criminal procedure code regarding the separation of judicial functions.

However, it has not been expressly established whether elements of absolute or relative nullity exist in the case, nor whether these means of evidence are to be excluded.

This descriptive silence must be read in the light of the fact that in the latter case, the court of judicial review upheld the decisions of the judge of the preliminary chamber of the first court which ordered the return of the entire case to the prosecutor's office¹³¹.

From the above, the following question emerges: is the judge of the preliminary chamber entitled to exclude a means of evidence submitted after the completion of the first stage at the substantive court or after the second conclusion ordering either the start of the trial or the restitution the case at the prosecutor's office, considering that according to the current provisions, the preliminary chamber judge analyzes the legality of the administration of the evidence taken during the criminal investigation, but not outside of it?

Consistent with the aforementioned argumentative line, we believe that the answer to this question can only be affirmative. If this point of view were not accepted, we would be in a situation where two procedures would be carried out in parallel/simultaneously, both the one in the criminal investigation phase and the one in the preliminary chamber phase.

In an effort to simplify, we also note that ordering the solution to exclude evidence in such situations would also be required from the need to comply with the principle of evidentiary legality which imposes the requirement that the authorization, disposition, obtaining, administration, assessment and/or use of evidence in any evidentiary form in the criminal process must be in accordance with the law.

Without going into details, we recall that the distinction between legality and legality is understood in the light of the dichotomy of the proximate genus and the specific difference, or in other words, the distinction between the general theory of evidence and the special law of evidence¹³².

¹³¹ Gorj County Court, Criminal conclusion no. 29/2022, unpublished.

¹³² In this sense, see the works of professors E. Vergés, G. Vial, O. Leclerc, cited by M. Udriou, *prev.cit.*, 567-568.

In other words, the procedural morality of criminal investigation bodies in the activity of gathering evidence, able to ensure the credibility of the judicial act, can be questioned.

Another argument in support of the decision to return the entire case to the prosecutor's office is the fact that the prosecutor did not remedy all the irregularities found by the preliminary chamber judge, in the sense that, although it was ordered to remove from the indictment and from any other criminal investigation documents the references to these and to the informative content of certain procedural documents and some means of evidence, the prosecutor did not comply with this requirement, but the judge of the preliminary chamber ordered the start of the trial.

In this context, the question arises: what will the court do regarding this aspect, or will it return the case to the prosecutor, giving him the opportunity to make the relevant changes in the content of the procedural documents and the indictment, so as to eliminate the ambiguities and gaps, then let him inform the defense in this sense, or allow the prosecutor to blur the text, or will the court itself do this operation?

In our opinion, with reference to the Kolev Case¹³³, the first solution is more practical, the two-step procedure, regulated in the preliminary chamber, can also be translated during the trial.

Of course, it can be admitted that the solution of returning the case directly to the prosecutor would ensure a higher standard of protection for the defendant, since, in this situation, being reinstated, the prosecutor will have to issue a new indictment and refer the court again, which means that the accusation will be contained in a single procedural document (the new indictment), so it will have a compact nature and, therefore, it will be easier to understand, while in the case of correcting the irregularity during the court hearing, there will be two documents, the original indictment and the subsequent clarifications, making the charge more difficult to understand.

Without going into details, we consider that the Judgment handed down in case C-282/20, corroborated with those handed down in the cases C-612/15¹³⁴, C-704/18¹³⁵ and C-769/19¹³⁶,

¹³³ Judgement from the 21 st of October 2021, ZX (Régularisation de l'acte d'accusation), C-282/20.

¹³⁴ Judgment of 5 June 2018, Kolev and Others, C-612/15.

¹³⁵ Judgment of 12 February 2020, Kolev and others.

¹³⁶ Judgment of January 14, 2021, C-769/19.

does not exclusively legitimize the solution that, when the irregularity of the indictment is ascertained during the trial, the case is automatically returned to the prosecutor (by divesting the court and returning the file to the criminal investigation phase).

Regarding the stage of the judgment in which the above procedure can be applied, we note that it is almost illusory to believe that the irregularity of the indictment - left unnoticed in the preliminary chamber - will be found even by the first instance panel¹³⁷. Much more likely, it will be brought up during the appeal hearing. Obviously, the appellate court cannot resort to the procedure of regularizing the indictment directly in the appeal, as there is a risk of losing a degree of jurisdiction.

Conclusions

Without providing individualized notes on the living law¹³⁸, we appreciate that in the situation of invoking the sanction of nullity and implicitly the exclusion of evidence, this approach must find its solution in the phase of the preliminary chamber, phase in which, in the analyzed case, it ended with the pronouncement of the conclusion from the appeal, in accordance with the provisions of art. 347 of the Criminal procedure code.

The analysis of the compensatory mechanisms by the preliminary chamber judge must consider the verification of the evidence administered by the criminal investigation body during this procedural phase. When these means of evidence were submitted after the court was notified, they must be considered to have been administered in violation of the functional competence of the criminal investigation body. In such cases there is a procedural sanction and that can only be absolute nullity, given the violation of the fundamental principle of the criminal process provided by art. 3 of the Criminal procedure code, which bears the marginal name "Separation of judicial functions".

¹³⁷ The judge of the preliminary chamber from the court seized with the indictment is also the one who, in most situations alone, conducts the trial in the first instance.

¹³⁸ The living norm represents the interpretation, almost always of judicial origin, diffuse, constant, predominant. An isolated decision cannot, in principle, form a living right, since, by its nature, it requires the finding of a dominant orientation in jurisprudence and other practical legal principles. The doctrine of living law, imported from the USA, is the justification of last resort for judicial legislation or, in other words, the revision of legal norms under the pretext of the need for an evolutionary interpretation, using the teleological method.

Regarding the second issue addressed, we believe that the court must, first of all, give the possibility to the prosecutor to regularize the indictment during the trial, with the assurance for the defendant, prior to the debates, of the right to know the new configuration of the accusation, to prepare his defense and to propose evidence related to the change that occurred. We believe that only in the event that the prosecutor does not remedy the irregularity during the trial, the court can order the return of the case to the prosecutor's office.

The importance of jurisprudential clarification of the treated issue is essential, if we consider that these situations brought before the judge, be it by the preliminary chamber or the court, are more and more frequent. This is what we tried to do in the lines above.

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Fraud to the Law in Private International Law

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Abstract: *Fraud is the intentional use of deception or dishonesty to acquire an unwarranted advantage or benefit. Within the context of private international law, fraud can have substantial effects on the enforceability of contracts and the resolution of cross-border disputes. In numerous contexts, including international contracts, commercial transactions, and international arbitration, fraudulent behavior can occur.*

In private international law, fraud is a significant problem that can have legal repercussions. Private international law addresses legal disputes involving multiple jurisdictions or nations. Determining which country has jurisdiction over a fraud case can be a difficult and complex process.

There are numerous types of fraud, such as misrepresentation, concealment, and deception. When fraud is committed within the context of a contract, the contract's validity may be contested.

Determining which legal system has the authority to adjudicate a case involving fraudulent conduct is one of the primary issues with fraud in international private law. This can be especially complicated when multiple jurisdictions are implicated in the fraud or when there are conflicts of law between the jurisdictions.

In order to address this issue, numerous nations have enacted legal frameworks allowing their courts to recognize and enforce foreign judgments. In addition to these legal frameworks, international conventions and agreements address fraud-related issues in private international law.

Fraud is an intricate and multifaceted issue in private international law, with implications for jurisdiction, contract validity, and the recognition and enforcement of judgments.

Key words: *Fraud, Private international law, Illegal advantage, Jurisdiction, Cooperation.*

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Definition

In international private law, law fraud is the operation by which the parties to a legal relationship, using private international law for fraudulent (illegal) purposes, have made a different legal system applicable to that legal relationship than is normally competent. Thus, the parties are able to voluntarily shape their conduct so that the law normally applicable to the legal relationship they enter into is not the competent law, but rather the law to their advantage.

In international private law, there are generally two ways to commit fraud:

- In a domestic legal relationship, an element of extraneity is fraudulently introduced, which artificially initiates a conflict of laws and, by applying the normally competent conflict rule for the given hypothesis, refers to a legal system other than domestic law. For instance, in a company ordinarily linked to Romanian law by its defining characteristics (nationality or the seat of the associates), the parties establish their seat abroad to circumvent Romanian tax laws. This creates an artificial conflict of laws (the element of extraneity being the foreign registered office) and renders foreign law applicable to the company, rather than Romanian law (in most cases, the company's headquarters are located in a tax refuge where no taxes are paid).

- In a legal relationship that already contains an element of extraneity, the parties fraudulently alter the point of connection by applying a legal system that is not ordinarily competent to that legal relationship. Only in cases of conflicting rules with variable (mobile) links, such as the change of citizenship or domicile of a natural person or the change of location of movable property, is the voluntary and fraudulent change of the point of connection permissible. In the case of fixed points of connection, such as the scene of the crime or the location of the damage caused by the illegal act, fraud is impossible.

Conditions of law fraud in private international law

For international private law fraud to exist, the following conditions must be met:

- there is a will agreement of the parties (in the case of bilateral legal acts) or an act of will of the party (in the case of unilateral legal acts) to change the link point of a legal relationship; the change of link point must be effective, or else we are in the presence of simulation;
- the parties to use a method of international private law that, in and of itself, is lawful, but by which the normally competent law is circumvented; consequently, the sanctioning of fraud to the law has a subsidiary nature and only intervenes when there is no other way to sanction an act committed in violation of the law;

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- there is fraudulent intent (or intent to circumvent the law) on the part of the parties, who have intentionally created conditions for fraud of the applicable law; consequently, the parties' objective is to remove the ordinary legal system competent to apply to the legal relationship and to apply another legal system as appropriate;
- the result attained by the parties' intervention is illegal, in the sense that it violates the applicable law.

The areas in which fraud can occur in international private law

Law fraud may occur in areas where parties are permitted by law to alter the relationship between conflicting rules, namely:

- concerning the status of the natural person (citizenship, capacity, and familial ties of the natural person). Typically, fraud in this context consists of a natural person fraudulently changing his citizenship, domicile, or habitation.
- in the realm of real property mobility. In this context, fraud consists of relocating movable property from one state to another in order to fall under a different set of laws. Various unfavorable legal provisions regarding the alienation of movable property, the acquisition of rights, etc. are avoided in this manner.
- in the area of the outward appearance of legal acts. Typically, fraud entails relocating the location of a transaction to a state with more favorable legislation. For instance, a legal act may be concluded in a country where private signatures are permitted as opposed to a country where authentic forms are required.
- in the contractual field, by utilizing the autonomy of the will or by altering the location of contract conclusion or execution.
- in the area of the legal person's organic status. In this instance, law fraud consists of relocating a company's headquarters from the court state to a state with favorable legislation (typically in the area of taxation) for illegal purposes.
- in the sphere of succession, by the natural person changing citizenship in order to take advantage of a larger quota than his personal law permits.

Comparison of law fraud with other legal institutions

Fraud and direct violation of the law

In international private law, law fraud comprises an indirect violation of the applicable law because the parties to a private law legal relationship use lawful means to achieve an unlawful result.

The direct violation of the law precludes the appearance of legality, as not only the end result but also the means of achieving it are illicit.

Law fraud and simulation

The comparison between the two institutions can be emphasized by analyzing them within the context of the activities of legal entities. The issue is exacerbated when the regulating bodies of a legal entity are located in separate nations.

In the legal literature, “it is stated that the registered office of a legal person must be real, effective, i.e., where its principal location, its management center, where its legal and functional activity is concentrated, and in fact, where the decision-making services of the legal person are located; if the registered office is not real, it is fictitious and does not correspond with reality”¹⁴⁰.

In this instance, the law of the fictitious registered office will not apply; instead, the law of the actual registered location will govern. As with the simulation, the sanction of the fictitious statutory seat represents the inopposability of the apparent act.

In cases of fraud, the registered office is actually located in a country that has no logical connection to the legal entity. Thus, the headquarters was established solely to take advantage of the favorable provisions of the laws of that country, circumventing the normally applicable law. “If the registered office of a legal entity is genuine but irrelevant (unrelated to the company), then fraud has been attempted”¹⁴¹.

Fraud of law and public order

There are fundamental distinctions between the two legal institutions, despite the fact that both appear to seek to eliminate the applicable law.

Public order is the preservation of societal stability within a given jurisdiction. Public order occurs after foreign law has been designated competent and is removed from application due to an objective fact of foreign law's incompatibility with local law.

¹⁴⁰ P.I. Filipescu, I.A. Filipescu, *Private international law treaty*, Universul Juridic publishing house, Bucharest, 2008, p. 153.

¹⁴¹ Ș.A. Stănescu, *International civil process. 2nd edition*, Hamangiu publishing house, Bucharest, 2023, p. 14.

In the case of law fraud, the fraudulent activity of the parties, who intentionally and artificially make another law applicable to the detriment of the applicable law, must be considered.

At the time of the fraud, the applicable law was unknown, and the parties' actions were undertaken to ascertain the applicable law.

The fraud and legal abuse of the law

Abuse of the law refers to the intentional exploitation or misuse of legal processes, procedures, or vulnerabilities to gain an unfair advantage or cause damage to others. “Abuse of a right is the exercise of a subjective right granted to a natural or legal person for purposes other than those for which it is granted by law, namely the gratification of the holder's legitimate interests”¹⁴².

Abuse of the law implies the existence of a subjective right, an intentional or unintentional violation, and a resulting harm. The method of sanctioning the violation of the law is the refusal to grant the state coercive power and, in particular, the rejection of any action to safeguard subjective rights.

In the case of law fraud, the objective is not to apply the law of a particular country, whereas in the case of law abuse, the objective is distinct from the one recognized by the rightholder.

In both instances, there is an illegal purpose to the legal transaction, but in each case, the illegality of the goal pursued rests in a different way.

The penalty for defrauding the law in private international law

Fraud in Romanian Private International Law

In our legal system, fraud is governed by Article 2564, Section 1 of the Civil Code¹⁴³. According to Art. 256 align. (1), the application of foreign law is null and void if the foreign law became applicable due to a fraudulent Romanian law. In the event that foreign law is no longer applicable, Romanian law will apply. The sanction for the violation of Romanian law in favor of an alien law has two consequences:

- a negative one, namely the removal of foreign law from application;

¹⁴² C.M.C. Ignătescu, *Abuse of law*, Lumen publishing house, Bucharest, 2019, p. 91.

¹⁴³ Law no. 287 of July 17, 2009, regarding the Civil Code, with subsequent amendments and supplements, rectified in the Official Gazette no. 246/29 Apr. 2013.

- a positive one, namely the application of Romanian law in the event that foreign law is abolished.

Fraud under foreign law, which is ordinarily competent to be applied in accordance with the Romanian conflict rule, constitutes, in fact, a violation of the Romanian conflict rule, which, in principle, is obligatory. In this instance, the punishment is the parties' fraudulent intent (*fraus omnia corrumpit*). For the purpose of proving a violation of the law, any method of proof, being a factual situation, may be used. In international private law, fraud is difficult to prove in practice because the fraudulent intent of the parties must be established. (a subjective element that is more difficult to prove). The case law has established that the party alleging noncompliance with the foreign law operative at the time of the legal relationship (marriage) is obligated to demonstrate the nature of that law. The requirement to demonstrate compliance with foreign law cannot be imposed on a party who invokes an act of civil status that is opposable *erga omnes* and possesses the legal presumption of validity. "The application of foreign law is nullified under Romanian law if it becomes competent through deceit"¹⁴⁴.

To prevent the inapplicability of foreign law, it is necessary to demonstrate the misconduct that led to it becoming applicable.

The sanctioning of law fraud is extremely rare in Romanian law and consists of either the nullity of the legal act concluded fraudulently or the inopposability of the act before Romanian authorities.

The sanctioning of defrauding the law in specialized literature

Some authors argue against sanctioning the deceit of the law on the grounds that the parties have exploited a right granted by the current legislation. The presented argument overlooks the fact that the sanction is imposed for the illicit result attained, not for the manner in which the parties have employed lawful means.

Other authors¹⁴⁵ concede the sanctioning of legal fraud only with regard to the form of the acts and contracts, but not with regard to altering the citizenship of a natural person or the location of a legal entity in order to take advantage of the provisions of another law.

The majority of authors who acknowledge the need to punish law deception believe that this punishment consists of the act's inopposability in the country whose law was repealed.

¹⁴⁴ A. Gherghe, *Private international law*, Universul Juridic publishing house, Bucharest, 2010, p. 183.

¹⁴⁵ P.I. Filipescu, I.A. Filipescu, *Private international law treaty*, Universul Juridic publishing house, Bucharest, 2008, p. 157.

Therefore, from the perspective of the state whose laws prohibit fraud, the act has no legal consequences.

The authors who acknowledge the inopposeability of the act as a sanction for law fraud do not share a unified view on the scope of this inopposeability, with some arguing that the sanction applies to the act in its entirety and others arguing that it applies only to the consequences resulting from the act's conclusion.

Conclusions

In private international law, fraud against the law poses a significant threat to the principles of equity, justice, and the effective operation of cross-border legal systems. Legal disputes involving parties from different jurisdictions are governed by private international law, and fraud against the law occurs when individuals or organizations exploit the rules and procedures of this legal framework for personal gain or to deceive others.

Efforts to combat legal fraud must strike a balance between respecting party autonomy and the legitimate pursuit of legal remedies while preserving the equity, effectiveness, and integrity of private international law. By upholding the principles of transparency, good faith, and cooperation between jurisdictions, it is possible to mitigate the negative effects of fraud on the law and preserve the credibility and efficacy of private international legal systems.

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Self - Defense in Opposition with Other Justifiable Acts or Impunity Causes

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Abstract: This work proposes to analyze special situations, when self-defense would crisscross with other justifiable acts or impunity causes. The topic addressed is determined by reality, which can give rise to complex factual situations that, in turn, generate legal issues.

The application of one or the other, or even the combined application of the self-defense with another justifiable act or impunity cause requires a deep knowledge of these legal institutions, but also the ability of the one who perceive them to reveal them correctly.

Keywords: self-defense, state of necessity, the minority of the perpetrator, irresponsibility, intoxication

1. Self - Defense and State of Necessity

There are situations when self-defense can be overlap on state of necessity, or, on the contrary, when state of necessity can be superposed on self- defense. In these complex situations, it is mandatory to know very well all the conditions of the two legal institutions and their correct application, *the similarities and differences* between them playing a determining role.

Thus, according to the actual Criminal Code¹⁴⁶, both self-defense and state of necessity are justifiable acts and they only remove the illegal nature of the deed provided by the criminal law¹⁴⁷; no longer based on the lack of guilt of the one who performs the act of defense, respectively rescue, that is, to remove the danger¹⁴⁸, as provided by the previous Criminal Code¹⁴⁹.

Also, both legal institutions produce their effects *in rem*, which also extend to the participants¹⁵⁰.

In self-defense, but also, in state of necessity, the act provided for the criminal law can be committed both *by the person exposed to danger and by a third person*.

In both cases: exceeding the limits of self- defense or state of necessity, the deed retains its criminal character, less so in the case of *not imputable excess of defense or rescue*¹⁵¹.

¹⁴⁶ Article 19 și article 20 Criminal Code , <https://legislatie.just.ro/Public/DetaliiDocument/223635>;

¹⁴⁷ In the same sense, see also: M. Udrioiu, Criminal Law Worksheets. General part., 4th edition, Universul Juridic Publishing House, Bucharest, 2017, page 76,

¹⁴⁸ See also: C. Mitache, C. Mitache, Romanian Criminal Law. General part, Legal Universe, Bucharest, 2009, pages 143, 151;

¹⁴⁹ Article 44 and article 45 of the Criminal Code of 1969,
<https://legislatie.just.ro/Public/DetaliiDocument/38070>;

¹⁵⁰ Art. 18 Criminal Code, <https://legislatie.just.ro/Public/DetaliiDocument/223635>; In this sense, see also the doctrine: F. Streteanu, D. Nițu, Penal Law. General part, first volume, Legal Universe Publishing House, Bucharest, 2014, page 457;

¹⁵¹ Article 26 Criminal Code, site cit.;

There are obvious similarities between the two justifiable acts that can sometimes make it difficult to set a boundary between them. Starting from these existing similarities and considering it, it will be possible to determine the elements, their differentiation criteria, in the absence of which their distinct regulation would not find its justification.

The first and it seems that it is the most important of the *criteria for differentiating* the two justifiable acts is constituted by *the source of the danger* that removes the freedom of will of the perpetrator. Thus, in self- defense the danger arises from "attack" and in the state of necessity from "occurrences", "events", "accidents".¹⁵²

Supporter of the priority character of *the delimitation criterion* of the self-defense of the state of necessity based on *the source of the danger*, Professor V. Dongoroz¹⁵³ affirms that in order to be considered *unjust*, the attack must be launched and exercised by a *capable person*, capable of realising what is just or unjust in his deeds. From this it was concluded and argued¹⁵⁴ that there is no self-defense, but the state of necessity when the attack is constituted by *the deed of a person who has no discernment*. However, there is another opinion¹⁵⁵, which can be found in the older Romanian doctrine¹⁵⁶, as well as in the foreign one¹⁵⁷, according to which even if the attack originates from an irresponsible person, the benefit of the self-defense of the one who defends himself will be recognized on the grounds that: "the law does not require that the attack be imputable, but only unjust."

We believe that a distinction must be made between the situation when *the attacked knows that the aggressor has no discernment* and, then, the conditions of *the state of necessity* are created and the situation when *he is not aware of* the special state of the attacker and the *self-defense* will be going to be retained *in competition with the error*¹⁵⁸. We consider this solution to be the fair one because, if in the case of an animal attack, the provisions of the state of necessity institution are applicable, which impose greater rigor regarding the rescue action, retaining the self-defense in the case of the irresponsible person, would create for him an inferior position of legal protection, giving the opportunity of opposing to him a much more energetic defense.

The stated criterion of differentiation between self-defense and the state of necessity must not be rigid and formal, but we must go beyond appearances to clarify *the meaning and limits of the notion of attack*.

¹⁵² V. Dongoroz, S. Kahane, I. Oancea, I. Fodor, N. Iliescu, C. Bulai, R. Stănoiu, Theoretical explanations of the Romanian Penal Code, General part, first volume, Academy Publishing House, Bucharest, 1969, page 363;

¹⁵³ V. Dongoroz and collaborators, op. cit., page 352, in the same sense see also M. Udriou, op. cit., page 77;

¹⁵⁴ Idem, see in the same sense M.A. Hotca, Criminal Code. Comments and explanations, C.H. Beck Publishing House, Bucharest, 2007, page 518, C. Mitrache, C. Mitrache, op. cit. page 147;

¹⁵⁵ See: F. Streteanu, D. Nițu, op. cited, 360;

¹⁵⁶ I. Tanoviceanu, Treatise on Law and Criminal Procedure, first volume, 2nd edition, Curierul Judiciar Publishing House, Bucharest, 1924, page 893, where it was stated that: "it doesn't matter if the man who attacks me is imputable or not; against the attack of a madman there is in self-defense, because the attack is unjust from an objective point of view although his impunity does not take place."

¹⁵⁷ See the foreign specialized literature cited by F. Streteanu, D. Nitu, op. cit., loc. cit., M.A. Hotca, op. cit., loc cit.;

¹⁵⁸ This opinion is shared by the most of the Romanian specialized literature. In this sense: M. Udriou, op. cit., page 77, M.A. Hotca, op. cit., pages 518-519, C. Mitrache, C. Mitrache, op. cit. page 147;

It is beyond discussion, in this regard, the classic example¹⁵⁹ of the situation in which the animal is taken aback, directed by a capable person who, acting in this way, is in reality the aggressor, the animal being the instrument. In these circumstances, the attack becomes unjust and the removal of the danger is carried out under the conditions of self-defense and not of the state of necessity.

The two justifiable acts also differ in relation to *the person against whom the deed is performed to remove the danger*. In self-defense, this is confused with the author of the attack (the aggressor), while in the state of necessity, most of the time it is a person who has no fault in causing the danger¹⁶⁰.

Self-defense and the state of necessity *coexist, those two intertwine* when the attack is committed by *an individual found in a crowd* and the attacked person will be able to react indefinitely if he cannot distinguish and thus individualize the aggressor. He will be in self-defense against the author of the attack and in a state of necessity against the other participants in the crowd, but who did not take part in the attack¹⁶¹.

Such situations should not be confused with *aberatio ictus*, so that the issue of factual error cannot be discussed since the person who reacts and acts in defense, *saw and accepted the third party's injury*.

In these conditions, self-defense generates a state of necessity in the relations between the one reacting in defense and the innocent third party, since the first cannot defend himself without harming the second one¹⁶².

In such situations, **the self-defense and the state of necessity will produce their effects together**, the removal of the criminal nature of the act or acts thus committed taking place ***pro parte* based on the first cause and *pro parte* based on the second one**.

Considering all these aspects, we believe that only an in-depth analysis and knowledge of these legal institutions will be able to lead to **the correct application of one or another of them, or even to their conjugate applying**.

2. Self-defense in a state of irresponsibility

If we have analyzed the situation in which the attack in the case of self-defense is carried out by an irresponsible person, reality can also provide us with the situation in which the reply in defense is carried out by persons found in a state of irresponsibility¹⁶³.

According to the previous Criminal Code, the ascertaining of the existence or non-existence of the causes that removed the criminal nature of the act was carried out *in personam*. In this context, neither the issue of self-defense nor that of exceeding its limits could be raised, *the criminal character of the act being removed on the basis of irresponsibility*, of the mental state

¹⁵⁹ V. Dongoroz and collaborators, op. cit., page 352; example also taken by F. Streteanu, D. Nitu, op. cit., pages 359 - 360;

¹⁶⁰ See: V. Dongoroz and collaborators, op. cit., page 363;

¹⁶¹ V. Dongoroz, Criminal law – Reprint edition of 1939, Academy of Criminal Sciences, Bucharest, 2000, page 363;

¹⁶² See in this sense the comments of the teacher I. Tanoviceanu, op. cit., page 512;

¹⁶³ Article 28 Criminal Code, site cit.;

of the one who reacted and responded in defense. The state of irresponsibility led to the psychological incapacity of the perpetrator, so that *the guilt* was removed because of the lack of *his cognitive, intellectual element*, which determined that *the eventual analysis of the existence of some situations or circumstances* - which have constraining effects on *the element of will* and which have led to the same legal effects: the removal of the criminality of the act *to become useless*.

In accordance with the current Criminal Code, the justifiable acts¹⁶⁴, therefore the self-defense, are established *in rem*, while the impunity causes¹⁶⁵ are going to be established *in personam*.

Also according to this Criminal Code and in relation to the new configuration of the crime¹⁶⁶, the illegality, as a feature of it, is going to be checked and ascertained before impunity.

Thus, starting from their way of ascertaining, we consider that the state of self-defense is the one that will be analyzed with priority, while the existence or non-existence of the state of irresponsibility will occupy a secondary place in this operation.

This fact determines the withholding of the self-defense in favor of the one who defends himself, no longer necessary; appearing as uninteresting the analysis of the mental state of the one who defends himself in order to be able to retain the cause of irresponsibility¹⁶⁷.

There is, therefore, no competition between *the two causes*: self-defense and irresponsibility, regardless of the Criminal Code we refer to, *the retention of one removes the incidence of the other*.

3. Self- defense and the minority

*The deed provided for by the criminal law committed by the person who, at the time of its commission, did not meet the legal conditions to be criminally liable (article 27 of the Criminal Code) is not imputable*¹⁶⁸.

*The minor who has not reached the age of 14 is not criminally liable (article 113 paragraph (1) of the Criminal Code*¹⁶⁹), and the one who is between the ages of 14 and 16 is criminally liable only if it is proven that he committed the act with discernment (article 113 paragraph (2) Criminal Code).

In the case of the minor who has not reached the age of 14, the law establishes an absolute presumption of irresponsibility, and in the case of the minor who is between the ages 14 and 16, a relative presumption, which can be overturned by evidence to the contrary, establishing the fact that the minor acted with discernment at the time of committing the act.

¹⁶⁴ Article 18 Criminal Code, site cit.;

¹⁶⁵ Article 23 Criminal Code, site cit.;

¹⁶⁶ Article 15 Criminal Code, site cit.;

¹⁶⁷ In this sense, see also F. Streteanu, D. Nitu, op. cit., page 361;

¹⁶⁸ Article 27 Criminal Code, site cit.;

¹⁶⁹ Article 113 Criminal Code, site cit.;

As a result, the act provided for by the criminal law is not imputable because the minor did not have discernment at the time of committing it: either he did not reach the age of 14 or because he was between 14 and 16 years old and acted without discernment.

However, in both cases, when the criminal act committed during the minority comes into competition with self-defense for similar reasons to those of the institution of irresponsibility, the criminal character of the act is removed on the basis of self-defense and not by the special situation in which the minor offender is.

So, this time too, **self-defense and minority cannot coexist, the first one removing and making unnecessary the application of the latter.**

4. Self-defense and intoxication

In accordance with the article 29 of the Criminal Code¹⁷⁰ is not imputable the deed provided by the criminal law committed by the person who, at the time of committing it, could not realize his actions or inactions or could not control them, because of involuntary intoxication with alcohol or other psychoactive substances.

The act provided by the criminal law committed as a defensive reaction *loses its criminal character not because of the special state in which the person who acted is in - complete involuntary intoxication* - but because of the state of self-defense; because procedurally, as in the case of irresponsibility - the justifiable act is going to be verified and established before that of non-impunity.

As a result, **the presence of self-defense removes the incidence of this case.**

I brought up only *involuntary complete intoxication*, because only this one can constitute a cause of non-impunity, *voluntary complete intoxication* not removing impunity, but still being able to constitute a judicial mitigating circumstance under the conditions of the article 75 paragraph (2) letter b) Criminal Code¹⁷¹.

Voluntary complete intoxication, but also voluntary incomplete intoxication not only does not remove impunity, but these can be retained as aggravating circumstances¹⁷². In the case of the first one, to the extent that it was *provoked in order to commit the crime*, it constitutes the legal aggravating circumstance provided for by the article 77 letter f) from the Criminal Code¹⁷³.

5. Self-defense and factual error

The error regarding one or more of the constitutive elements of the crime is called the error on typicality and has the effect of removing the criminal character of the act because of the lack of guilt¹⁷⁴.

¹⁷⁰ Article 29 Criminal Code, site cit.;

¹⁷¹ Article 75 paragraph (2) letter b) Criminal Code, site cit.;

¹⁷² See also F. Streteanu, D. Nitu, op. cit., pages 420 - 421; M. Udriou, op. cit., page 101;

¹⁷³ Article 77 letter f) Criminal Code, site cit.;

¹⁷⁴ In this sense see also : F. Streteanu, D. Nitu, op. cit., pages 429 - 430; M. Udriou, op. cit., page 103;

It is in error, with the mentioned legal consequence, the one who, *at the time of committing the act provided for by the criminal law, was not aware of the existence of a state, situations or circumstances on which its criminal nature depended* according to the article 30 paragraph (1) Criminal Code¹⁷⁵.

It, the error, influences both the cognitive component, of consciousness by forming a representation nonconforming with the reality and, on the other hand, the factor, the volitional component of freedom of will, making not only the committed act, but also its consequences to be other than those on who represented them¹⁷⁶.

The deed committed in defense, as a result of *an invincible error*¹⁷⁷ on the factual situations, makes it not criminal in nature and therefore does not fall under the scope of the criminal law.

The impunity of the deed committed in error, under the conditions of self-defense, has been known and recognized since ancient Rome (*si alter defender non poterat nisi istum interficere*)¹⁷⁸.

In the case of self-defense, the error can concern: the person of the aggressor (*error in personam*), the way of execution of the reaction in defense (*aberratio ictus*) or the existence of the danger of aggression.

The error on the person is a misrepresentation of a factual circumstance - the identity of the aggressor - that is, of the person who unleashed and carried out the attack and against whom the committed act is not criminal in nature.

There are also situations in which the attacked person wants to retaliate against the aggressor, but *by the way of executing the reaction in defense*, he acts against an innocent third party or against him as well.

The deed committed as a result of the error regarding the existence of the danger of aggression is called *putative self-defense* and stands out precisely because of the false assumption of the existence of the objective condition of the state of self-defense which does not have a real existence, but only an imaginary one. The error must, however, be determined by circumstances that create a relevant appearance of the existence of an attack, an appearance that justifies the reaction in defense, otherwise it may be a case of irresponsibility.

In all three hypotheses of the manifestation of the error, **the exclusion of the criminal character of the reaction in defense is the result of the joint application of the two causes: self-defense and error.**

Conclusions: The analysis we carried out regarding self-defense in competition with other justifiable acts or non-impunity causes allows us to conclude that there are situations when the

¹⁷⁵ Article 30 Criminal Code, site cit.;

¹⁷⁶ In this sense see: V. Dongoroz, op. cit., page 415;

¹⁷⁷ For more details regarding the classification of the error as invincible and vincible, with the related legal consequences, see: F. Streteanu, D. Nitu, op. cit., pages 428 - 429; M. Udriou, op. cit., pages 103-105;

¹⁷⁸ See I. Tanoviceanu, op. cit., page 920.

retention of self-defense excludes that of other justifiable acts or non-impunity causes, or there are situations in which it follows to produce its effects alongside the other causes.

Thus, an act committed in a *state of self-defense*, but also in a *state of necessity*, will lose its illegal character, pro parte because of to the first cause and pro parte because of the second one and, in this situation, these can coexist. However, it must be emphasized as I have shown that these two justifiable acts, precisely because of the similarities between them, must be given special attention in order to correctly retain one or the other or both together.

In the case of *irresponsibility, minority or intoxication, the presence of self-defense excludes the incidence of these causes of non-impunity*. This ascertainment method is diametrically opposed to the previous Criminal Code when these cases were ascertained and retained before analyzing the existence of the self-defense, thus making these steps unnecessary and to be applied with priority. The error, however, is the cause that will be retained and will produce its effects alongside self- defense, regardless if we are talking about *error in personam, aberatio ictus or putative self- defense*. However, it will be necessary for the error to have an invincible character in order to be able to remove the guilt and, therefore, implicitly, the criminal character of the act.

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CRIMINAL POLICY REFLECTED IN LEGISLATIVE CHANGES

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Abstract Along with the evolution of mankind, in the modern period of the last decades, the issue of criminal policy influenced by society's reaction against illegal acts and facts but also by the evolution of criminality was in a continuous change, changing progressively. Although scientific research into the causes of crime has produced remarkable results, they have received little consideration in the field of criminal policy. It has been appreciated that prevention in the sense of actions on the socio-economic causes of crime involves high costs.

For a long time, society had a totally repressive reaction upon detection of a criminal act so, in an effort to act to eradicate crime through intimidation, punitiveness represented society's first model of reaction against crime. The purpose of the punishment was to re-educate the offender with a view to a positive return to the community in which he lives. One of the factors that most undermined the success of the social reintegration of an ex-offender, prisoner, was discrimination at the personal, professional and social levels. The implementation and promotion of the preventive model in the criminal policy of the state aimed to prevent the commission of new crimes. The objective of the preventive model was to identify the causes of crime, that is, the factors that generated this phenomenon in order to eradicate it. The essence of the mixed model is reflected by the intertwining of repression and prevention, between the attempt to eliminate the commission of crimes or misdemeanors by example and the sanctioning of non-compliant behaviours.

Key words: criminal policy, legal norms, reintegration, prevention, punitiveness

Criminal policy, "does not, or in any case should not, have anything in common with political... politician politics. However, criminal policy circumscribes the wider sphere of the general policy of a state, but only to the extent that it is understood and practiced in its traditional sense, of managing the affairs of the city"¹⁷⁹.

¹⁷⁹ Cioclei, Valerian, Critique of criminal reason. Legal criminology and criminal law studies, 2009, Bucharest, CHBeck Publishing House. p. 2

Criminal policy cannot be anything other than "management of the criminal phenomenon"¹⁸⁰. It cannot be separated from the wider context of criminal sciences, namely criminal law, criminology, penology, etc.

Punishment policy is defined as a set of political choices made by the state to define, guide and exercise the right to punish which the state has a monopoly on. The goal of the state's criminal policy is the set of rules adopted in order to prevent and combat crime, but it also implies the way to manifest itself on the principles of criminal, economic and social justice. All of these represent options to respond fairly but at the same time effectively to the problems of prevention, combat and reintegration into society of those who have served sentences.

The desire for progress expressed in the economic, cultural, political and social realities of society is also reflected in the normative system, in the penal policy of the state.

According to the Romanian Constitution, the entire penal policy of the state must be brought into line with current realities, with the protection of citizens' rights, so that the laws must enshrine and at the same time defend fundamental human rights. Thus, the criminal policy of the state starts from the constitutional principle according to which "no one should be held responsible for an act that the law did not criminalize at the time of its commission"¹⁸¹.

Following the full exercise of citizens' rights and freedoms, the state's criminal policy must be a strong expression of the constitutional content, of its role in guaranteeing legality in promoting the fundamental interests of society.

The implementation of criminal policy requires a much broader general context, principled discussions regarding both its content and its implications in society.

Social control becomes a real mechanism by which society checks its members, a mechanism that ends up identifying what deviant behavior is by referring to what is good and what is bad, including what it means to break the law. Within this social mechanism, to keep the members of society under control, the law, norms, customs, morals, ethics and morals, are considered to be forms of social control that impose different forms of social reaction, in case of their violation, through non-compliance.

"Hans Kelsen stated that through the search for justice, human happiness is, in fact, eternally

¹⁸⁰ Cioclei Valerian, 1994, Sexual life and criminal policy, Holding-Reporter Publishing House

¹⁸¹ Art. 4 of the New Criminal Code according to which the criminal law does not apply to the acts committed under the old law, if they are no longer provided for by the new law

sought...justice being social happiness, guaranteed by social order. Cicero defined justice as the queen and mistress of all virtues, and Domitius Ulpian identified the notion of justice with the constant and perpetual desire to give everyone what they deserve"¹⁸².

However, crime, delinquency, in its essence, also has positive aspects. It is a factor of social progress and the reasons that lead us to recognize it are multiple.

First of all, human habits and conduct are influenced by impulses of a social, biological or psychological nature.

Secondly, by identifying and rejecting non-conformists, assimilated by society with bad individuals, the cohesion of the conformist majority, considered to be of good people, is strengthened.

Thirdly, the existence of a large number of deviant acts leads to the conclusion that the violated norms are not appropriate, their changes or the adoption of new ones being necessary.

Thus, through the recognition of deviance, the need to create norms that impose social conformity is highlighted, an important role being assigned to the criminal policy of the state. by the way the current criminal policy of the Romanian state represents a mixed, dual model of reaction against crime.

An eloquent example of changing the state's criminal policy based on statistical data, opinion polls, reports drawn up by state institutions with law enforcement powers, is the continuous adaptation of legislation regarding the fight against family violence.

Violence in the family, so-called domestic violence, is widespread and deeply rooted in everyday life and affects not only social life, family life, its well-being and quality, but is a public health problem. That is why it was appreciated that urgent support and protection measures are required for victims of family violence, of domestic violence in general. The criminal policy of the state sought to find solutions for the protection of the family, their collaboration and mutual help, respect, moral and material support.

The adoption, implementation and, subsequently, the amendment of the legislation represents the "transposition into practice of the Government's sectoral public policy in the field of preventing and combating domestic violence and is an integral part of an extensive structural reform process that takes place in the period 2019-2022, characterized by the dimension of social innovation based on the principle of an approach centered on the situation and needs of vulnerable women who

¹⁸² Iordache Magdalena, About justice, justice and power, Universul Juridic Premium no. 6/2015

are victims of domestic violence"¹⁸³.

As early as 2003, a coherent framework of laws aimed at criminalizing family violence began to form, namely Law 217/2003 for the prevention and combating of domestic violence. Analyzing the jurisprudence of the civil courts that implemented the provisions of the Law on the prevention and combating of domestic violence, certain inconsistencies and deficiencies in the way of implementing these rules with reference to the resolution period resulted, although the speed solving the cases with this object was impetuously necessary but also predetermined in the law.

First of all, there were inconsistencies regarding the regularization of the terms regarding the request for the issuance of the protection order. Secondly, there were inconsistencies with regard to the evidence requested by the court in order to issue the protection order, but also the long duration of the substantive resolution of the cases with the issue of these protection orders.

Thus, starting from the Report of the Judicial Inspection within the Superior Council of Magistracy¹⁸⁴, but also a study at national level prepared by several non-governmental organizations, the competent state institutions promoted the amendment of article 27 paragraph 1 of Law 217 /2003.

Based on this article of the law, before the amendment, "the person whose life, physical or mental integrity or freedom is endangered by acts of violence by a family member may request the court to issue a protection order by which one or more obligations or prohibitions provided by law are provisionally ordered for a maximum of six months"¹⁸⁵.

According to Article 27 paragraph 1 of the Law, the protection order issued under the terms of the law "is judged urgently in the council chamber, the participation of the prosecutor being mandatory¹⁸⁶." The regulation also contained other provisions aimed at substantiating the principle of speedy adjudication of these requests, namely paragraph 5, "in case of special urgency, the court may issue the protection order on the same day, ruling on the basis of the request and the submitted documents without the conclusions of the parties and paragraph 7, the judgment is made urgently and especially since evidence that takes a long time to administer is not admissible¹⁸⁷".

And this because the practice of the courts has shown that due to insufficient human resources, the load of court hearings, the deadline for the resolution of a case with this object was

¹⁸³ *ibid*

¹⁸⁴ The report A former Joined in the THE COUNCIL Higher of Magistrates TO no.1609/IJ/1070/DIJ/2014

¹⁸⁵ Extract from the provisions of art. 27 paragraph 1 and 5 of Law no. 217/2003 for the prevention and combating of family violence

¹⁸⁶ *Ibid* p. 201

¹⁸⁷ *Ibid* p.214

practically left to the discretion of the magistrate handling the case. Under these conditions, there were situations in which the duration of the imposition was shorter than the term in which the protection order was settled.

Consequently, the procedure for issuing the protection order was regulated in the sense that the deadline for resolving the action requesting the issuance of a protection order should be a maximum of 72 hours from the moment the request is formulated and registered. This short term constitutes a remedy for regulatory deficiencies and thus comes to protect victims of domestic violence.

Paragraph 1 has been amended in the sense that "applications for the issuance of the protection order are judged urgently and in any case their resolution cannot exceed a period of 72 hours from the submission of the application. The requests are judged in the council chamber, the participation of the prosecutor being mandatory"¹⁸⁸.

In 2016 by Law no. 30/2016 the Council of Europe Convention on preventing and combating violence against women and domestic violence¹⁸⁹ was ratified on May 11, 2011 in Istanbul. Although in 2018 the New Penal Code, respectively Law 286 / 2009 and the New Code of Criminal Procedure Law 135/2010 were also in force, which also provide rules on the sanctioning of family violence, but also government decisions on the framework methodology for prevention and intervention in situations of child violence and family violence, these normative acts were not sufficiently adapted to the needs of society regarding the protection of family relationships, victims of domestic violence.

The surveys carried out immediately after the entry into force of the law that ratified the Convention adopted in Istanbul demonstrated that there was a need for continuous adaptation of the legislation.

Thus, as a result of the state's criminal policy aimed at preventing and combating domestic violence as well as protecting victims of domestic violence, Law 217/2003 on the [of the legislation](#). prevention and combating of family violence was amended by introducing new measures in order to immediately protect the victim and removal of the aggressor. It is about the provisional protection order which is an instrument in administrative matters on the basis of which the policeman has the right and obligation to enter the victim's home to quickly intervene in situations of imminent danger, introduced by Law no. 174 of July 13, 2018 regarding the amendment and completion of Law no. 217/2013 for the prevention and combating of family violence.

¹⁸⁸ Paragraph 1 of Article 27 of Law 217/2003 was amended by Law 351 of December 23, 2015 published in the Official Gazette no. 973 of December 30, 2015

¹⁸⁹ The National Agency for Equal Opportunities between Women and Men published in April 2017 the results of a national opinion poll on a representative sample of 2,000 people within the project

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<https://www.utm.ro/conferinta-imas-2023/>

National Awareness and Public Information Campaign on Family Violence. The survey results show that:

- 78% of Romanians are aware of the existence of a law regarding the prevention and combating of family violence;
- 4 out of 10 Romanians say that they have encountered cases of domestic violence among acquaintances. Of these, in most cases the assaulted person was the wife (79%);
- 86% of those interviewed believe that acts of domestic violence should be punished more severely;
- The police is the main institution from which Romanians expect to intervene in cases of family violence (72%);
- The most received message of the Campaign was: "Victims of domestic violence are protected by the law" (73%).

Immediately after the entry into force of the new amendments, at the beginning of 2019, a number of 3034 provisional protection orders were issued, based on the statistical data provided by the General Police Inspectorate¹⁹⁰. From the statistical data on domestic violence provided by the General Inspectorate of the Romanian Police in 2018 at national level, 38,445 criminal acts, 3,775 protection orders and 1,424 non-compliance with protection orders were registered. After the amendment of the law for the purpose of regulating provisional protection orders, in the first five months of 2019, 16,585 criminal acts were reported, were issued 3,016 protective orders, far fewer crimes were recorded, 766 crimes of non-compliance with protection orders, 3,034 temporary protection orders were issued, and 236 violations of temporary protection orders.

The constantly changing social life, the increasingly unpredictable events constituted a challenge for the criminal policy of many states. As I highlighted, at the national level the criminal policy of the Romanian state is in continuous adaptation, designed to keep up with the ever-changing criminal typology.

Therefore, the attempt to control the criminal phenomenon is the immediate consequence

¹⁹⁰ Analysis on centers for counseling aggressors in situations of domestic violence or violence against women at national level published within the Norwegian Financial Mechanism 2014-2021 Justice Program, within the Support Project for the implementation of the Istanbul Convention in Romania, analysis registered at the National Agency for Equal Opportunities for Women and Men on 14 June 2019

of a penal policy that must place more emphasis on the preventive purpose of punishment, on legal education. Legal education in schools, according to the latest regulations, should become a compulsory subject in all primary and secondary education units in Romania, criminal policy thus emphasizing prevention, education, because large, exemplary punishments are not the best solution for keeping the criminal phenomenon under control.

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FILING A CHALLENGE FOR ANNULMENT ON GROUNDS OF THE STATUTE OF LIMITATION CONSIDERING THE DECISION NO.676/2022 OF THE PANEL FOR PRELIMINARY RULING ON QUESTIONS OF LAW

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Abstract: *After the conviction has become final, the statute of limitation, as a cause of criminal proceedings termination, may be brought up by means of a challenge for annulment, stipulated by the provisions of article 426 letter b) Criminal procedure code. The applicability of these provisions is, however, problematic in the situation of the succession in time of several criminal laws regarding the statute of limitation.*

The multitude and diversity of the resolutions adopted in recent judicial practice, subsequent to the decisions of the Constitutional Court no. 297/26.04.2018, no. 358/26.05.2022 and of the High Court of Cassation and Justice no. 67/25.10.2022, justify the present scientific approach aimed at identifying a proper solution to the previously stated legal issue.

Key words: statute of limitation, the principle of the application of more lenient law, challenge for annulment, decision, Constitutional Court.

I. General considerations regarding the challenge for annulment provided for by art. 426 letter b) Criminal Procedure Code

The challenge for annulment is the extraordinary way of appeal, non-suspensive of execution, which can be exercised in the cases strictly and limitedly provided by law, with the aim of annulling a final judgment pronounced in violation of the criminal procedural norms and of pronouncing a new judgment, respecting the legal requirements¹⁹².

The formalism of the challenge for annulment, as otherwise of any other extraordinary appeal, consisting in the strict regulation of the holders, cases and terms of exercise, was designed in order to respect the principle of res judicata authority as well as to ensure the effectiveness of the more general principle of security legal relations, both related to final decisions.

Conceived in this way, the system of extraordinary ways of appeal provided for by the New Code of Criminal Procedure is compatible with the provisions of art.6 and art.4 paragraph 2 of Protocol no.7 additional to the ECHR, ECtHR establishing, in its jurisprudence regarding the application of these articles, that,, (...) one of the fundamental aspects of the supremacy of law is the principle of legal security which requires, inter alia, that when the courts have

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¹⁹² M.Udroiu, „Synthesis of criminal procedure. The special part", edition 3, vol.II, C.H.Beck Publishing House, Bucharest 2022, p.666.

pronounced a definitive solution, their solution can no longer be called into question. Legal security implies the principle of *res judicata* which constitutes the principle of finality of court decisions, and derogation can be justified only when it is imposed by exceptional circumstances. This principle implies that no party can request the modification of a final and binding court decision only to obtain a new retrial of the case."¹⁹³.

By Decision no. 10/29.03.2017, issued by the High Court of Cassation and Justice- the panel for preliminary ruling on questions of law, it was held that the nature of the "cancellation" of the appeal means that "the verification on which the court makes in the annulment appeal represents an assessment of the violation of some procedural guarantees that are not related to the merits of the case, but which have occurred", and the nature of "withdrawal" puts the court in the situation of "verifying, itself, the legal conditions in which the decision was given and, if necessary, to deny it, but without being able to extend its control over the legality or the validity of the solution pronounced"¹⁹⁴.

Therefore, no issues regarding the merits of the case (*vitium in iudicato*), but only procedural errors (*error in procedendo*) can be invoked by way of challenge for annulment. Also, by means of the challenge for annulment, the nullity of certain procedural acts and not of any procedural act carried out in violation of the law can be invoked.

The doctrine also concluded that the purpose of exercising the right of appeal is the removal of procedural errors ("*error in procedendo*"), and not the wrong resolution of the merits of the cases¹⁹⁵.

In the same sense, in the jurisprudence of the Constitutional Court, it was held that, in order to respect the *res judicata* authority of the final decision and the security of the legal relationships established by final decisions, "the intention of the legislator was not to allow the reformation, by way of challenge for annulment, of decisions that are subject to *res judicata* except in exceptional situations where procedural errors are noted that could not be removed by way of appeal and under the conditions expressly regulated in art. 426-432 of the Code of Criminal Procedure"¹⁹⁶.

One of the nine cases that allow the formulation of a challenge for appeal is regulated by art. 426 paragraph 1 letter b) Code of Criminal Procedure and is represented by the situation in which the defendant was convicted, although there was evidence regarding a case of termination of the criminal process, thus making explicit reference to the provisions of art. 16 paragraph 1 letters e)-h) and j) Criminal Code.

The provisions of art. 16 para. 1 letter e) Code of Criminal Procedure include among the causes of termination of the criminal process the intervention of the prescription of criminal liability.

Although the legislator changed the wording from the old Criminal Procedure Code, which in art. 386 lit. c) provided for the possibility of reopening the procedure when the court failed to rule on a cause of termination of the criminal process, currently mentioning only the

¹⁹³ M.Udroiu (coordinator), "Criminal Procedure Code. Commentary on articles", edition 3, C.H.Beck Publishing House, Bucharest 2020, p.2165-2166.

¹⁹⁴ <https://www.iccj.ro/2017/03/29/decizia-nr-10-din-29-martie-2017/>.

¹⁹⁵ N.Volonciu, "Treaty of criminal procedure. The special part", Vol. II, 3rd Edition, Paideia Publishing House, Bucharest 1994, p. 323. The decision of the C.C.R. no. 453/2020 published in the Official Gazette of Romania, Part I, no. 1190 of 07.12.2020.

¹⁹⁶ The decision of the C.C.R. no. 453/2020 published in the Official Gazette of Romania, Part I, no. 1190 of 07.12.2020.

condition that there was evidence in this sense, judicial practice ruled that the requirement from the previous regulation is maintained¹⁹⁷.

Therefore, in the hypothesis in which the convicted person invoked before the court the incidence of the provisions relating to the prescription of criminal liability and the court examined this matter, the reiteration of the same cause of termination of the criminal process by way of challenge for annulment based on the provisions of art. 426 letter b) Criminal Procedure Code amounts to a criticism of the court's judicial reasoning when deciding the case and would cause a reassessment of the merits of the case. In this situation, the extraordinary challenge for annulment would be transformed from one of annulment and withdrawal to one of reformation, impermissibly expanding the scope of judicial review, contrary to the will of the legislator¹⁹⁸.

In the situation where the court failed to rule on the incidence of the provisions relating to the prescription of criminal liability invoked by the convicted person or if they were not invoked or examined ex officio, the court's omission will constitute a procedural error that can be invoked through the challenge for annulment based on the provisions of art. 426 letter b) Criminal Procedure Code.

II. The effects of the decisions of the Constitutional Court no. 297/26.04.2018 and 358/26.05.2022 on the institution of the prescription of criminal liability

It is generally known that the prescription of criminal liability is a cause that removes criminal liability, art. 121 paragraph 1 of the previous Criminal Code and art. 153 paragraph 1 of the current Criminal Code, it extinguishes, on the one hand, the right of the state to hold the offender criminally liable, and, on the other hand, the offender's obligation to be criminally liable¹⁹⁹.

In order for the prescription to produce the effects, it is necessary to fulfill the term provided by the law, without the resolution of the case through a final court decision having taken place in the time interval that constitutes the duration of the term.

The term runs from the date of the commission of the crime and its course can be interrupted or suspended; in case of interruption, the previous period should not be considered, after each interruption a new limitation period begins to run, while, in the case of suspension, the limitation resumes its course from the day when the cause of suspension ceased, the period prior to the suspension being in regarding the calculation of the term²⁰⁰.

According to the provisions of art. 123 paragraph 1 of the previous Criminal Code, the limitation period could be interrupted by the performance of any act that, according to the law, had to be communicated to the accused or the defendant during the criminal process.

¹⁹⁷ "Although the text no longer provides as in art. 386 letter c) Criminal Procedure Code from 1968 the condition that the court has omitted to rule, this condition is imposed considering that the legislator granted the competence to resolve the challenge for annulment to the same court as the one that pronounced the contested decision. However, given that this appeal is resolved by a panel composed of judges of the same rank as those who pronounced the initial solution, there is no justification for giving victory to a different interpretation than the one initially given to the same legal issue " Bucharest Criminal Division, Second Criminal Section, Decision no. 10/2015, M. Udrioiu, prev.cit., p.674.

¹⁹⁸ Decision no. 67/2022 of the Panel for resolving some legal issues, published in the Official Gazette of Romania, Part I, no. 1141 of 25.10.2022.

¹⁹⁹ V. Dongoroz and others, „Theoretical explanations of the Romanian Criminal Code. The general part.", vol.II, Academy of the Socialist Republic of Romania Publishing House, Bucharest 1970, p.358

²⁰⁰ R.Ionescu, I.R.Mălăescu, "The implications of the admission of the request to reopen the criminal process on the prescription of criminal liability", Law Review, no. 10/2018, p. 233.

With the entry into force of the current Criminal Code, the interruption of the prescription of criminal liability took place by fulfilling any procedural act in question, according to the provisions of art. 155 paragraph 1, the form in force until 30.05.2022, no longer being necessary that the document be communicated to the suspect or defendant.

By decision of the Constitutional Court no. 297/26.04.2018²⁰¹ the objection of unconstitutionality raised by Coriolan Secară and Nela Mirela Secară was admitted in File no. 2.635/111/2014 of the Oradea Court of Appeal - Criminal Section and for cases with minors and it was found that the legislative solution that provides for the interruption of the criminal liability limitation period by fulfilling "any procedural act in question", from the provisions of art. 155 para. (1) of the Criminal Code, is unconstitutional.

After the publication of this decision, the doctrine but also the judicial practice have appreciated that the provisions relating to the interruption of the limitation period must be interpreted in the spirit of the considerations by which the constitutional court held that "it is necessary to guarantee the predictable nature of the effects of the provisions of art. 155 para. (1) of the Criminal Code on the person who committed an act provided for by the criminal law, including by ensuring the possibility to know the aspect of the intervention of the interruption of the course of prescription of criminal liability and the beginning of the course of a new period of prescription. Moreover, the date of execution of a procedural act that produces the previously mentioned effect is also the date from which the new limitation period begins to run and can be calculated. Accepting the opposite solution means creating, on the occasion of carrying out procedural acts that are not communicated to the suspect or defendant and that have the effect of interrupting the course of the prescription of criminal liability, for the person in question a state of perpetual uncertainty, due to the impossibility of a reasonable assessment of the interval of time in which they can be held criminally liable for the committed acts, uncertainty that can last until the end of the special prescription term, provided for in art. 155 para. (4) of the Criminal Code."

Thus, it was held that, in the absence of a procedural document that must be communicated, according to the law, to the suspect or defendant, the interruption of the prescription of criminal liability cannot be achieved, considering the provisions of art. 155 para. (1) Criminal Code interpreted in consideration of the Decision of the Constitutional Court no. 297/26 April 2018²⁰².

In judicial practice, starting from the unconstitutionality aspects of art. 155 para. 1 of the Criminal Code, as they were ruled by the Decision of the Constitutional Court, it was appreciated that informing the defendant about the extension of the criminal prosecution in personam represents a cause for interrupting the course of the prescription of criminal liability, the court finding that the term of special limitation of liability has not been fulfilled criminal²⁰³. In another case, the court proceeded to analyze the effects of Decision no. 297/2018 on the situation of the defendants from the perspective of the last act carried out in the case, likely to interrupt the course of the criminal statute of limitations²⁰⁴.

Later, by the decision of the Constitutional Court no. 358/26.05.2022, the exception of unconstitutionality raised by Roland Lucian Stoica in File no. 2.380/63/2016 of the Dolj Court - Criminal Section, by Ioan Călin Abrudean in File no. 1.867/85/2016 of the Sibiu Court - Criminal Division, by Marius Gabriel Smaranda in File no. 6.010/215/2018 of the Craiova Court - Criminal Division, by Anghel Sandu in File no. 458/104/2019/a1 of the Olt Court -

²⁰¹ Published in Official Gazette no. 518 of June 25, 2018.

²⁰² I.G. Enache, "The institution of the prescription of criminal liability, following the Decision of the Constitutional Court no. 297 of April 26, 2018", available on <https://www.juridice.ro/611836/institutia-prescriptiei-raspunderii-penale-in-urma-deciziei-curtii-constitutionale-nr-297-din-26-aprilie-2018.html>.

²⁰³ Criminal decision no. 1541/2018, Bacău First instance court, rolul.ro.

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Criminal Section, by Ioan Huntai in File no. 11.649/197/2018/a4 of the Braşov Court - Criminal Section, by Marius Gabriel Smaranda in File no. 1.070/54/2019 of the Craiova Court of Appeal - Criminal Section and for cases involving minors, by Vasile Dumitru in File no. 9.928/279/2016 of the Bacău Court of Appeal - Criminal Section and for cases with minors and family cases, by Mititelu Adrian Marin in File no. 5,997/63/2016 of the Craiova Court of Appeal - Criminal Section and for cases involving minors, by Ştefan Emil Matei in File no. 46.638/3/2015 of the High Court of Cassation and Justice - Criminal Section and by Rodica Vlad in File no. 4.708/101/2013 of the Craiova Court of Appeal - Criminal Section and for cases with minors was admitted and it was found that the provisions of art. 155 para. (1) of the Criminal Code are unconstitutional²⁰⁵.

In the merits of this decision that established the legal nature of Decision no. 297 of April 26, 2018 as a simple/extreme decision, showing that, in the absence of the active intervention of the legislator, mandatory according to art. 147 of the Constitution, during the period between the date of publication of the respective decision and until the entry into force of a normative act that clarifies the norm, through the express regulation of cases capable of interrupting the course of the limitation period of criminal liability, the active fund of the legislation does not contain any case that to allow the interruption of the criminal liability limitation period.

It was also established that the legislator disregarded the provisions of art. 147 para. (4) of the Constitution, ignoring the mandatory effects of Decision no. 297 of April 26, 2018 with the consequence of creating a more serious flaw of unconstitutionality generated by the non-unitary application of the legal text "the course of the limitation period of criminal liability is interrupted by the fulfillment", which, obviously, does not provide for any case of interruption of the course of the limitation of liability criminal. In order to restore the state of constitutionality, the Constitutional Court emphasized that it is necessary for the legislator to clarify and detail the provisions regarding the termination of the criminal liability statute of limitations, in the spirit of what was specified in the considerations of the previously mentioned decision.

Through the only article of the O.U.G. no. 71/2022, published in the Official Gazette, Part I, no. 531, dated 30.05.2022, the legislator provided, "In article 155 of Law no. 286/2009 regarding the Criminal Code, published in the Official Gazette of Romania, Part I, no. 510 of July 24, 2009, with subsequent amendments and additions, paragraph (1) is amended and will have the following content: communicated to the suspect or defendant. >>".

III. The request for the termination of the criminal process through the challenge for annulment, invoking the effects of decisions no. 297/26.04.2018 and 358/26.05.2022 on the institution of the limitation of criminal liability

Decisions of the Constitutional Court of Romania no. 297/26.04.2018 and no. 358/26.05.2022 regarding the interruption of the prescription of criminal liability have been the subject of extensive debates between legal specialists, the most publicized opinions regarding in particular aspects related to the timely application of the decisions of the constitutional court, the legal nature of the provisions of art.155 para. (1) of the Criminal Code and the incidence of the *mitior lex* principle²⁰⁶.

²⁰⁵ Published in Official Gazette no. 565 of June 9, 2022.

²⁰⁶ M. Gornoviceanu, C. Curteza, „ Admissibility of the annulment appeal concerning the incidence of the limitation of criminal liability. The inefficiency of the analysis made in the ordinary procedure with exceeding the powers of the judiciary", available on <https://www.juridice.ro/684726/admisibilitatea-contestatiei-in-anulare->

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It was also necessary to issue a decision to resolve a question of law, the High Court of Cassation and Justice showing that the rules related to the interruption of the prescription are rules of material (substantial) criminal law subject from the perspective of their application in time to the principle of the activity of the criminal law provided by art. 3 of the Criminal Code, with the exception of more favorable provisions, according to the *mitior lex* principle provided by art. 15 para. (2) from the Constitution of Romania, republished, and art. 5 of the Criminal Code²⁰⁷.

This means that the criminal law in force between 25.06.2018, when the Constitutional Court no. 297/26.04.2018 was published in the Official Gazette of, and 30.05.2022, when O.U.G. no. 71/2022 was published in the Official Gazette, the law that no longer provided for any case that would allow the interruption of the prescription of criminal liability, benefits from extraactivity. In other words, it can be applied to acts that were committed before its entry into force (retroactivity) as well as to acts that are pursued or judged after its entry into force (ultraactivity)²⁰⁸.

For the cases under trial at the time of the pronouncement of Decision no. 297 of April 26, 2018, the courts checked whether the general prescription was applicable, the situation in which they considered that the criminal law that no longer provided for the causes of termination was more favorable and ordered the termination of the criminal process.

More problematic, however, is the situation in which, reported at the same period, the case was definitively resolved and the convicted persons request, through the annulment appeal, the establishment of the statute of limitations and the termination of the criminal process.

We consider that such an annulment appeal is not admissible in the following cases:

- first of all, in the situation where the judgments remained final before the publication of the Constitutional Court Decision no. 297/2018 since, from the perspective of the *ex nunc* production of the effects of the decisions of the constitutional court, they do not have the ability to constitute pending cases at that time²⁰⁹.

- also, if the acts were committed under the empire of the previous Criminal Code, which the court appreciated as representing a more favorable criminal law,²¹⁰ it would practically lead

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²⁰⁷ Decision no. 67/2022 available at <https://www.iccj.ro/2022/11/29/decizia-nr-67-din-25-octombrie-2022/>.

²⁰⁸ M.Udroiu, "Syntheses of Criminal Law. The general part", Edition 3, vol.I, Ed.C.H.Beck, Bucharest 2022, p.11.

²⁰⁹ O. Lup, "Effects of Constitutional Court decisions in pending cases. Jurisprudential analysis", available on <https://www.juridice.ro/640512/efectele-deciziilor-curtii-constitutionale-in-cauzele-pendinte-analiza-jurisprudentiala.html>.

Regarding the creation and development of legal principles through the interpretation of the constitutional norm, see A.D. Bobaru, „Relevant aspects regarding the interpretation of the norm in the jurisprudence of the Constitutional Court of Romania, study published in the volume of the scientific conference Legal order and justice in the European space organized by the Legal Research Center "Grigore Iunian" within the Faculty of Education Sciences, Law and Public Administration of the "Constantin Brâncuși" University from Târgu-Jiu in partnership with the Legal and Administrative Sciences Research Center within the Scientific and Multidisciplinary Research Institute of the "Valahia" University from Târgoviște, 31st of May 2022, Sitech Publishing House, Craiova, 2022, p.129-138.

²¹⁰ High Court of Cassation and Justice, criminal decision no. 4/A of January 10, 2023,, In the situation where the courts that have resolved the merits of a case have definitively established the applicability of the provisions of the Criminal Code of 1969, as a more favorable criminal law, this aspect can no longer be the subject of a reassessment from in view of the annulment appeal case provided for by art. 426 lit. b) from the Criminal Procedure Code. Therefore, the establishment of the more favorable criminal law regarding, including, the method of calculating the limitation periods of criminal liability, after the final conviction, exceeds the analysis that can be carried out in the extraordinary appeal of the annulment appeal, an aspect that also results from the

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to the reanalysis of the more favorable criminal law, the change of legal framework in the provisions of the current Criminal Code, so that the prescription is calculated according to art. 155 Criminal Code. However, such an analysis would be equivalent to reanalyzing the merits of the case, diverting the purpose of the extraordinary appeal²¹¹.

- another hypothesis of inadmissibility is that in which the court debated and analyzed the incidence of the limitation of criminal liability as a cause for the termination of the criminal process²¹². For example, it was noted that "It is true that by the Decision of the C.C.R. no. 297/2018, invoked by the petitioner's lawyer, it was found that the legislative solution that provides for the interruption of the criminal liability limitation period by fulfilling "any procedural act in question", from the provisions of art. 155 paragraph (1) of the Criminal Code, is unconstitutional. However, by the said decision it was not ruled that the limitation period can no longer be interrupted in any situation, as it is claimed, but, as it follows from the considerations of the decision, the limitation period is interrupted by the fulfillment of any procedural act that is communicated suspect or defendant in the course of the criminal process. Or, in the case, the procedural documents were communicated to the defendant and thus the limitation period was interrupted and, in this situation, the provisions regarding the special limitation, shown above, become incidental."²¹³

The possibility of invoking the prescription based on the effects of the decisions of the Constitutional Court no. 297/26.04.2018 and no. 358/26.5.2022 in the cases that remained final between the publication of the first decision and the publication of the second remains open for discussion.

The judicial practice is non-uniform, with numerous notifications being promoted requesting the resolution of this legal issue, even if the wording of the questions is not identical²¹⁴. The issue was also addressed during the meeting of the presidents of the criminal sections of the High Court of Cassation and Justice and the appeal courts in Bucharest, from February 27-28, 2023²¹⁵.

However, the majority solutions are in the sense of admitting the challenge for annulment declared against decisions that remained final in the period 25.06.2018-30.05.2022, with the reasoning that the omission to analyze a cause of termination of the criminal process that was not put in the adversarial discussion of the procedural participants neither ex officio nor upon request, is subject to the notion of a procedural error, remediable by challenge for annulment, based on the provisions of art. 426 let. b) from the Criminal Procedure Code²¹⁶.

We agree with the point of view that, in these cases, the challenge for annulment is inadmissible. In this sense, through the considerations of Decision no. 120/2022 of the Constitutional Court of Romania (Official Gazette no. 715/15.07.2022) the following relevant

considerations of decision no. 67 of October 25, 2022 issued by the Panel for resolving legal issues in criminal matters.", available on www.scj.ro.

²¹¹ Craiova Court of Appeal, criminal decision no. 155/2023, unpublished.

²¹² ProLege editorial board, „ The statute of limitations for criminal liability. Interrupting the course of the criminal liability limitation period by fulfilling any procedural act in question", available at <https://www.universuljuridic.ro/termenul-de-prescriptie-a-raspunderii-penale-intreuperea-cursului-termenului-prescriptiei-raspunderii-penale-prin-indeplinirea-oricarui-act-de-procedura-in-cauza/>.

²¹³ Craiova Court of Appeal, criminal decision no. 91/2022, available on <http://www.rolii.ro/hotarari/62283087e49009d8240001c0>.

²¹⁴ Notifications registered under numbers 677/1/2023; 680/1/2023; 914/1/2023 and 924/1/2023 available on <https://www.scj.ro/CMS/0/PublicMedia/GetIncludedFile?id=25220>.

²¹⁵ <https://inm-lex.ro/wp-content/uploads/2023/03/Minuta-intalnire-presedinti-sectii-penale-Bucuresti-februarie-2023.pdf>.

²¹⁶ High Court of Cassation and Justice, criminal decision no.253/A/2022; High Court of Cassation and Justice, criminal decision no.55/2023

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aspects were retained: "Similarly, the Court observed that in the specialized literature it was argued that, although the legal provisions analyzed no longer provide for the condition that the court has omitted to rule on a cause of termination of the criminal process regarding which there was evidence in the file, this cannot lead to a substantially different interpretation of the scope of the annulment appeal case under analysis, in the sense that it can be invoked under less restrictive conditions than those provided for in art. 386 let. c) from the Code of Criminal Procedure from 1968. It was also argued that beyond the literal and grammatical interpretation of the text, although it is no longer stipulated that the court has omitted to rule on the cause of termination of the criminal process, but only the necessity of the existence of a judgment of conviction, this does not mean that, if the court ruled on the cause of termination of the criminal process, in the sense that it assessed that it does not exist, convicting the defendant, the challenge for annulment can be admitted. Once the court analyzed the cause of termination of the criminal process, at request or ex officio, and assessed that it is not an incident, pronouncing a judgment of conviction that acquired the authority of a *res judicata*, the annulment appeal based on art. 426 let. b) from the Criminal Procedure Code can no longer be admitted." Therefore, in the hypothesis in which the court ruled definitively - even implicitly, by pronouncing a judgment of conviction - on the incidence in question of the institution of the limitation of criminal liability in question, there is no longer a procedural error, but an error of judgment, the challenge for annulment being inadmissible. Only in the situation where a request was made to establish the incidence of the limitation of criminal liability can it be discussed about an omission of the court that definitively resolved the case and, therefore, about a procedural error, the annulment appeal being admissible.

We also consider that it cannot be assimilated to a procedural error, what in reality constituted an error of judgment, namely the erroneous generalized judicial practice that led to the application by the judicial bodies of the law by analogy. The fact that the error regarding the nature of the decision of the Constitutional Court no. 297/2018 had a generalized effect at the level of judicial practice does not lead to the conclusion of a procedural error but, on the contrary, emphasizes the fact that it was the result of the judicial reasoning developed by the courts charged with judging the respective causes. Similarly, the pronouncement of the decision of the Constitutional Court no. 358/2022 through which the error of interpretation of the nature of the decision no. 297/2018 was revealed does not have the significance of a cause of change in the character of the error of judgment of the courts.

Moreover, the requirements of art. 426 let. b) Criminal Procedure Code, the decisions of the Constitutional Court of Romania (specifically, Decision no. 297/2018) not constituting evidence. Also, the decisions of the Constitutional Court of Romania produce effects for the future, in the cases that were not definitively resolved on the date of their pronouncement, as the constitutional contentious court also held - Decision no. 377 of May 31, 2017, published in the Official Gazette of Romania, Part I, no. 586 of July 21, 2017, par. 58: "Under these conditions, the Court ruled that a decision to admit the exception of unconstitutionality is applied in the cases pending before the courts at the time of its publication - pending cases, in which those provisions are applicable - regardless of the invocation of the exception until publication admission decision, since what is relevant regarding the application of the Court's decision is that the legal relationship governed by the provisions of the law found to be unconstitutional should not be definitively consolidated. In this way, the effects of the admission decision of the constitutional court are produced *erga omnes*. Regarding the cases that are not pending before the courts at the time of publication of the Court's admission decision, as it is an exhausted legal report - *facta praeterita*, the Court held that the party can no longer request the application of the admission decision, since the admission decision of The

Court cannot constitute a legal basis for a legal action, otherwise the consequence will be the extension of the effects of the Court's decision for the past"²¹⁷.

IV. Conclusions

Decisions of the Constitutional Court of Romania no. 297/26.04.2018 and no. 358/26.05.2022 regarding the interruption of the criminal liability limitation period raise special problems regarding their application in time.

We can state with certainty that there are cases in which the challenge for annulment based on the provisions of art. 426 let. b) Criminal Procedure Code, from the perspective of the two decisions of the Constitutional Court and decision no. 67/2022 pronounced by the High Court of Cassation and Justice cannot be admitted, respectively: the situations in which the decisions remained final previous to the publication of the Constitutional Court Decision no. 297/2018; when the acts were committed under the rule of the previous Criminal Code, which the court considered as representing a more favorable criminal law or the hypothesis in which the court debated and analyzed the incidence of the limitation of criminal liability.

Not as obvious is the solution that must be given in the case of the decisions that remained final between 25.06.2018 and 30.05.2022, our opinion being that the courts misinterpreted the effects of decision no. 297/2018 when they did not order the closing of the criminal process, an error that cannot be remedied by the challenge for annulment.

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²¹⁷ <https://legislatie.just.ro/Public/DetaliiDocumentAfis/191503>.

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Theoretical and practical aspects regarding migrant trafficking

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Abstract. Migrant trafficking represents one of the most lucrative illegal activities at the international level. The enormous migratory pressure to which Europe is subjected in recent years represents a business of billions of euros, money that enters the accounts of migrant trafficking networks from the countries of origin (Syria, Afghanistan, Iraq, Pakistan), of transit (Turkey, Libya, Tunisia, Morocco) or destination (European countries).

These migrant trafficking networks operate according to unwritten rules, very well organized, having connections from the countries of origin of the migrants to the countries of destination. Most migrant trafficking networks are very territorial, operating in a certain "area of responsibility", which they totally control, often benefiting from the concurrence of the authorities. Usually, these areas of responsibility correspond to a certain geographical area or an ethnic group.

One of the principles that underpins the development of society is that people are equal, but it does not allow for differences between them. With all this, the incident was not and is not completely corrected, migrant trafficking is a more serious form of crime. This phenomenon exists even in old times. The science and technology of science and technology, as well as science and technology, are well known.

This investigation is justified by the fact that migrant trafficking, as a criminal and sociable phenomenon, remains a crime that requires a sustained effort and not only in the international organization, but also in the entire society.

Key words: Migrant trafficking, the victim of child trafficking, human trafficking. the crime of trafficking minors, Criminal Code.

Art. 263 Criminal Code has no counterpart in the previous Criminal Code, the criminalization was taken over with certain changes from art. 71 of the O.U.G. no. 105/2001 regarding the state border of Romania.

The content of the normative versions of the two texts is similar, with some differences also being noted.

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Thus, as far as the basic version is concerned, the new Criminal Code expressly indicates other ways in which the act can be committed: "transfer", "transportation" and "sheltering", in this way completing the objective content with met components in judicial practice²¹⁹.

Another addition concerns the aggravated version of art. 263 paragraph 2 letter of C.pen. which was not found in art. 71 of the O.U.G. no. 105/2001 and which will be retained when migrant trafficking is committed to obtain, directly or indirectly, a patrimonial benefit.

Also from the comparison of the text of art. 263 Penal Code. with the corresponding previous regulation, there is still a difference compared to the aggravated version found in art. 71 paragraph 3 of the O.U.G. no. 105/2001 "the act resulted in the death or suicide of the victim". In the absence of such a circumstance, under the scope of the new Penal Code, for the cases in which the trafficking of migrants produces the indicated consequences, the rules of the contest of crimes will be applied.

According to art. 263 Penal Code. the crime consists in the act of recruiting, guiding, guiding, transporting, transferring or harboring a person, for the purpose of fraudulently crossing the state border of Romania.

The act involves actions that facilitate the fraudulent crossing of the border, by migrant persons (who are not Romanian citizens, nor foreigners with the right of residence).

The special legal object is formed by the social relations regarding the respect of the authority of the state in terms of entering or leaving the country, as well as the need to combat the transformation of migrants into sources of illicit income for certain people.

Migrant trafficking activities are crimes against public order, referring to the illegal entry of people into the territory of a state²²⁰.

The material object is missing in the basic version, but it can exist in the aggravating version and consists of the body of the trafficked person.

Thus, to the extent that the migrant is subjected to inhumane treatments directed against the migrant's body, it will become the material object of the crime²²¹.

The active subject can be any natural or legal person. Criminal participation is possible in all forms.

²¹⁹ V.Dobrinioiu, M.A. Hotca, M.Gorunescu, M.Dobrinioiu, I. Pascu, I.Chiș, C. Păun, N.Neagu, M.C.Sinescu, Noul Cod Comentat, vol.II., Partea specială, Universul juridic, București, 2012, p.383.

²²⁰ George-Cristinel Zaharia, Traficul de persoane, Ed. C.H. Beck, București, 2012, p. 160.

²²¹ V.Dobrinioiu, M.A. Hotca, M.Gorunescu, M.Dobrinioiu, I. Pascu, I.Chiș, C. Păun, N.Neagu, M.C.Sinescu, Noul Cod Comentat, vol.II., Partea specială, Universul juridic, București, 2012, p.384

The main passive subject of the crime is the state as the holder of the social values affected by the commission of the crime - ensuring the legal regime of border crossing by migrants.

Secondary passive subject is the migrant himself, if he has been subjected to inhuman or degrading treatment or if his life, bodily integrity or health have been endangered.

The constitutive content of the crime of migrant trafficking provided for in art. 71 of the O.U.G. no. 105/2001 was largely amended by the current art. 263 Criminal Code²²².

The objective side. The material element consists of the following alternative actions: gathering, guiding, guiding, transporting, transferring or sheltering a person.

Recruitment involves recruiting people interested in illegally crossing the state border through promises or pressure.

The guidance consists in the detailed indication of the way to proceed for crossing the national borders, to facilitate the crossing of the border.

Transportation consists in moving them with the help of a means of transport.

Transfer involves moving migrants in any way from one location to another.

Housing means making available to interested persons some spaces to live in for short periods, until the transfer across the border is made.

Guiding means accompanying immigrants, leading them so that the border crossing is facilitated.

In other words, rapolare means to attract, to convince someone; guidance means to show someone the way, to advise him; guiding means to accompany someone to show him the way, to act as a guide; transport means to move someone from one place to another; transfer involves moving the migrant from one place to another; sheltering means hosting, accommodation, installation in a safe place, hiding.

All these facts constitute the crime of migrant trafficking if two essential requirements are met.

First of all, it is mandatory that the facts are aimed at some people who are in the situation of being migrants, that is, of moving from their country to another country, in order to establish residence in this country.

Secondly, any of the indicated facts must be committed for the purpose of fraudulently crossing the state border of Romania.

²²² C. Voicu, A.S.Uzlău, R.Moroşau, Cr.Ghigheci, „Noul Cod penal. Ghid de aplicare pentru practicieni”, Ed. Hamangiu Bucureşti, 2014, p.425.

The essential requirement of the material element is the purpose, understood as the destination of the action: the fraudulent crossing of the Romanian border.

In the new regulation, the material element of the offense is also extended with regard to activities such as: "transportation", "transfer" or "sheltering a person" changes required by judicial practice. After the term "state" the expression "of Romania" was added without any influence on the scope of this criminalization rule²²³.

For the crime to exist, it is necessary for the perpetrator to commit the crime for the purpose provided by the text, respectively for the purpose of fraudulently crossing the state border of Romania.

If the gathering, guiding, guiding, transporting, transferring or sheltering is not carried out for the purpose provided by law, the act does not constitute the crime of migrant trafficking.

It is enough that the act is committed against a single person. The legislator eliminated the option in which the act was committed by organizing these activities, since the actions that constitute the material element of the crime of migrant trafficking covered this situation as well, and the commission by three or more persons in an organized manner constitutes an organized criminal group, provided by art. 367 Penal Code, with the consequence that the act of migrant trafficking will enter into competition with that of constituting an organized group, according to art. 367 paragraph 3 C. pen²²⁴.

In the concrete situation, among others, this offense was held against two Romanian citizens who transported two Indian citizens from Romania to Austria with a minibus, hiding them among the luggage of the other passengers²²⁵.

In order to retain the crime in the basic version, it must be established that the crime is not committed by means by a foreigner declared undesirable or who has been denied the right to enter or stay in the country in any way that would increase the level of danger his social.

In other words, it must not be committed by using means that endanger the life, integrity or health of the migrant (such as, for example, putting him in a refrigerated car and transporting him at very low temperatures over a considerable distance).

²²³ Constantin Duvac, „Infracțiunile privind autoritatea și frontiera de stat din perspectiva Noului Cod penal și a Codului penal în vigoare”, publicat în Revista de drept penal, nr. 2, Aprilie-Iunie 2013, p.31.

²²⁴C. Voicu, A.S.Uzlău, R.Moroșau, Cr.Ghigheci, „Noul Cod penal. Ghid de aplicare pentru practicieni”, Ed. Hamangiu București, 2014, p.426.

²²⁵ ÎCCJ, s.pen., dec.nr. 2694/2010, Programul Legis, CTCE Piatra Neamț, Modulul Jurisprudență.

Equally, the aggravated version and not the basic one will be retained if the migrant is subjected to inhuman or degrading treatments (for example, he is "sheltered" in unsanitary conditions, without light and without food for several days)²²⁶.

The immediate consequence in the case of the crime of migrant trafficking is the creation of a state of danger for the state authority, in terms of compliance with the state border regime.

The causality relationship results from the mere commission of the act of trafficking migrants.

The deed is committed with direct or indirect intention, because the purpose in which the deed is committed characterizes the action, having the meaning of destination (migrants are rounded up, guided, etc., to cross the border), not that of finality.

In the basic version, any of the normative variants indicated by the legislator are carried out for the purpose of crossing the state border of Romania.

If the purpose of these acts is different, the committed act no longer meets the conditions to be legally classified as migrant trafficking

The attempt in the case of the crime of migrant trafficking is sanctioned by the criminal law in force. The typical form of the crime is punishable by imprisonment from 2 to 7 years.

Aggravated forms. In the 2nd paragraph, the aggravated forms of the crime are described, and the aggravating circumstantial elements consist of the purpose pursued by the perpetrator or the means used to commit the act.

Thus, the crime is considered more serious if it is committed:

- in order to obtain, directly or indirectly, a patrimonial benefit;
- by means that endanger the life, integrity or health of the migrant;
- by subjecting the migrant to inhuman or degrading treatments.

In these cases, the act is punishable by imprisonment from 3 to 10 years and the prohibition of the exercise of certain rights.

This time, the purpose of obtaining patrimonial benefits characterizes the subjective side and this aggravated form can only be committed with direct intention qualified by purpose.

For the act to exist in an aggravated form, it is not necessary that the means used have caused any harm to the life, integrity or health of the migrant, it being sufficient that this danger existed or that the migrant was treated inhumanely or degradingly.

²²⁶ V.Dobrinioiu, M.A. Hotca, M.Gorunescu, M.Dobrinioiu, I. Pascu, I.Chiș, C. Păun, N.Neagu, M.C.Sinescu, Noul Cod Comentat, vol.II., Partea specială, Universul juridic, București, 2012, p.385.

Procedural aspects. The criminal action is initiated ex officio. The competence to resolve the case in the first instance rests with the court.

However, human trafficking has a transnational dimension, the rerouting of the information is carried out on Romanian territory, and it is carried out abroad. There are encounters and situations in the country, they are resolved abroad and exploited in Romania.

Crossing from the state of origin, transit or destination is done legally or illegally.

In such a situation, there is a cross-border transshipment, there is a re-trafficking between minors and minors he is a migrant.

In the case of the crime of trafficking minors, legiuitorul provided for certain conditions attached to the material element.

In case of consent, rerouting or transfer of the victim, it must be done under coercion, abduction, inducement in error or abuse of authority or taking advantage of the victim's inability to defend himself or to express his will or by offering, giving, accepting or receiving money or other benefits to obtain the consent of the person who has authority over the victim.

Under the provisions regarding the trafficking of migrants, the legislator did not set such conditions.

The crime of human trafficking is committed in order to compel the victim under art. 182 of the Penal Code, while the crimes regarding the trafficking of migrants are committed, as the case may be, for the purpose of fraudulently crossing the Romanian border, migrants being free after reaching their destination.

Migrant trafficking, both from a legal point of view and from the point of view of the content of the crimes included in this concept, is clearly differentiated into two major components: human trafficking and human trafficking.

Conclusions:

Both migrant trafficking and human trafficking are transnational crimes, in the representative legal sense, i.e. any crime which, as the case may be, is either committed both on the territory of a state and outside its territory, or is committed on the territory of a state, but its preparation, planning, management or control takes place, in whole or in part, on the territory of another state, or is committed on the territory of a state by an organized criminal group that

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carries out criminal activities in two or more states, or it is committed on the territory of one state, but its result is produced on the territory of another state.

It is very important to make a clear distinction between this crime and that of human trafficking, since, although in both situations we can talk about human trafficking, migrants are active participants in committing the act, in all its forms, by members of criminal groups of traffickers.

The legal regulation of cases of illegal migrant trafficking is a process that involves a staged approach to both operative activities and probation, given the sequential way in which this crime is committed, namely rounding up, guiding, organizing and guiding migrants.

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The protection of persons with intellectual and psychosocial disabilities through judicial counseling and special guardianship

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Abstract

The protection of persons with intellectual and psychosocial disabilities is regulated by Law no. 140 of May 17, 2022, regarding certain measures for the protection of persons with intellectual and psychological disabilities, which is meant to complete and modify a series of normative acts, including the Civil Code and the Code of Civil Procedure, published in the Official Gazette no. 500 of May 20, 2022.

The protection of persons with intellectual and psychosocial disabilities can take various forms regulated by Law 140/2022, such as assistance in concluding legal acts, but the most important forms, intended to replace the former institution of interdiction, are the two: judicial counseling and special guardianship, treated in chapter III, which modifies articles 164-177 of the Civil Code, which represented, until modification, interdiction, but also others from the Civil Code.

This paper represents a succinct analysis of the two forms of protection, namely judicial counseling and special guardianship, both from the perspective of substantive law and procedural law, by comparison with the institution of interdiction, which it substantially modified, including by changing its name.

We will analyze, within the framework of this study, using the method of comparison, systemic and logical and grammatical interpretation method, from a theoretical and practical perspective, the conditions for the applicability of the two measures of protection, namely judicial counseling and special guardianship, by capturing the legal differences between the two of them, but also the common procedure of adoption by court decision.

Introduction

The protection of persons with intellectual and psychosocial disabilities is regulated by Law No. 140 of May 17, 2022, regarding certain measures for the protection of persons with intellectual and psychological disabilities.

This law is the Romanian legislator's response to Constitutional Court Decision No. 601/2020, published in the Official Gazette of Romania, Part I, No. 88 of January 27, 2021. The decision referred to the unconstitutionality exception of Article 164(1) of Law No.

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287/2009 regarding the Civil Code, republished with subsequent amendments, published in the Official Gazette of Romania, Part I, No. 88 of January 27, 2021.

The Romanian Constitutional Court found that Article 164(1) of the Civil Code, which established that a person lacking the necessary discernment to care for their interests due to mental alienation or debility should be placed under judicial interdiction, was inconsistent with constitutional provisions contained in Article 1(3), Article 16(1), and Article 50, as interpreted in the light of Article 12 of the Convention on the Rights of Persons with Disabilities, Article 20(1).

As can be observed, the aforementioned law represents a belated response from the legislative body, coming over a year after the promulgation of the constitutional decision. During this time, the legislative vacuum prevented national courts from adopting a unified judicial approach in handling interdiction requests pending before them. Some courts chose to suspend cases with this subject matter, while others granted very long deadlines for their resolution, awaiting a modifying law to align the provisions of the Civil Code with the unconstitutionality decision. Another group attempted to adopt temporary measures with limited application, aimed at providing some support in protecting persons with mental disabilities. This waiting period resulted in the actual impossibility of adequate protection, especially for individuals with abolished or partially affected discernment, which not only affected these individuals but also their relatives who were unable to take necessary steps to administer the incapable person's assets for their support and maintenance.

As stated in the explanatory memorandum of Law 140/2022, the mentioned legislative act is considered the legal instrument for the support and safeguarding of these categories of persons, ensuring the respect for their dignity, rights, and freedoms, as well as their will, needs, and preferences, and safeguarding their autonomy. It is adopted with the purpose of aligning national legislation with the requirements imposed by the Convention on the Rights of Persons with Disabilities, adopted in New York by the United Nations General Assembly on December 13, 2006, ratified by Romania through Law No. 221/2010, published in the Official Gazette of Romania, Part I, No. 792, dated November 26, 2010, with subsequent amendments.

In Romanian legislation, disability is perceived as a handicap, a physical or mental state, which limits a person in movement, activity, reception. Initially, Law 448/2006 on protection and promoting the rights of persons with disabilities, defined persons with disabilities as those persons who, due to a physical, mental or sensory condition, lack the ability to function properly normal daily activities, requiring protective measures in support of recovery, integration and social inclusion. Through the amendment introduced by Emergency Ordinance no. 84/2010, following Romania's alignment with European legislation, the definition has been modified to mean that persons with disabilities are those persons whose social environment, not adapted to their physical, sensory, psychic, mental and/or associated deficiencies, totally prevents them or limits their access with equal chances to the life of society, requiring protection measures in the support of integration and social inclusion. In other words, the perception of these people has completely changed, they are no longer seen as people who must adapt to the environment, but rather, the environment must adapt to their deficiencies, so that they can exercise their

rights under equal conditions with others²²⁷.

The protection of persons with intellectual and psychosocial disabilities can take various forms regulated by Law 140/2022, such as assistance in the conclusion of legal acts.

However, the two most important forms intended to replace the former institution of interdiction are judicial counseling and special guardianship, addressed in Chapter III, which modifies articles 164-177 of the Civil Code, which until the modification represented interdiction, as well as others in the Civil Code.

The adopted legislative solutions essentially aim to reconfigure (and rename) the current institution of judicial interdiction and create a new protective mechanism called judicial counseling. The entire legislative framework is based on three fundamental pillars: necessity (the protective regime is instituted with the aim of adequately protecting the vulnerable person), subsidiarity (protective measures for adults are ordered only when the court determines that other measures provided by law, the application of common law rules for the protection of a general or specific interest, representation or assistance, rights and obligations of spouses, or the approval of a protective mandate by the person concerned, are not sufficient for the defense of the interests of the person under protection), and proportionality (the protective regime is appropriate to the degree of incapacity and individualized according to the needs of the person under protection and the circumstances in which they find themselves)²²⁸.

This paper represents a concise analysis of the two forms of protection, namely judicial counseling and special guardianship, both from the perspective of substantial law and procedural law, compared to the institution of interdiction, which it substantially modifies, including the change of its denomination.

1. Legal provisioning. Definition. Old and new

The legal provisioning of this institution is primarily governed by articles 164-177 of the Civil Code, in terms of substantial conditions, and articles 936-943 of the Code of Civil Procedure, in terms of procedural conditions. The protection of persons with intellectual and psychosocial disabilities is normatively positioned in place of interdiction, which it essentially modifies, both in terms of conditions, procedures, effects, and termination.

In the specialized literature, judicial interdiction was defined as a protective measure in civil law, taken by the court regarding a natural person lacking the necessary discernment to care for their own interests due to mental alienation or debility, consisting of the deprivation of legal capacity and the establishment of guardianship²²⁹.

Judicial interdiction is defined in Constitutional Court Decision No. 601/2020 as "a

²²⁷ Alina Ioana SZABÓ, Protecția persoanelor cu dizabilități în dreptul penal și procesual penal român, Acta Universitatis George Bacovia. Juridica - Volume 6. Issue 2/2017 – <http://juridica.ugb.ro/>, ISSN 2285-0171 ISSN-L=2285-0171

²²⁸ Șerban Diaconescu, Considerations on the Draft regarding the amendment and addition of Law no. 287/2009 on the Romanian Civil Code, of Law no. 134/2010 on the Romanian Code of Civil Procedure, as well as other regulations on the protection of persons with disabilities, in *Studia Universitatis Babeș-Bolyai Iurisprudentia*, Vol.66 nr 2, p.66. (p.53-91)

²²⁹ G. Boroi, *Drept civil. Partea generală. Persoanele*, 4th Ed., Hamangiu Publishing House, Bucharest, 2010, p. 380 *apud* I. Ciochina-Barbu, C. Jora, *Drept civil. Persoanele*, 3rd ed, Pro Universitaria Publishing House, Bucharest, 2020.

protective measure of the rights and legitimate patrimonial and non-patrimonial interests of the person, instituted by the court following the evaluation of the person's ability to exercise their rights and fulfill their obligations. The conditions for the establishment of this measure are strictly and limitatively provided for in the provisions of Article 164 (1) of the Civil Code. Therefore, according to the Civil Code, this represents a protective measure established in the person's interest, taking into account their ability to fulfill obligations regarding themselves and their property [Article 106 and Article 104 of the Civil Code].”

The mentioned definition represents a reflection of the conditions imposed by Article 164 of the Civil Code regarding interdiction, which stated that *"a person who lacks the necessary discernment to take care of their interests due to mental alienation or debility shall be placed under judicial interdiction. Minors with limited legal capacity may also be placed under interdiction."*

Mental alienation or mental debility are defined, according to Article 211 of Law No. 71/2011 for the enforcement of Law No. 287/2009 on the Civil Code, published in the Official Gazette of Romania, Part I, No. 409 of June 10, 2011, as a mental illness or mental handicap that results in the mental incompetence of a person to critically and predictively act, regarding the social and legal consequences that may arise from the exercise of civil rights and obligations.

Article 164(1) of the current regulation of the Civil Code establishes the conditions for placing someone under protection and provides that *"an adult who cannot take care of their own interests due to temporary or permanent, partial or total impairment of mental faculties, as determined through medical and psychosocial evaluation, and who needs support in forming or expressing their will, may benefit from judicial counseling or special guardianship if the adoption of such measures is necessary for the exercise of their legal capacity, on equal terms with other persons."*

By comparing Article 164(1) of the Civil Code in its initial version with the one amended by Law No. 140/2022, considerable differences regarding the conditions for application can be observed.

Regarding the individuals who can benefit from protection, the new amendment of Article 164(1) of the Civil Code refers only to adults, unlike the previous regulation concerning interdiction, which used a more comprehensive term, "person," explicitly mentioning that minors with limited legal capacity can also be placed under interdiction.

However, paragraph 6 of Article 164 of the Civil Code expressly provides that minors with restricted legal capacity can also benefit from special guardianship, meaning those who have reached the age of 14.

Such clarification was necessary considering that the legal acts of a person with restricted legal capacity, according to the amended Article 41, are concluded by that person with the consent of their parents or, where applicable, the guardian, and in cases provided by law, with the advice of the family council, if any, and the authorization of the guardianship court. Nevertheless, the same article states that a person with restricted legal capacity can independently perform acts of preservation, acts of administration that do not prejudice them, acts of accepting an inheritance or accepting gratuitous transfers without conditions, as well as acts of disposal of small value, of a routine nature, and which are executed on the date of their conclusion.

Moreover, minors with restricted legal capacity can also benefit from the measure of

curatorship or the protection measure through judicial counseling, which would take priority over special guardianship, according to Article 164(6) of the Civil Code, which stipulates that "when the guardianship court considers that the protection of the person can be achieved through the establishment of curatorship or placing them under judicial counseling, this measure can be ordered one year before reaching the age of 18 and takes effect from that date."

Both interdiction and protection have, as a common element, the essential condition of a pre-existing illness, transposed in writing in medical documents based on specialized evaluations.

However, while the legal text concerning interdiction expressly mentioned pre-existing illnesses such as mental debility and alienation, which have a legal definition in Law No. 71/2011 as any mental illness or mental handicap that results in the mental incompetence of a person to critically and predictively act regarding the social and legal consequences that may arise from the exercise of civil rights and obligations, protection presupposes "*a temporary or permanent, partial or total impairment of mental faculties.*" Further interpreting the legal text, it is understood that the mentioned impairment affects the formation or expression of the adult's will in the exercise of their legal capacity.

Thus, although the new legal formulation does not explicitly refer to mental alienation or debility, it is self-evident, by reading the legal significance to which it refers, that an adult affected by such an illness can be placed under legal protection in one of the two forms: legal counseling or special guardianship.

The Romanian legislator, "warned" by the decision of the Constitutional Court, adopts a much more permissive term, with broader coverage, that of "impairment of mental faculties," precisely because it includes not only total and permanent mental impairments, as the practical interpretation of the legal text on interdiction was, but also temporary and partial impairments that required express differentiated protection.

The legislative amendment, as mentioned, came as a result of the Constitutional Court's decision, which observed the deficiencies of Article 164 of the Civil Code and other related texts. The Court held that "in order to respect the rights of persons with disabilities, any protective measure must be proportional to the degree of capacity, adapted to the person's life, imposed only if other measures cannot provide sufficient protection, take into account the person's will, be applied for the shortest period of time, and be periodically reviewed."²³⁰

In the considerations of the mentioned decision, it is further stated that "in the conception of the Convention on the Rights of Persons with Disabilities, the legal capacity of a person is not synonymous with their mental capacity, as they are distinct concepts, and perceived or real limitations in mental capacity should not be used as a justification for rejecting legal capacity [Article 12 of the Convention on the Rights of Persons with Disabilities as interpreted by the Committee on the Rights of Persons with Disabilities through General Comment No. 1/2014]."

Thus, based on the above, we can attempt to **define** the protection of adults with intellectual and psychological disabilities through legal counseling or special guardianship as *a measure of civil protection, which is imposed solely by the court, for the adult or the minor with restricted legal capacity who, due to medical conditions (transposed into specialized documents*

²³⁰ The Constitutional Court Decision no. 601/2020., par. 34

based on medical and psychosocial evaluations), whether temporary or permanent, partial or total, needs support in their care and interests, to the extent that the adoption of this measure is necessary for the exercise of their legal capacity on equal terms with others.

Next, we will analyze the conditions for the applicability of the two protective measures, namely legal counseling and special guardianship, by capturing the legal differences between the two, as well as the common procedure for their adoption through a court decision.

2. Legal Counseling

According to Article 164(2) of the Civil Code, "a person may benefit from legal counseling if their impairment of mental faculties is partial and continuous counseling is necessary for the exercise of their rights and freedoms." And according to paragraph (3), "the establishment of legal counseling can only be done if adequate protection of the person cannot be ensured through the establishment of assistance for the conclusion of legal acts."

Judicial counseling, by virtue of its character as an intermediate means of protection, is equally, a measure that responds to the recommendations of the Court and of the other normative international acts regarding the proportionality and adaptability of these protection systems to the particular needs of each person, giving the possibility to the court to adopt a personalized measure that provides support to the person concerned only to the extent of which it needs, respectively in those legal and social relations in which the deterioration partial loss of mental faculties prevents her from self-management²³¹.

The conditions for ordering legal counseling, as mentioned in Article 164(2) and (3), are as follows: 1. the adult has a *partial impairment* of their mental faculties, regardless of whether it is temporary or permanent, 2. *continuous* counseling is necessary for the exercise of their rights and freedoms, 3. adequate protection cannot be ensured through the establishment of assistance for the conclusion of legal acts.

The last condition, established by paragraph 3 of Article 164 of the Civil Code, confirms the subsidiary nature of the measure of legal counseling in relation to the less restrictive measure of assistance for the conclusion of legal acts, established by the same law, in Chapter 1, Articles 1-6.

However, legal counseling takes priority over special guardianship, as evidenced by reading the provisions of Article 164(5) of the Civil Code, which provide for resorting to special guardianship only as a last resort when less burdensome protective measures, such as legal counseling, assistance for the conclusion of legal acts, or curatorship, cannot be taken.

Persons who can request the establishment of legal counseling, according to Article 165 of the Civil Code, can be the following: the person in need of protection, their spouse or relatives, relatives by marriage, the person living with them, as well as other persons, organisations, institutions, or authorities provided for in Article 111²³², which is applicable

²³¹Codruța Guzei-Mangu, The Reform of the Legal Framework Regarding the Protection of the Natural Person as a Result of the Decision of the Constitutional Court No. 601/2020, available at <https://drept.uvt.ro/administrare/files/1640037798-articol-codruta-guzei-mangu.pdf>

²³² Article 111 of the Civil Code provides: They have the obligation that, as soon as they learn of the existence of a minor without parental care in the cases provided for in art. 110, to notify the guardianship court: a) the persons close to the minor, as well as the administrators and tenants of the house where the minor lives; b) the civil status service, on the occasion of registering the death of a person, as well as the public notary, on the occasion of opening

accordingly.

Essentially, being seen as a protective measure in favor of the person in the situation described in Article 164 of the Civil Code, any person can request the establishment of legal counseling, including the person in need of protection, their close relatives (whether from the family or outside it), the courts, on the occasion of being convicted to the criminal penalty of deprivation of parental rights, the civil status office, etc.

3. *Special Guardianship*

According to Article 164(4), "a person may benefit from special guardianship if the impairment of their mental faculties is total and, as the case may be, permanent, and it is necessary for them to be continuously represented in the exercise of their rights and freedoms."

Therefore, the key element that differentiates special guardianship from legal counseling is the **total** impairment of their mental faculties, often permanent, which requires the appointment of a guardian to continuously represent the person in the exercise of their rights and freedoms.

The persons who can request the application of special guardianship are the same as in the case of legal counseling, according to Article 165 of the Civil Code.

4. Procedure for the establishment of legal counseling or special guardianship

Law 140/2022 also amends the Code of Civil Procedure, assigning Title II of Book VI as the procedural framework for the establishment of legal counseling or special guardianship.

According to Article 936 of the Civil Procedure Code, the competent court to adjudicate the request for the establishment of legal counseling or special guardianship of a person is the guardianship court in whose jurisdiction the person has their domicile.

Therefore, the rule of competence based on the domicile of the person under protection is maintained.

We consider that the court of the person's domicile remains competent to hear the case from the date of referral to the court, even if the person whose protection is sought has subsequently changed their domicile.

The request, according to Article 937 of the Civil Procedure Code, shall include, in addition to the elements provided for in Article 194, the facts indicating the impairment of their mental faculties, as well as the evidence proposed for this purpose, as well as information regarding the person's family, social, and financial situation, any other elements regarding their degree of autonomy, as well as the name of their attending physician, to the extent known to the claimant.

According to Article 937(4) of the Civil Procedure Code, in case the request for extension, replacement, or lifting of the protective measure is submitted by the representative or legal guardian of the person, it shall be accompanied by the evaluation reports provided for in Article 938(6), compiled no later than two months before the date of referral to the court.

The introductory request shall also state the requested protective measure although, according to Article 937(3), the guardianship court is not bound by the object of the request and may establish, under the conditions provided by law, a different protective measure from the one requested.

a succession procedure; c) the courts, on the occasion of the conviction to the criminal penalty of the prohibition of parental rights; d) the prosecutor, local public administration authorities, protection institutions, as well as any other person.

Thus, although the claimant may request the establishment of special guardianship through the request, the court may find that such a measure is not necessary, for example, if the impairment of their mental faculties is partial, and may instead impose, in our opinion, after prior discussion, the measure of legal counseling.

We believe that even in cases where the claimant requests the establishment of legal counseling or special guardianship, the court, taking into account the specific situation of the person in need of protection and applying the legal provisions, should be able to take the measure of assistance for the conclusion of legal acts.

This reasoning is based on the text of the law itself, namely Article 164, paragraphs 3 and 5 of the Civil Code, which provides that the measure of legal counseling and special guardianship is *only taken when adequate protection of the person's interests cannot be ensured by the establishment of assistance for the conclusion of legal acts*.

However, Article 1 of Law 140/2022 provides that the establishment of assistance for the conclusion of legal acts is done by the notary public under the conditions of Law no. 36/1995 on notaries public, without expressly providing any situation in which the court would have the competence to establish such a measure.

As a result, the court, when invested with a request for the establishment of special guardianship/legal counseling, cannot, in its current formulation, establish assistance for the conclusion of legal acts by judicial decision, even if it is required to analyze whether such a measure could be taken through the interpretation given to Article 164, paragraphs 3 and 5 of the Civil Code. Instead, the court will reject the request, stating in the considerations of its decision not only that the conditions for their establishment are not met but also, if applicable, that the conditions for the assistance of the adult for the conclusion of legal acts provided by Article 1 of Law 140/2022 are met.

Given the special purpose of the law, namely the protection of persons with intellectual and psychosocial disabilities, the urgent nature of taking a protective measure (although it is understandable why the responsibility for taking the measure of assistance for the conclusion of legal acts was entrusted to the notary public, thus relieving the courts of this task, since the notary public is the authority before whom authentic deeds are concluded), we believe that, as a matter of *lege ferenda*, the court should be able to take such a measure in exceptional situations, in order to avoid delaying the implementation of a protective measure for a person in need.

Furthermore, we consider that raising the possibility of an alternative protective measure cannot constitute a pre-decision and therefore a reason for abstention or disqualification, as it is a matter on which the parties must have the opportunity to express their opinion. Nor can it be considered as exceeding the purpose of the claim, since the law itself provides that the judge is not bound by the measure requested but can establish a different protective measure.

The question arises as to whether the court, when seized with a request for guardianship, can order the establishment of curatorship regarding the person in question.

Considering that curatorship is also a protective measure, in accordance with Article 109 of the Civil Code, and that Article 164, paragraph 6 provides that when the court of guardianship considers that the person's protection can be achieved by establishing curatorship or by placing them under legal counseling, this measure can be ordered one year before reaching the age of 18 and takes effect from that date, and also states that the judge is not bound by the protective measure mentioned in the request, according to Article 937, paragraph 3 of the Civil

Procedure Code, we believe that, after a prior consultation with the parties, the judge could change the legal basis and establish curatorship if the legal conditions for it are met.

Regarding the preliminary measures that the court takes, by interpreting Article 938 of the Civil Procedure Code, upon receiving the request, the judge shall issue a written resolution to communicate it to the person concerned and to obtain copies of the documents attached to the request, with the specification that they can engage a chosen lawyer, otherwise they will be provided with a lawyer appointed *ex officio*. The same documents shall also be communicated to the prosecutor when the request has not been submitted by the prosecutor.

Furthermore, Article 938 of the Civil Procedure Code provides that the prosecutor shall carry out the necessary investigations, order a medical and psychological evaluation, and determine the deadline for their completion. If the person concerned is hospitalized in a healthcare institution, a report shall be drawn up by the institution. During the medical evaluation and, if applicable, the preparation of the report, the opinion of the attending physician of the person in need of protection may be requested. The prosecutor shall also order the preparation of a social investigation report by the guardianship authority.

The medical and psychological evaluation shall be conducted after obtaining the consent of the person for whom protection is sought, in the presence of the evaluating person, if their health condition allows it.

If the person for whom protection is sought refuses the evaluation or fails to appear for it, the court shall order their mandatory presence.

The medical evaluation report and the psychological evaluation report of the person for whom protection is requested shall include, as applicable, references to the nature and severity of the mental condition, its predictable progression, the extent of their needs, the circumstances in which they find themselves, as well as mentions regarding the necessity and appropriateness of establishing a protective measure.

If necessary, the presiding judge may also appoint a curator in accordance with the provisions of the Civil Code.

All these procedures are referred to as preliminary measures under Article 938 of the Civil Procedure Code.

The general provisions set out in Article 200 of the Civil Procedure Code provide for a preliminary written stage before setting the first hearing date, which generally involves communicating to the claimant the deficiencies in the lawsuit in order to complete it, communicating the lawsuit to the defendant to file a response, and subsequently communicating it to the claimant to formulate a reply to the response.

It should be noted that during this preliminary written stage, no other acts or procedures involving adversarial proceedings or summons are carried out. The only procedures that can be included in this stage, without adversarial proceedings but with the summons of the interested party, are the request for reconsideration against the annulment of the claim, the request for legal aid, and the request for reconsideration against the rejection of the request for legal aid.

It is observed that Article 938 of the Civil Procedure Code adds to the measures that can be taken in the preliminary procedure the possibility of requesting the court, respectively, for the court to order the mandatory presence of the person for whom the protective measure is sought if they refuse the evaluation of their health condition or fail to appear for the evaluation.

For such a decision to be taken, it results from the interpretation of Articles 938-940 of the Civil Procedure Code that the request for the mandatory presence of the beneficiary shall

be made by the prosecutor, as it is the prosecutor's responsibility to carry out the steps regarding the medical and psychological evaluation, and it is not necessary to first set the first hearing date to order the mandatory presence.

This results from Article 940 of the Civil Procedure Code, which states that after receiving the documents provided in Article 938, the date for hearing the request shall be set, and the parties shall be summoned.

Article 939 of the Civil Procedure Code is dedicated to *the procedure of involuntary provisional hospitalization*, a procedure that has the following premises: 1. the need for extended observation of the health condition of the person for whom the protective measure is requested by the evaluating physician, and 2. the refusal of the person involved to be hospitalized.

Once the above conditions are met, the authority competent to order involuntary provisional hospitalization shall be the guardianship court, at the request of the prosecutor, who, in turn, is informed by the physician requested to evaluate the person's health condition.

The procedure for taking the measure of involuntary provisional hospitalization is an urgent one, involving the hearing of the person for whom protection is sought, with the application of Article 940, paragraph (3) final sentence, and Article 940, paragraph (4), and the mandatory participation of the prosecutor, who will present conclusions regarding the provisional hospitalization. The court will then analyze the necessity and proportionality of the measure in light of all the documents of the case-file and the report of the requesting physician, and based on these, decide whether it is necessary to take the measure of involuntary provisional hospitalization for a period not exceeding 20 days, in a specialized healthcare institution.

The court's decision shall be a justified, enforceable order, subject only to appeal, within a period of 3 days, which starts from the pronouncement for those present and from the communication for those absent. The appeal shall be resolved within 5 days from its formulation.

According to paragraph (6), if it is determined before the expiration of the involuntary provisional hospitalization that it is no longer necessary, the specialized healthcare institution immediately proceeds to discharge the person under protection.

It results thusly that the procedure for early discharge of the person before the prescribed term is a simplified one, as the legal text leaves it to the discretion of the specialized healthcare institution to immediately discharge the person if hospitalization is no longer necessary.

The procedure for trial of the request for protective measures is regulated in Article 940 of the Civil Procedure Code, specifying, first and foremost, that the trial of the request is done urgently and with priority, with the citation of the parties and the participation of the prosecutor.

In judicial practice, the question has arisen as to whether the procedure for resolving requests regarding the establishment of legal guardianship and special guardianship is a non-contentious procedure. There are situations where the person for whom protection is sought does not agree with the request or with the proposed guardian, or there are multiple persons expressing their desire to be appointed as a guardian. On the contrary, it is a contentious procedure, at least in cases similar to those mentioned.

Since judicial practice is not unanimous, the Iasi Court of Appeals has raised this issue

for discussion at meetings aimed at unifying judicial practice²³³, and the two opinions presented below were expressed.

The majority opinion argued that these requests are adjudicated in a non-contentious procedure, considering that they are requests that require the intervention of the court for their resolution, without aiming to establish a right conflicting with another person. It was also noted that Article 527 of the Civil Procedure Code concerning non-contentious proceedings refers to the adoption of legal measures for supervision, protection, or assurance, which includes the measures provided in Articles 936 and following of the Civil Procedure Code. It was further argued in support of this opinion that the legislator's intention was to resolve these cases in a single hearing granted by the court, with evidence being collected in the preceding non-contradictory phase. For this reason, Article 940, paragraph (3), mentions the hearing in the council chamber of the person for whom protective measures are sought, which, in practice, is the only hearing granted for the resolution of the case. Additionally, the fact that these disputes involve sensitive aspects of a person's life for whom protective measures are taken brings this procedure closer to the non-contentious procedure²³⁴.

The minority opinion expressed that the adjudication of these requests is done in a public session, as it involves establishing a right conflicting with another person, in all cases where the request is not made by the person for whom legal guardianship or special guardianship is established. The special regulations do not make references to the non-contentious procedure, and the adjudication procedure must guarantee the respect for the rights of the person subject to such measures. Since only the hearing of the person for whom protective measures are taken is mentioned to take place in the council chamber, it can be concluded that the legislator's intention was for the adjudication to take place in a public session. In support of the minority opinion, it is argued that the analysis should start from the provisions of the special procedure, noting that references to legal provisions concerning contentious proceedings are made (Article 194 of the Civil Procedure Code, not 530 of the Civil Procedure Code)²³⁵.

The discussion is not without arguments regardless of the position of the proponents. On one hand, in support of those who argue that the procedure for resolving requests for legal guardianship or special guardianship is non-contentious, Article 527 of the Civil Procedure Code states that *requests that demand the intervention of the court, without aiming to establish a right conflicting with another person, such as those concerning judicial authorizations or the adoption of legal measures for supervision, protection, or assurance, are subject to the provisions of this Code* regarding non-contentious proceedings. Both the establishment of legal guardianship and the imposition of special guardianship are protective measures for the person and do not aim to establish a right conflicting with another person.

Such an approach places the procedure for adopting one of the two protective measures entirely in the council chamber, but with the mandatory citation of all persons involved in the procedure, as expressly provided in Article 941 of the Civil Procedure Code.

On the other hand, the supporters, albeit a minority, of the thesis of contentious proceedings in the matter of adopting the two protective measures have strong arguments based

²³³ Summary of the quarterly meeting of the judges of the Iasi Court of Appeal and the district courts, regarding the non-unitary judicial practice issues in civil matters, - quarter I/2023 - unpublished

²³⁴ The opinion expressed was taken in full from the Practice Summary of the Court of Appeal Iași, quarter I/2023

²³⁵ Idem

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on the interpretation of special legal provisions.

The first argument starts from Article 940 of the Civil Procedure Code, which, in paragraph 2, only provides that the adjudication of these requests shall be done urgently and with priority, without specifying that the request should be adjudicated in the council chamber. However, the general principle stipulated in Article 17 of the Civil Procedure Code states that court hearings are public, except in cases provided by law.

Another indication supporting the presented thesis is contained in Article 937, paragraph 1, of the Civil Procedure Code, which provides that *the request for the establishment of judicial counseling or special guardianship shall include, in addition to the elements provided in Article 194, the facts indicating the deterioration of the person's mental faculties, as well as the evidence proposed for this purpose.*

Therefore, the reference made by Article 937, paragraph 1, to Article 194 of the Civil Procedure Code, which specifies what a statement of claim should include in contentious proceedings, and not to the provisions of Article 530 of the Civil Procedure Code, which specifies what a request in non-contentious matters should include, cannot be a mere legislative error.

Considering the arguments presented, we share the minority opinion expressed to the effect that the adoption of the measure of judicial counseling and special guardianship takes place in a public hearing, with the only exception being the hearing of the person for whom protective measures are sought, which, for the protection of their interests and privacy, takes place, as expressly provided, in the council chamber.

As mentioned earlier, a particularity of the procedure is the mandatory hearing of the person for whom the measure is sought in the council chamber, where they are asked questions to ascertain the necessity and appropriateness of adopting a protective measure, as well as their opinion regarding the protective regime and the guardian, with a trustworthy person from the beneficiary's side being present if necessary.

However, if it is in the best interest of the person for whom protective measures are requested, they will be heard at their residence, where they are being cared for, or at another location deemed appropriate by the court.

As an exception to the rule of hearing in the council chamber, the extension of the special guardianship measure for a period exceeding 5 years may be ordered without hearing the person under protection if the medical report mentions that their hearing would harm their health or if they are unable to express their will. This is the only situation where the request can be adjudicated without hearing the person for whom the measure is sought.

Article 940, paragraph 7, of the Civil Procedure Code provides that throughout the procedure, the person for whom protective measures are sought shall be informed, in ways adapted to their condition, about the progress of the judicial procedure, as well as about any measures taken regarding their person and property.

Therefore, the new regulation supports individuals in need of legal protection by imposing greater transparency in the procedure for adopting judicial counseling or special guardianship, with the obligation of ongoing information in terms and methods that allow the person to understand, to the extent possible, the progress of the judicial procedure and the measures taken regarding their person and property.

Article 941 of the Civil Procedure Code provides for the communication of the decision adopting the protective measure, whether it is judicial counseling or special guardianship, by

the court that pronounced it: a) to the local public community service responsible for personal records where the birth of the person under protection is registered, in order to make a mention on the birth certificate; b) to the competent health service, for the establishment of permanent supervision over the person under protection, as provided by law; c) to the competent land registry and real estate publicity office, for registration in the land register, if applicable; d) to the trade registry, if the person under protection is a professional; e) to the National Register of Support and Protective Measures taken by public notaries and guardianship courts, kept by the National Union of Public Notaries of Romania. Paragraph (2) of Article 941 applies to the courts vested with the adjudication of legal remedies provided by law.

Article 941, paragraph 3, of the Civil Procedure Code provides for the automatic termination of temporary guardianship established within the procedure for adopting judicial counseling or special guardianship, in the case of the rejection of the request for protection.

Therefore, through the decision rejecting the request for protection in the two mentioned modalities, it shall be mentioned that the measure of guardianship ceases automatically, but even in the absence of this mention, the measure shall cease automatically, *ope legis*.

The procedure for lifting, replacing, or revoking the protective measure is the same as the one regulated for adopting the measure, as indicated by Article 943 of the Civil Procedure Code, which also provides that future measures regarding the protective measure shall be mentioned in the decision adopting the respective measure.

In **conclusion**, the replacement of the former institution of interdiction with the institution of adult protection through judicial counseling and special guardianship, although raising some interpretation issues, provides more support for the respect of the rights of persons with intellectual and psychosocial disabilities by establishing clearer procedures and introducing a temporary period for adopting these measures, with the obligation of courts to periodically review the situation of the protected persons *ex officio*.

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PART 2: ECONOMY CHAPTERS

COMPUTERIZED DECISION ASSISTANCE FOR THE MANAGEMENT OF RENEWABLE RESOURCES IN THE CURRENT CONTEXT OF DIGITALIZATION AND THE IMPLEMENTATION OF THE NATIONAL HYDROGEN STRATEGY

VătuIU Teodora²³⁶

Abstract: One of the problems faced by the energy sector is the lack of digitization, given that the digital revolution in this field would change the way energy is produced and consumed. The lack of investments in digitization will lead to the difficulty of integrating prosumers and renewable energy in general in the energy system, dispatchable consumption measures are not sufficiently widespread in Romania, and meters and smart networks are quite few. In the context of the transition to a green energy, it is important that Romania gives special importance to digitization.

The digitization of the energy sector will have a major impact on energy consumption and will contribute to the increase of energy production from renewable sources through the development of smart grids and related storage, as well as the use of dispatchable consumption measures and the penetration of digital and decarbonized technologies in the transport and heating-cooling. All these approaches can contribute to a modern, low-carbon energy market. The National Strategy for Hydrogen aims to achieve the targets of the energy transition process and decarbonization of the economic sectors, as well as the realization of the legal framework for facilitating investments in green hydrogen along the entire value chain.

Keywords: Digital economy, renewable energy, investments in green hydrogen

JEL classification: C81, C88, C63, D25

Introduction

The crucial imperative of the modern world is to maintain, as far as possible, the temperature of the Earth's atmosphere at its current level, which implies the drastic reduction, if not the annihilation, of anthropogenic carbon dioxide emissions. They cause, to a decisive extent, an effect of heating the atmosphere, which occurs when the sun's rays are reflected, called the "greenhouse effect".

Hydrogen would be much needed to remove carbon dioxide produced by burning fossil fuels, especially for iron and steel production, in transport and for heating.

The EU's priority for the next 10 years is the production and use of green hydrogen in sectors that are difficult to electrify: the chemical, cement and steel industries, in heavy transport, aviation or maritime transport.

Hydrogen seems to become the new trend in sustainable energy production and there is an effervescence of clean hydrogen production projects across the world. Thus, it is estimated that clean hydrogen could meet 24% of energy world demand by 2050 and there are 750 hydrogen projects in the pipeline of the European Green Hydrogen Alliance.

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With the European Green Deal aim of climate-neutrality by 2050, decarbonizing the energy sector, which accounts for 75% of greenhouse gas (GHG) emissions, is an essential step, hydrogen being regarded as a key component to deliver decarbonized energy.

The European Clean Hydrogen Alliance (ECH2A) Roundtable on Clean Hydrogen Transmission and Distribution brings together public and private companies, research institutes, civil society and policy makers/regional authorities working in the transport and distribution of hydrogen (renewable and/or low-carbon) from renewable and low-carbon hydrogen production sites to consumer/demand centers, especially those sectors with hard-to-abate emissions.

Romania has already included in the PNRR projects for the production of green and gray hydrogen and it's mixing with fossil gases in pipelines that will reach the home consumer directly.

Theoretical and Literature Review:

However, green hydrogen is rare and expensive, currently less than 4% of hydrogen produced in Europe is green, and the cost is double that of fossil gas. Specialists argue that it should contribute to the greening of sectors that are otherwise very difficult to decarbonise, such as industry, heavy transport (trucks/navigation/aviation) and the construction sector.

A series of authors including Vatuiu, Iana and Iana (2020), Pirlogea and Ciucea (2012) demonstrated the fact that in Romania, renewable energy sources have a strong influence on the sustainable development and economic performance of Romania.

The specialized literature highlighted the fact that for hydrogen to be green, the electricity we use to produce it must, in turn, be produced from renewable sources: solar, wind, hydropower (Ciupăgeanu et al., 2020, 170).



Fig. 1 Producing green electricity and green hydrogen

The electrolyzers that are used to split water into hydrogen and oxygen, can, if powered by renewable energy, produce hydrogen without any greenhouse gas emissions. Hydrogen generated in this way is often referred to as green hydrogen.

With green hydrogen as the bridge, green electricity can be transformed into a transportation fuel, or as feedstock in industrial processes, where currently no climate-neutral alternatives exist. Green hydrogen and derived fuels, such as green ammonia, will allow us to put wind power into the fuel tank of a container ship. In this way, hydrogen can significantly extend the decarbonization potential of renewable energy sources.

It is estimated that, by 2030, in Romania we could see over 20 GW installed in wind and photovoltaic, wind being both on-shore and off-shore. Thus, in addition to investments in production capacities, investments must also be made in the transport and distribution network and in the interconnection with neighboring countries.

But for environments with a low degree of predictability, such as the case of the energy system, which integrates natural resources such as wind that depend on natural factors, it is particularly important to find solutions to be able to provide the best possible prediction so that the information provided to the decision-makers should be as close as possible to reality (Vatuiu *et al*, 2020).

Secondly, a particularly important component is given by the analysis of the specifics of the risk factors and the appropriate dimensioning of some reserves or some measures to remove them. Also, when the dimension of the decision-making process concerns decisions at

the national level, an appropriate integration, monitoring and analysis of the resources involved in the system must be carried out.

To ensure these objectives, it is necessary to carry out a rigorous analysis of the specifics of the system, to design its architecture so that various technologies can be used, such as: technologies for integrating data from heterogeneous sources, technologies for optimized data extraction, technologies for forecasting and data analysis and technologies for processing analytical requests and for presenting information.

The methodology used

The methodology used, aimed at both quantitative and qualitative research in the national and European context regarding the management of renewable resources in the current context of digitalization and the implementation of the national hydrogen strategy.

The main objective of the study is to identify the opportunities and challenges generated by

The European ecological pact for the sustainable development of Romania, with an emphasis on the framework European Union for achieving climate neutrality, more precisely the European Climate Law and its implications at the national level.

The specific objectives of the study aimed at the following:

1. Analysis of The digitization of the energy sector will have a major impact on energy consumption and will contribute to the increase of energy production from renewable sources through the development of smart grids and related storage, as well as the use of dispatchable consumption measures and the penetration of digital and decarbonized technologies in the transport and heating-cooling.

2. Identification of opportunities and challenges in the context of the European Ecological Pact

for the sustainable development of Romania and the National Hydrogen Strategy and the Action Plan for its implementation in 2023-2030.

The situation of renewable resources

At the national level, at the present time, the management of renewable resources is not supported by an IT decision support system that allows the effective monitoring and analysis of the energy resources produced by these sources. Within the installed wind power plants, there are various monitoring systems that use a multitude of algorithms for the allocation and management of the equipment and for ensuring the security of the power plants.

From these centers come information and various data sources, forecasts and predictions with various errors from types of applications and local methods (Landberg et al, 2003).

The requirements regarding the information necessary for the decision-making process at the national level are high, requiring the organization of this data in data warehouses and knowledge bases, as well as specific tools for extraction, processing and analysis in a format as accessible as possible to the decision-makers. But the most important problem, on which the dimensioning of energy reserves depends, but also the profitability of investments in wind power plants, is the component on which these power plants are based, namely the wind.

The production of wind energy is also conditioned by other factors, some of which are characterized by low unpredictability, such as: the shading effect, the topography of the soil, power characteristics, losses up to the connection point, etc.

Unfortunately, on a national and international level, there are no methods or systems that provide a prediction with errors smaller than 10%. From the studies carried out internally (studies carried out by the research institutes SC ISPE SA, SC TRACTEBEL ENGINEERING SA, ICEMENERG) and at the European level (the EWIS study carried out at the level of the EU countries), DENNA (carried out in Germany) found that these errors propagated in the energy system at the national level can lead in periods of maximum consumption to a drop in the power produced in certain regions.

On the European level, there are several countries in which decision support systems have been developed at the level of the energy system for the efficient management of wind resources (for example: Germany, Spain), but the costs of building these systems are particularly high and the specificity of the national energy potential makes it difficult application of these methods in Romania.

These problems concerning the impossibility of prediction with the greatest possible accuracy, integration of data from various equipment and local systems, efficient analysis of energy and economic resources lead to the need to develop solutions for a better prediction of the energy produced but also for an integrated GRID type system with a decision-making support component in this field.

Considering the complexity of the use and integration of wind resources within the National Energy System (ENS), it was found that a series of software components are needed to assist the operational and decision-making process of monitoring, modeling and analyzing the energy produced, the recorded consumption, the energy reserves necessary power as well as tracking the economic balance regarding the revenues and expenses recorded with the production of energy from wind sources(VătuIU & Lăzăroiu, 2018, pp. 79-85).

The decision-making process at the level of an organization in general is particularly complex, being the set of phases, processes through which their objectives and incorporated subsystems are determined, the resources and work processes necessary to achieve them and their executors, through which the work of the staff is integrated and controlled using a complex of methods and techniques in order to fulfill as efficiently as possible the reasons that determined the establishment of the respective organization (Vatuiu *et al*, 2020).

The architecture of an SSD can also be viewed from the point of view of the levels of achievement, from bottom to top, pyramidally, on three levels: bottom-tier (data management), middle-tier (model management or analysis level) and top-tier (interface or presentation level), their interconnection being carried out by the telecommunications level (Lungu, Velicanu, Bâra, Diaconița & Botha, 2008).

Based on the architecture of the support systems for decisions as well as on the basis of the informational requirements identified at the CEE level of the SEN, the conceptual model of the IT system was conceived. Thus, the conceptual model contains the four levels previously presented with the following elements:

1) The data level will be made up of operational and spatial data sources as well as the data warehouse to be built to facilitate multidimensional analyses.

Data sources have multiple ways of provenance, depending on the type of activity pursued. These can be the sources within the TSO (data related to the current operational, commercial and financial activity) or sources within the CEE units (data from public or private operators connected in the system related to the production of wind energy or from measurements of meteorological parameters).

Part of the collected data related to operational activity will be stored as spatial data in a DBMS (Database Management System) in order to represent them on interactive maps for monitoring energy production and available resources.

The data warehouse will be a centralized, organizational warehouse, consisting of data marts for each type of activity analyzed: operational (energy production) and financial. In order to load data from sources into the data warehouse, it is also necessary to carry out an Extract, Transform and Load (ETI or ETL – Extract, Transform, Load) process. This process will be executed automatically at regular time intervals depending on the technical requirements of the realization.

2) The level of models will contain models for current financial analysis and forecasting of these activities, models for representing spatial data, but also models for simulation, extrapolation, prediction and analysis of energy production from wind sources. New business intelligence technologies such as OLAP, data mining, analytical functions and prediction algorithms will be used to create the models. For the spatial data, the models used allow the geographical analysis of the energy production and the resources involved in the system.

3) The interface level will contain data presentation elements, applications and analysis reports specific to decision support systems. The system will be accessible through a Web interface, so that users can access the reports without the need to install any client applications. It will be opted for the integration of all interface elements in a portal that allows a unique and unitary authentication method of the Single Sign-On type. The portal will integrate elements of previous subsystems and levels: OLAP analysis, prediction and real-time monitoring modules, exception reporting. The OLAP system will offer reports with drill-down/roll-up navigation facilities, data perspective changes and interactive graphics. The GIS (Geographic Information System) will result in a series of maps that allow users to interact with information related to wind power generating units, the energy transmission network, the current situation of production and consumption, as well as existing resources in the system.

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4) The telecommunications level will provide support for access to the decision assistance system both within the SEN and outside it with the help of mobile devices. For this level, the network components existing within the SEN will be used, where access is carried out in an authorized manner depending on the role and access rights of each user.

In order to be able to develop the conceptual model, it is necessary to identify and find on each level of the architecture appropriate technological solutions for the successful realization of the IT prototype.

IT solutions for assisting the decision-making process within the National Energy System

For the development and realization of the previously proposed conceptual model, specific technologies were analyzed, mainly from the sphere of Business Intelligence technologies (Vătuțiu, Udrică & Tarcă, 2013). Thus, for the data level we will use data organization and integration solutions, for the model level we will use multidimensional analysis solutions, forecasting, simulation and extrapolation models, and for the interface level we will use dynamic data presentation solutions.

Data integration is all about combining data from different sources so that a unified view of that data can be provided to the user. In this sense, the exchange of information must occur between the databases, which is why they must be seen as the main points of integration (Diaconița & Botha, 2007, pp. 169-174).

Following the analysis of the data sources within the CEE units, a heterogeneity of the data to be provided to the TSO was found, mainly caused by the diversity of wind turbines and measuring devices, but also of the IT applications that process the data. For this reason, it is necessary to use data migration and integration techniques in order to be loaded in a coherent way into a centralized operational database where they can later be used for predictions, simulations and analyses. Also at this level it is necessary to create a data warehouse in order to be able to analyze in a multidimensional form two main types of information: production, consumption and energy reserves in the system on the one hand and economic and financial indicators related to this production on the other other side.

The real relationship between the power generated by a wind farm and the wind speed can be of a complex form, the analysis of which cannot be carried out in a standard way by a certain prediction method.

For this purpose, taking into account the trends derived from the research carried out in the current period, advanced methods of predicting a time series can be considered, such as:

- *extrapolation of trends based on the past evolution of phenomena;*
- *econometric models ARMA / ARIMA;*
- *neural networks.*

Research on wind energy forecasting using the technique of data extrapolation based on past trends has been undertaken in studies such as *A Review of Wind Power and Wind Speed Forecasting Methods With Different Time Horizons* (Saurabh; Hamidreza ; Om & Paras, 2010), or *Wind speed prediction by different computing techniques* (Ahmad Nayak & Deo M.C., 2010)

ARMA econometric models, widely used in hydrology, but also in many other fields, are mathematical models of autocorrelation in a time series. Neural network models have been developed relatively recently, gaining increased popularity in a short period of time. They are used in numerous applications. Engineering applications include approximation, optimization, system modeling and pattern recognition functions.

Artificial neural networks are also widely used for hydrological modeling. Preliminary research in the field of wind energy production prediction (Vătuțiu & Lăzăroiu, 2019, pp. 593-603) using artificial intelligence components has proven that this type of methods can be successfully applied to achieve the best possible accuracy (about 93%).

Romania's green hydrogen projects: development of a strategy for hydrogen in the context of the implementation of the Strategy for the Integration of Energy Systems

According to the latest version of the PNRR, approved by the European Commission on September 27, 2021, in the two published annexes, it is proposed:

- Construction of 1,870 km of renewable gas distribution network (green hydrogen) to be built in the Oltenia region, being produced and distributed in pipelines (either from wind, solar or both). The first phase of implementation will be a 20% mix of fossil gas and renewable hydrogen when the network is commissioned on June 30, 2026, and by 2030 100% green hydrogen and/or other renewable gases. It is planned to install a 100 MW capacity of electrolysis for the production of green hydrogen from renewable sources until December 31, 2025. It is mentioned that starting from 2026 all appliances and boilers will have to be "hydrogen ready" and will be mandatory for new installations.
- The PNRR envisages the installation of a capacity of 300 MW for gas-based combined heat and power (CHP) production. The PNRR also mentioned the need to develop and elaborate a National Strategy dedicated to hydrogen, as well as to create a legislative framework that would allow the mobilization of investments in the production, storage, transport and consumption of this fuel. The national hydrogen strategy under development is also correlated with the European strategies for the development of hydrogen and with REPowerEU, which envisages a consumption of 20 MT of green hydrogen in Europe in 2030.

The strategy recommends the use of green hydrogen in chemical industries and steel production and in transport for heavy road vehicles, shipping, aviation, and in some places trains and public transport where electrification is difficult to achieve.

The core idea of the Energy Systems Integration Strategy is that by directly electrifying final energy consumption in sectors such as transport and heating, as well as certain industrial processes, renewable energy offers a proven and scalable solution to decarbonise more than 60% from the final energy consumption at European level.

But to achieve an even higher level of decarbonisation, other solutions are also needed for sectors where decarbonisation is more difficult, and renewable hydrogen, produced by electrolysis powered by renewable energy, thus becomes essential, according to the Hydrogen Strategy.

The Commission's Economic Recovery Plan identifies hydrogen as an investment priority to encourage economic growth and resilience, create new jobs and strengthen the EU's global leadership. The strategy identifies and prioritizes renewable hydrogen, produced by electrolysis, using electricity from wind and photovoltaic sources, as the most compatible option with the EU's climate neutrality objectives.

In order to become one of the beneficiary states, Romania will have to start as soon as possible the development of a strategy for hydrogen at the national level for 2050, which will pay particular attention to the fact that renewable hydrogen, produced by electrolysis of water, using electricity from wind and photovoltaic sources, is the method of obtaining hydrogen consistent with the EU climate neutrality objectives, for which:

a. The share of hydrogen in the European energy mix will increase from less than 2% currently to approximately 13-14% in 2050, generating investments between 180 and 470 billion Euros, according to the Strategy document citing data from IRENA, FCH-JU and BNEF.

b. Between 2020 and 2024, more than 6 GW of electrolytic renewable hydrogen production capacity will be installed, with an output of up to 1 million tons, a significant opportunity for the development of such an industry at the national level.

c. Between 2025 and 2030, installed electrolysis capacities will be at least 40 GW, corresponding to a production of up to 10 million tons of renewable hydrogen, gradually becoming cost-competitive. Also, the electrolyzers will be used to balance energy systems and increase their degree of flexibility. After 2030, renewable hydrogen technologies will reach maturity and be developed on a large scale to help hard-to-decarbonize sectors.

d. Renewable energy production capacity must increase significantly to support this development, with more than a quarter of renewable energy expected to be used for renewable hydrogen production by 2050.

CONCLUSIONS

In conclusion, with the publication of the "Hydrogen Strategy" on 07/08/2020, the European Commission established a series of objectives regarding the production of clean hydrogen for the member states to achieve by 2050, noting at the same time that in this currently in the European Union the 300 operational electrolyzers (used for the production of clean hydrogen) produce less than 4% of the total hydrogen production.

Promoting clean hydrogen production is of particular interest due to its potential to:

- Decarbonization of industrial sectors dependent on hydrogen (oil refining, ammonia, methanol and steel production);

- The replacement of fossil fuels, even in sectors that proved difficult to electrify (transportation, district heating);

- The possibility of energy storage. The hydrogen produced can be stored in liquid or gaseous form and reused to produce electricity.

For hydrogen produced by electrolysis to be truly carbon-free, the electricity used must come from renewable sources.

Only in this case the hydrogen produced can be qualified as "green", a fact that requires the implementation of IT solutions to assist decisions for the management of renewable resources in the context of the national strategy dedicated to hydrogen. The development of an investment agenda for renewable hydrogen is carried out in the context in which:

a. Romania can attract a considerable part of the necessary investments until 2030 at the EU level (between 24 and 42 billion Euros for electrolyzers and between 220 and 340 billion Euros for energy production capacities to ensure their supply with renewable energy). Investments in hydrogen transport, distribution and storage are estimated at 65 billion Euros.

b. There is a need to identify a stream of viable investment projects, Romania being able to benefit from funding from multiple sources to support hydrogen: InvestEU, the Modernization Fund, the Innovation Fund and the Just Transition Fund.

At the same time, it is necessary to stimulate the demand and production of renewable hydrogen because:

a. One of the immediate applications of hydrogen is industry, where renewable hydrogen can replace the use of fossil hydrogen in refineries, ammonia production, new forms of methanol production, or to replace fossil fuels in the steel production process.

b. It is beneficial to encourage the use of hydrogen in the field of transport to achieve the ambitious decarbonisation targets assumed by the PNIESC, possibly by establishing a minimum share of renewable hydrogen: to begin with at the level of captive fleets (buses, commercial fleets), long-distance road freight transport, the next steps being to encourage the use of hydrogen in rail, naval and maritime transport. In the long term, hydrogen is also a solution for the decarbonisation of air transport.

c. Increasing the production of renewable hydrogen through a framework that establishes market-based support schemes, transparent and with competitive procedures or the use of CCfD (carbon contracts for difference). Also, Romania must use the financing instruments available at the EU level to stimulate the production of renewable hydrogen, such as: InvestEU, the Modernization Fund, the Innovation Fund and the Just Transition Fund, Next Generation EU.

d. The existing natural gas infrastructure can be used to inject a substantial hydrogen component, thus contributing to the decarbonisation of industrial processes and the heating sector.

e. Development of a legislative and regulatory framework, as well as market rules, for the infrastructure dedicated to hydrogen.

f. Capitalizing on opportunities for regional cooperation, with neighboring countries, for the production of hydrogen.

g. Promoting research and innovation activities of hydrogen-based technologies, with the involvement of the private sector.

Green hydrogen, produced by electrolysis, based on current, in wind and photovoltaic power plants in Romania, not being continuously generated, must be used at a maximum yield from the perspective of the energy produced compared to the one used, but also of the price.

ACKNOWLEDGMENT

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HOUSEHOLDER INSURANCE IN CASE OF NATURAL DISASTERS

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JEL: G22 - Insurance

Key words: *Hoseholder insurance, Natural disater, Earthquake, Reinsurance*

I. Householder insurance market in Romania

Romania is ranked 87 out of a total of 171 countries with the highest risk of natural disasters, according to the World risk Report. This ranking, drawn up for 171 countries worldwide, states the fact that citizens of a particular country risk to become victims of a disaster, as a result of natural disasters such as earthquakes, storms, floods, droughts or rising sea levels.

The most important risks that can occur on Romanian territory are: earthquakes, surface water floods and landslides. In order to protect their assets, natural and legal persons can turn to an insurer, which in exchange for an insurance premium accepts the risk transfer to it. Unfortunately, due to the low level of insurance penetration in Romania, it was decided to make it mandatory to take out an insurance policy against disasters. PAD represents the insurance policy against natural disasters, and, by law no. 260/2008, every householder is obliged to own one.

The Natural Disaster Insurance Pool (PAID) is an insurance-reinsurance company, with private capital, formed by the association of insurance companies for the conclusion of compulsory householder insurance (PAD), in accordance with the provisions of Law no. 260/2008. PAID was established as an insurance company in November 2009, through the association of 12 insurance companies (ABC Insurance, Astra Insurance, Carpatica Insurance, Certasig, City Insurance, Credit Europe Insurance, Euroins Romania, Generali, Grawe Romania, Groupama Romania, Platinum Insurance and Uniqa Insurance), PAID shareholders.

The characteristics of a PAD policy are the following:

- it is a mandatory policy;
- it is concluded exclusively for residential buildings, in the urban or rural environment, located on the territory of Romania and which are tax registered, with the exception of buildings classified in seismic risk class 1;
- it is concluded for each home separately if at the address of the insured location there are several buildings with the destination of the home or for each home located in a condominium (block);

- it covers three risks: earthquakes, floods, landslides as natural phenomena, and the mandatory insured amount is determined according to the type of housing: EUR 20,000 for type A housing or EUR 10,000 for type B housing.²³⁷

In addition to these limits, natural and legal persons may conclude optional insurance policies that cover the difference between the limit offered by the PAD policy and up to the value of the property.

The total householder insurance market (mandatory and optional) has grown steadily in the last five years, reaching in the first half of 2022 a value of subscribed gross premiums of around 305 million lei. From the data presented for the first half of 2013 – first half of 2022, we observe a lack of interest in house protection, this being observed both in the value of the subscribed gross premiums, and in the number of contracts in force at the end of the reporting period.

From the data analysis, it can be observed that the value of mandatory householder insurance subscriptions and optional insurance shows a decrease of 9.8% in the first half of 2022 compared to the first half of 2013, and the number of contracts in force decreased to 3.4 million, from 4.16 million in the first half of 2013. A positive aspect is the fact that in the last **2 years the market is starting to position itself on an upward trend and registers significant increases.**

Unfortunately, out of the 9.6 million homes in our country, only 20% have a mandatory insurance and only 17% are also protected by an optional insurance, according to UNSAR data. It is worth noting throughout this period that, despite the slight decrease in the PBS value, the companies paid more and more claims for the risks covered by the policies. Thus, in the first half of 2022, the damages paid amounted to approximately 46.32 million lei, an increase of almost 48% compared to the first half of 2013, when they were worth 31.38 million lei.²³⁸ – Table no. 1.

Evoluția asigurărilor de locuințe (obligatorii și facultative)

Perioada	Număr de contracte în vigoare la sfârșitul perioadei de raportare (buc)	Număr de contracte noi, încheiate în perioada de raportare (buc)	Prime brute subscrise (lei)	Evoluție PBS față de anul anterior*	Indemnizații brute plătite (lei)
S1 2013	4,166,443	2,220,566	338,011,423	21.98%	31,378,453
S1 2014	3,490,931	1,633,397	222,053,113	-34.31%	27,131,644
S1 2015	3,299,440	1,680,865	225,990,243	1.77%	33,884,842
S1 2016	3,296,396	1,524,034	249,409,712	10.36%	22,820,161
S1 2017	3,175,038	1,419,279	224,707,094	-9.90%	30,123,396
S1 2018	3,165,178	1,420,185	232,487,208	3.46%	30,143,074
S1 2019	3,226,790	1,446,889	246,919,791	6.21%	47,074,776
S1 2020	3,264,085	1,468,730	249,495,927	1.04%	41,763,738
S1 2021	3,392,070	1,572,491	275,851,409	10.56%	43,795,042
S1 2022	3,410,916	1,607,275	304,947,942	10.55%	46,317,907

Sursa: Rapoarte ASF

*Calcul XPRIMM Publications

Table no. 1 - The evolution of householder insurance during the period 2013-2022

²³⁷ Type A housing - the construction with reinforced concrete, metal or wood resistance structure or with external walls made of stone, burned brick, wood or any other materials resulting from a thermal and/or chemical treatment; Type B housing - construction with exterior walls made of unburned brick or any other materials not subjected to heat and/or chemical treatment.

²³⁸ <https://www.1asig.ro/Evolutia-asigurarilor-de-locuinte-in-ultimii-10-ani-articol-13,90-69842.htm>

II. The catastrophic risks to which Romania is exposed

The most destructive natural catastrophes recorded in Romania are earthquakes, floods and landslides.

2.1 Floods

In recent years, in Romania, floods have caused great material losses. Galati and Tulcea counties may be among the areas most affected by floods, but also Bacau, Vrancea, Vaslui, Teleorman, Olt and Dolj may be in a similar situation, according to IGSU. The rivers Siret, Mures, Crisurile, Olt, Prut and the Danube can cause extremely large damages. In the counties where there are areas (hydrographic basins) with a high degree of flood risk, we unfortunately observe a low level of insurance coverage (mandatory PAD policies), such as the counties of Galati, with 18.1% degree of inclusion, Braila, with 15.9%, Tulcea with 15.2%, Alba, with 14.6%, Arad, with 18.6%. A slightly better situation is in Timis with 28.6% insurance coverage through a PAD policy.

In 2001, during the first strong floods of this century, the damages reached one billion euros. The figures have grown progressively, from year to year, so that in 2005 and 2006, the material damage amounted to two billion euros, 600 affected localities from 31 counties, the worst situations being registered in Arges, Bacau, Braila, Vrancea, Galati, Alba and Valcea. 15,000 houses were affected, of which 857 were destroyed and over 10,500 people were evacuated. In 2007, because of the waters, 1,000 houses were destroyed in almost 60 areas in Galati, Vrancea, Bacau and Vaslui, and 1,400 people were left without homes, while in 2010 the waters caused damages of 700 million euro, 426 localities were affected in the counties of Suceava, Botosani, Neamt, Galati, Braila, Tulcea, 4,472 homes were flooded, of which 246 were completely destroyed. In 2014, more than 3,000 homes were affected by floods, in 22 counties including Olt, Mehedinti, Gorj, Dolj, Valcea, Olt, Constanta, Timis. Also, several areas in Dambovita, Buzau, Vrancea and Prahova counties were affected by landslides caused by heavy rainfall.

It is very important to note that, besides this material destruction, the floods caused, unfortunately, also human lives loss. During the floods of 2005 and 2006 alone, there were more than 90 deaths, and in total, since 2001, floods have led to more than 180 human lives lost, a phenomenon that is all the more worrying.

2.2. Landslides

Landslide means the movement of a portion of rocks on an inclined surface. In most cases, slips are caused by the existence of masses of clay or clay rocks, which act as sliding surfaces either for themselves or for other rocks on their surface. The factors that cause these landslides are: water, deforestation, earthquakes, volcanic eruptions, etc.

In 1971, the disaster at Certej was caused by the breakage of the dam and the slide of the sterile mountain from the tailings dam of the mining from Certej, Hunedoara.

2.3. Earthquakes

Romania is considered one of the countries with the most active seismicity in Europe and among the top 10 countries in the world in terms of earthquake exposure, by built area, according to European and international statistics (Atlas of the Human Planet 2017 - Global Exposure to Natural Hazards). Recent risk assessments indicate that nearly 75% of the population and over 60% of existing infrastructure are exposed to seismic risk, accounting for over 70% of the gross domestic product (GDP). According to the analysis of the World Bank and the European Commission (Economic Analysis of Prevention and Preparedness – Financial Risk and Opportunities to Build Resilience in Europe, 2021), among EU member states, Romania ranks third in terms of average annual losses associated with seismic risk, these being estimated at 512 million Euros, most of them as a result of the damage of residential buildings.²³⁹

The strongest earthquakes in Romania took place in:

Year	1802	1812	1829	1838	1908	1940	1977	1986	1990	2004
Magnitude	7,9	6,5	7,3	7,5	7,1	7,7	7,4	7,1	6,9	6

On February 14, 2023, a new earthquake occurred in Romania with a magnitude of 5.7 on the Richter scale, causing moderate damage especially in the Gorj county area.

III. Natural disasters and the compensation capacity of insurance companies

One of the most interesting aspects to be analyzed is the ability of insurers to face compensation in the event of a major disaster, which would involve the immobilization of considerable financial resources intended to compensate the financial losses incurred by the insured.

Depending on the insurers' financial indicators, each of them can bear a certain degree of load with risks from the insured. Exceeding this level could put any of these insurers at risk in the event of a disaster, possibly leading to the inability to face compensation. Fortunately, starting with 2016, at European level, Solvency II Directive was adopted to protect direct interests of clients.²⁴⁰

²³⁹ <https://sgg.gov.ro/1/wp-content/uploads/2022/11/ANEXA-36.pdf>

²⁴⁰ Solvency II sets out how an insurance company assesses its risk, from primary information to risk assessment models and methodologies to corporate governance and reporting standards.

One of the pillars of Solvency II refers to risk management, and reinsurance is an extremely important aspect for the insurance activity. Insurers use various reinsurance programs for:

Increasing the insurance capacity — is the main reason why reinsurance is called for, generating the increase in the insurance receiving capacity. In the field of Insurance there are risks which, due to their size or nature, cannot be fully covered by a single company. Therefore, if the amount insured for a risk or for a group of risks that characterizes an event exceeds the retention limit that an Insurance company can afford, it is necessary to resort to reinsurance.

Risks homogenization – is another particularly important reason for using reinsurance, with the role of leveling the results obtained by the insurance company over a certain period of time. Large fluctuations in the results of an insurance company can endanger its image to the public and raise concerns among shareholders.

Financial stabilization – another important function of the reinsurance is the financial function. One of the standards used by control bodies of the insurance companies activity is the degree of solvency. Authorities set minimum percentages below which they do not allow insurance companies to operate. This percentage is called the minimum solvency percentage.

The insurance functioning mechanism can be highlighted as follows, where it can be seen how the risks are transferred from the client to the final organization, the specialized risk carriers tacking action in a sequential manner:

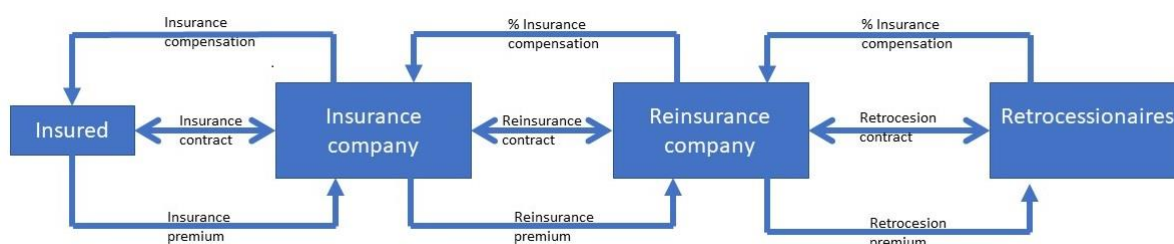


Fig. 1 – The insurance functioning mechanism

It is thus noted that the compensations granted are not only the insurers' responsibility, but according to the reinsurance/retrocession programs, the reinsurers/retrocessionaires' liability is also involved in the cascade.

IV. Conclusions

Starting from the above premises, we can conclude that the insurance policy does nothing but distribute the damages among all policy holders worldwide based on the architecture presented in Fig.1.

Based on the reinsurance programs, each specialized risk carrier retains part of the insurance premium related to a risk, and the rest is passed on through reinsurance contracts, respectively retrocession contracts. Depending on the reinsurance program accessed by the

insurers, they can secure their performance indicators to shelter their insured in the event of a major disaster.

Another immediate effect is the increase in confidence in the insurance field, which will have immediate effect on the Romanian market by increasing the penetration of property insurance among the residents.

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*** - <https://www.1asig.ro>

*** - <https://asfromania.ro>

*** - <https://sgg.gov.ro>

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The economy of the Gorj – yesterday, today and perspectives

Grigore LUPULESCU²⁴¹

Keywords: Gross Domestic Product (GDP); economy; primary, secondary, tertiary sector

Introduction

Located in the south-western part of Romania, Gorj County covers an area of 5,602 km², representing 2.34 percent of the country's territory. Its neighbors are Vâlcea County to the east, Hunedoara County to the north, Caraș County to the northwest -Severin, to the southwest Mehedinți county and to the southeast with Dolj county.

Gorj county has important coal deposits (lignite) in the Motru and Rovinari basins. There is also anthracite at Schela, oil is found at Țicleni, Hurezani, Bâlteni, Albeni, Scoarța, Bustuchin, natural gas at: Țicleni, Hurezani, Logrești, Bustuchin, graphite at Baia de Fier and Polovragi, limestone at Suseni, marl in Bârsești, dolomite in Tismana, refractory clay in Schela and Vierzuroiu. Also, in Gorj county we find mineral water springs with therapeutic properties in: Țicleni, Săcelu, Glogova and Bălănești.

From an administrative point of view, it is composed of 9 cities, of which 2 municipalities, 61 communes and 411 villages. The seat of the county is the municipality of Târgu Jiu. The second municipality in the county is the city of Motru. The other cities are: Bumbești-Jiu, Novaci, Rovinari, Târgu Cărbunești, Tismana, Turceni and Țicleni.

There are also cultural institutions and establishments such as: a theater - the Dramatic Theater "Elvira Godeanu" from Târgu Jiu, the professional artistic ensemble "Doina Gorjului", 203 libraries, of which 62 are public, museums: the Gorj County Museum "Alexandru Ștefulescu", Gorjenesti Folk Architecture Museum from Curtișoara, Lelești Village Museum, Arcani Village Museum, Tudor Vladimirescu Memorial House from Vladimir village, Ecaterina Teodoroiu Memorial House from Târgu Jiu, Proclamation Monument from Padeș.

A very special objective declared a historical monument is the Constantin Brâncusi Memorial House in the village of Hobîța, Peștișani commune.

The data published by the Gorj County Directorate for Culture and National Heritage confirms that there are 511 historical monuments in the county as follows: 46 monuments and archaeological sites, 352 historical monuments, 4 urban complexes, 24 public monuments and 28 memorial monuments. Among them all, the Monumental Ensemble "Calea Eroilor", included in the UNESCO heritage, from the municipality of Târgu Jiu stands out.

Especially touristic objectives, specific to the county, are the culles, such as: Cula de la Curtișoara, Cula Crăsnaru, Cula din Șiacu and Casa-culă din Glogova.

Gorj County is also notable for the existence of places of worship, such as: Tismana Monastery dating from the reign of Vlaicu Vodă (1364-1377); Polovragi Monastery with an age of over 500 years, originally built in 1505; Crasna Monastery was founded in 1636; Lainici Monastery, located in the gorge of Văii Jiului.

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On July 1, 2022, the population of Gorj county by domicile was 345,835 inhabitants, representing 1.57% of the country's population, with an average density of 61.73 inhabitants per km², down by 38,715 people compared to 1992.

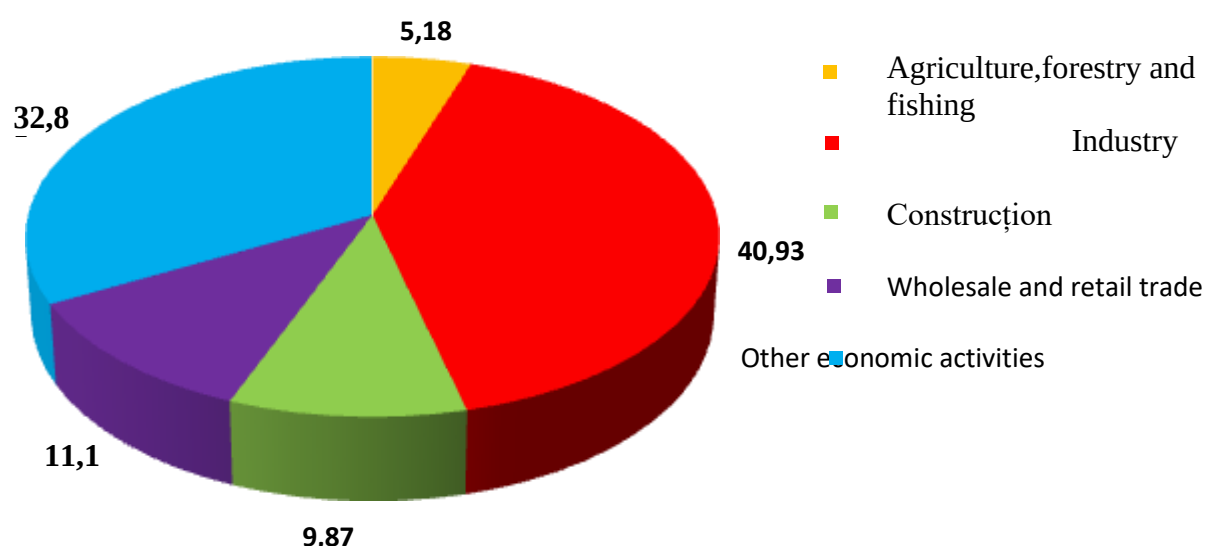
2. Economy of the Gorj: characteristics, evolution

2.1 Gross Domestic Product (GDP) of Gorj County and its share in Romania's GDP

Table no. 1

PIB	U.M.	1995	2000	2010	2020
PIB Romania	Mil lei	7648,9	80984,6	540336,3	1066780,5
PIB Gorj	Mil lei	134,5	1533,2	9285,4	17130,3
PIB Gorj/Romania	procent	1,71	1,84	1,71	1,60

Graph 1.1. The structure of GDP at the county level by resource category in 2020



From the graphic representation of the structure of GDP resources of Gorj County, it appears that industry contributes more than 40%, followed by other economic activities with 32.8%.

The industry of Gorj County belongs mainly to the primary sector of the economy, developed mainly due to the existence of natural resources of coal, gas, oil. All these natural resources led to the emergence of an industry based on their exploitation and processing, processing which gave birth to an industry belonging the secondary sector of the economy.

The industry structure of Gorj County is mainly based on:

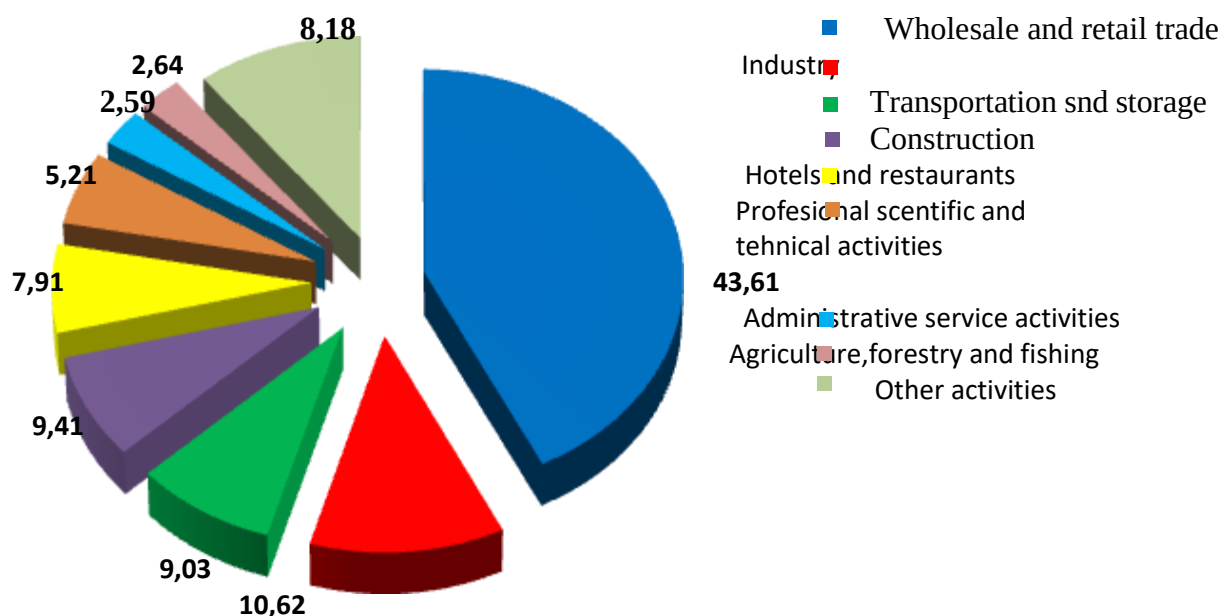
- extractive industry;
- manufacturing industry;
- production and supply of electricity and thermal energy;
- water distribution, sanitation, waste management.

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As for the number of active units per activity field, they are as shown in the graph below.

Graph 1.2 Share of the number of active local units by field of activity in 2020



It can be seen from the graphic presentation above that although the industry of the county has the contribution of higher in GDP, as the number of active units, wholesale and retail trade own the largest share 43.61%.

Regarding the prospects of Gorj county, from the analyzed data, corroborated with national and European policies, we can say that the industry, respectively that based on coal and electricity extraction, will have an increasingly smaller share in Gorj's GDP (environmental problems, the emergence of green energy, etc.).

The prospects of Gorj County are related to the development of the infrastructure, especially the road one, which would lead to the development of tourism and services. The decrease of the primary and secondary sector of Gorj County, through local and national policies, the tertiary sector of the county should be developed with a definite development potential.

Conclusions

Gorj County was and is still dependent on the primary and secondary sectors of the economy.

The decrease of the industry belonging especially to the coal extraction sector and the production of electricity based on coal - decrease due in particular to the European policies for the development of green energy - was not replaced by other industries at the level of the county's potential, a fact that led and will lead to the reduction of the county's contribution to Romania's GDP.

The tertiary sector - that of services - must be developed, at least at the level of the county's rather large potential - especially tourism.

Investments in the road transport network, the construction of an airport - especially for low-traffic aircraft, the restoration of some railway tracks from the past (Tg-Jiu - Tismana), etc. All these investments and others can at least maintain, if not increase, the share of GDP- County in Romania's GDP.

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ESTABLISHING THE TAX RESULT AND RECORDING IN ACCOUNTING

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Abstract: Legal entities that carry out economic activities register monthly the incomes obtained.

The expenses related to the realized incomes are registered monthly, according to the accounting regulations.

Gross profit represents the positive difference between the revenues and expenses recorded from the activity performed.

The fiscal result is determined quarterly, respectively annually as the difference between total income and total expenses, from which non-taxable income is subtracted and non-deductible expenses are added from a tax point of view. Fiscal losses recorded in the next 7 consecutive years are also recovered.

The positive difference represents the taxable profit and the profit tax is determined by applying the 16% rate on this difference.

If a negative difference results, this represents a fiscal loss.

The accounting registration of the profit tax due is carried out with the help of account 4411 "Profit tax" quarterly, accumulated since the beginning of the year as the difference between the profit tax due for the previous period and the accumulated profit tax, on the reporting date.

For the micro-enterprise that registers revenues greater than 500,000 Euros, this owes profit tax starting with the quarter in which it exceeded this limit. The calculation and payment of the profit tax for this situation is carried out taking into account the incomes and expenses realized starting from the respective quarter.

Keywords: corporate tax, income, expenses, share, tax loss.

Introduction

The fiscal result is determined [5] as the difference between revenues and expenses recorded according to the applicable accounting regulations, from which non-taxable revenues and tax deductions are subtracted and to which non-deductible expenses are added from a fiscal point of view. When determining the fiscal result, elements similar to income and expenses are taken into account according to methodological rules, as well as fiscal losses that are recovered in accordance with legal provisions.

Accounting profit and taxable profit

Since the financial accounting is connected to taxation, it is necessary to determine and reflect separately the accounting result and the tax result, the accounting result being calculated before and after tax.

The accounting result is obtained using the data from the accounting. If the total revenues are greater than the total expenses, the entity records gross accounting profit. In the opposite situation, when expenses are greater than income, an accounting loss is recorded.

The accounting loss is that which results from the accounting records as the difference between revenues and expenses and it is reflected in the trial balance. The current loss is reflected in the debit balance of the account 121 "Profit or loss", and the loss from previous financial years is reflected in the debit balance of the account 1171 "The carried forward result representing undistributed profit".

The tax loss is reflected in the income tax return (form 101) and, as a rule, differs from the accounting loss, being influenced by non-deductible expenses and non-taxable income. The annual loss established by the income tax return is recovered from the taxable profits obtained in the following 7 consecutive years. The recovery of losses will be carried out in the order of their registration, at each profit tax payment term.

The profit tax is determined by applying the rate of 16% on the taxable profit. The taxable profit is the positive tax result and the negative tax result is the tax loss.

For taxpayers who earn income from activities of the nature of night bars, night clubs, discotheques, casinos, even if they come from associations and owe a profit tax of less than 5% of the respective income, they must pay profit tax in the proportion of 5% calculated on these revenues.

The fiscal result is calculated quarterly and annually, accumulated from the beginning of the fiscal year.

The profit tax is applied to the taxable profit obtained from any source, both in Romania and abroad.

Determination of the profit tax

The following Romanian legal entities do not owe profit tax [5]:

- State Treasury;
- the public institution established according to the law, with the exception of the economic activities carried out by it;
- The Romanian Academy as well as the foundations established by the Romanian Academy as the sole founder, with the exception of the economic activities carried out by them;
- The National Bank of Romania;
- The deposit guarantee fund in the banking system, constituted according to the law;
- The investment compensation fund, established according to the law;
- The insured's guarantee fund, established according to the law;
- The Romanian legal entity that pays tax on the income of micro-enterprises in accordance with the provisions of Title III;
 - the foundation established as a result of a bequest;
 - the fiscally transparent entity with legal personality regarding situations that do not involve the existence of non-uniform treatments of inverted hybrid elements;
 - owners' associations established as legal entities and tenants' associations recognized as associations of owners, except for those who obtain income from the exploitation of common property according to the law;
 - the local unit of worship to the extent that the revenues obtained are used in the current year and/or in the future years for the maintenance and operation of the worship unit, for construction, repair and consolidation of places of worship and ecclesiastical buildings, for education, for provision, in its own name and/or in partnership, of social services, accredited under the law, for specific actions and other non-profit activities of religious cults.

The corporate tax rate that applies to the taxable profit is 16%.

The fiscal year is the calendar year. When a taxpayer is established or ceases to exist during a tax year, the taxable period is the period of the calendar year for which the taxpayer existed.

Declarations to be submitted for profit tax:

- Declaration 100 (Form 100) – "Declaration regarding payment obligations to the state budget". The submission deadline is the 25th inclusive of the first month after the quarter for which the profit tax is calculated. Exception, between January the 1st, 2021 and 2025, the submission deadline is extended until June 25th, inclusively in the following year;
- Declaration 101 (Form 101) - "Declaration regarding the tax on advantage". The submission deadline is March 25th of the following year. Exception, between January 1st, 2021 and 2025, the submission deadline is extended until June 25th, inclusively in the following year.

Tax facilities granted to corporate tax payers

According to the legal provisions [5] the profit invested in equipment, the technological assets, the assets used in production and processing activity, the assets representing refurbishment, electronic computers and peripheral equipment, machines and household, control and invoicing devices in computer programmes, as well as for the right to use computer programmes, produced and/ or purchased inclusivevely on the basis of financial leasing contracts and put into operation, used for the purpose of conducting economic activity, as well as the profit invested in supporting professional dual education by ensuring the practical training and quality training of students are exempt from tax.

The invested profit represents the balance of the profit and the loss account, respectively the accumulated gross accounting profit from the beginning of the year, obtained up to the quarter or year of putting the assets into operation. The profit tax exemption related to the investments made is granted within the limit of the profit tax calculated cumulatively from the beginning of the year until the quarter of putting the assets into operation for taxpayers who apply the quarterly system of declaring and paying the profit tax, respectively within the limit of the tax on cumulative calculated profit from the beginning of the year of putting the assets into service until the end of that year for taxpayers who apply the annual system of declaration and payment of profit tax.

The exemption is calculated quarterly or annually, as the case may be. The amount of the profit for which the profit tax exemption, less the part related to the legal reserve, is distributed at the end of the financial year or during the following year, with priority for the creation of reserves, until the concurrence of the accounting profit recorded at the end of the financial year. If an accounting loss is made at the end of the financial year, the profit tax related to the invested profit is not recalculated, and the taxpayer does not allocate the amount of the invested profit to reserves.

For the assets that are the subject of the exemption, which are carried out over several consecutive years, the facility is granted for investments put into operation partially in the respective year, based on partial work situations.

The exemption provisions apply to deemed new assets.

Taxpayers who benefit from the exemption have the obligation to keep the respective assets in their patrimony for at least a period equal to half of the duration of economic use, established according to the applicable accounting regulations, but not more than 5 years. In case of noncompliance with this condition, the profit tax is recalculated for the respective amounts and accessories are charged according to the Fiscal Procedure Code from the date of application of the facility according to the law. In this case, the taxpayer has the obligation to submit the rectification tax return.

Non-taxable income, non-deductible expenses from a tax point of view

The main non-taxable incomes when calculating the profit tax are [5]:

- dividends received from a Romanian legal entity;
- dividends received from a foreign legal entity if the participation is at least 10% of the share capital for an uninterrupted one-year period, on the date when the Romanian legal entity receives the dividends;
- revenues from the cancellation of expenses for which no deduction was granted;
- revenues representing increases in value resulting from the revaluation of fixed assets, land or intangible assets;
- non-taxable incomes, expressly provided in agreements and memoranda approved by the normative acts.

The expenses incurred for the purpose of carrying out the economic activity are deductible expenses when determining the taxable profit.

The following expenses are tax deductible, limited [5]:

- protocol expenses within the limit of a 2% quota applied to the accounting profit to which are added the expenses with the profit tax and the protocol expenses;
- social expenses, within the limit of a quota of up to 5% applied to the value of staff salary expenses;
- expenses representing meal vouchers and vacation vouchers;
- losses, perishables, losses resulting from handling/storage;
- depreciation;
- interest expenses and other costs equivalent to interest from an economic point of view;
- 50% of the expenses related to motorized road vehicles that are not used exclusively for the purpose of economic activity, according to legal provisions [5].

The non-deductible expenses when calculating the taxable profit are:

- the taxpayer's own expenses with the profit tax due;
 - interest/late increase, fines, confiscations and late penalties owed to Romanian or foreign authorities;
 - expenses related to goods in the nature of stocks or depreciable fixed assets found to be missing from management or degraded and not chargeable, including the related value added tax;
 - expenses related to non-taxable income;
 - expenses recorded in the accounting records, which are based on a document issued by a taxpayer declared inactive;
 - sponsorship or patronage expenses, expenses related to private scholarships.
- These amounts are deducted from the profit tax due according to the law [5].

For a commercial company, **the legal reserve** is deductible within the limit of a 5% rate applied to the accounting profit before the determination of the profit tax to which the

expenses with the profit tax are added, until they reach one fifth of the subscribed and paid-up capital or from the heritage, as the case may be.

Profit tax accounting

The accounting of debts and receivables regarding the profit tax is organized with the help of the account 441 "Profit tax and other taxes", respectively the second grade synthetic account 4411 "Profit tax".

The credit of these accounts [8] provides information on the tax owed by the taxpayer, by correspondence with the debit of account 691 "Expenses with profit tax" and information that refers to the profit tax related to previous years, in case of correction of accounting errors through the debit account 117 "The carried forward result".

The debit reflects information regarding the amounts settled to the state budget on account of this fiscal obligation, by correspondence with the credit of account 5121 "Bank accounts in lei", as well as the amounts prescribed, exempted or canceled from the profit tax, through the corresponding creditor account 758 "Other operating income".

The accounting registration of the profit tax due and paid at a commercial company for the period 01.01.2022 – 09.30.2022 is presented as follows:

For the period 01.01. – 30.06.2022 (quarter I and quarter II) the tax due of 8,000 lei is reflected (taxable income 240,000 lei and expenses related to this income 190,000 lei):

$240,000 - 190,000 = 50,000$			
Profit tax = $50,000 \times 16 / 100 = 8,000$ lei			
8,000 lei tax due is paid:	691	=	4411
	"Profit tax expenses" "Profit tax" The profit		
	4411	=	5121 8,000 lei
	"Profit tax" "Bank accounts in lei"		

On 30.09.2022 (quarter I, quarter II and quarter III) the profit tax is 6,400 lei.

Since the entity paid the amount of 8,000 lei in the first semester, it follows that on 25.10.2022 the profit tax in the amount of 1,600 lei is additionally paid:

691	=	4411	1.600 lei
"Profit tax expenses"		"Profit tax"	

Tax on the income of micro-enterprises

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Starting with the year 2023, a micro-enterprise is a Romanian legal entity that cumulatively fulfills several conditions on December 31st of the previous fiscal year [5]:

- earned income that does not exceed the equivalent in lei of 500,000 euros, determined at the exchange rate (lei/euro) valid at the end of the financial year in which the revenues were recorded;
- its social capital is owned by other persons than the state and administrative-territorial units; • is not in division, followed by liquidation;
- achieved revenues, other than those from consulting and management in a proportion of more than 80% of total revenues;
- has at least one employee, except for the first 30 days after establishment for Romanian legal entities;
- has associates/shareholders who hold more than 25% of the value or number of participation titles or voting rights in no more than three Romanian legal entities.

The micro-enterprise income tax is optional starting with the following fiscal year, if they meet the micro-enterprise conditions on December 31st of the previous year and if, after January 1st, 2023, they no longer paid micro-enterprise income tax.

Micro-enterprises can opt for the payment of profit tax starting with the following fiscal year, until January 15th of the year for which they opt. Likewise, the share of revenues from consulting and management for micro-enterprises which during a fiscal year achieve revenues greater than 500,000 euros is at least 20% of the total revenues or they no longer meet the condition of having at least one employee. Moreover, they owe profit tax starting with the incomes and expenses realized from the quarter in which they no longer meet the conditions to be micro-enterprises.

Taxpayers who carry out activities in the HoReCa field can opt for the payment of microenterprise income tax without any restriction or profit tax.

Case studies

There are economic agents, who owe profit tax and who try to reduce the tax to be paid. The control bodies within ANAF - fiscal inspection activity - have found various violations of the legal provisions [5] as a result of the checks carried out, and thus, they have established additional profit tax and related accessories, namely interest, late payment penalties and non-declaration penalties. The main findings that determined additional amounts attracted to the state budget are:

- non-acceptance as deduction of expenses related to purchases of services or products, in the case of which the taxpayer could not prove that they were carried out in view of the economic activity;
- taxpayers mistakenly considered the expenses related to goods as deductible of the nature of the stocks found to be missing from management, not imputable, registered during the verified period;
- non-registration of the realized incomes;
- not fully declaring the calculated profit tax to the fiscal body;

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- non-registration of reserves from revaluation of assets and non-registration of income from revaluation reserves when derecognizing revalued assets;
- non-declaration through the declaration form 101 "Profit tax declaration", a non-deductible expenses representing expenses recorded as a result of the transfer of some corporate shares, below their nominal value;
- inadmissibility for deduction of expenses with compensations, fines and penalties, amounts which were considered deductible by the verified taxpayer when calculating the taxable profit;
- rejecting the deduction of the sums entered in account 606 "Interest expenses and exchange rate differences" representing the interest related to loans in lei, obtained from affiliated entities, the interest level being well above the Robor average, being considered non-deductible for tax purposes that exceeded the Robor level;
- influencing the taxable profit with the differences resulting from the summation of the adjustments of income and/or expenses, for transactions carried out between affiliates, based on the transfer price dossier drawn up;
- non-admission for deduction of operating expenses regarding provisions;
- adjustment of expenses with amortization of fixed assets or incorrect calculation of them with reflection in the tax-deductible expenses;
- registration of expenses for which supporting documents could not be presented.

1. The "X" Corporation has as its object of activity "Ceramic element manufacturing", cod CAEN 2341. It belongs to the category of middle taxpayers.

The verified period was: 01.01.2019 – 31.12.2022.

Following the tax inspection, additional tax obligations were established in the total amount of 1,310,245 lei.

Following the tax checks carried out, deficiencies were identified as a result of the unjustification of the tax bases according to the provisions of the tax and accounting legislation in force, as follows:

- not justifying the use of cars for the benefit of his taxable operations purchased in the leasing system, for which the company exercised its right to deduct VAT related to financial leasing rates, with influence on the tax base and the fiscal result declared by the company in the period 2019-2022;
- purchases of goods, namely sports articles, which did not contribute to the achievement of taxable income, these expenses being treated as deductible amounts when calculating taxable profit, expenses that were reconsidered in the category of non-deductible expenses when calculating taxable profit;
- determination of income and expenses from interest related to loan contracts, reframing these transactions (granting/receiving interest-free loans between related parties) to reflect the economic content. Thus, for granting/requesting loans from affiliated companies, the fiscal inspection body proceeded to determine the interest rate, based on the interest level

communicated by the National Bank of Romania for the period 2019 – 2022 for each individual year as well as for each individual partner. Taxable interest income and related interest expenses were established, recalculating the result of the financial year related to the verified period 01.01.2019 – 31.12.2022.

Following the findings above, an additional amount of 1,310,245 lei was established, representing the income tax.

2. The "Y" Corporation has as its object of activity "Manufacture of tires and inner tubes", retreading and remaking of tires CAEN code 2211.

Following the tax inspection, additional tax obligations were established in the amount of 13,893,565 lei, as follows:

- The legal reserve registered by the taxpayer in December 2020 was considered erroneously deductible by the company in full when calculating the profit tax. Thus, the verified taxpayer mistakenly considered the amount of 1,643,482 lei (representing the difference between the amount of the reserve considered deductible by the company and the amount of the reserve deductible according to the legal provisions), as deductible when calculating the profit tax for the year 2020, not complying with the provisions of Law no. . 227/2015 regarding the Fiscal Code, art. 26, para. 1, letter

a) "the legal reserve is deductible within the limit of a 5% rate applied to the accounting profit, to which the expenses with the profit tax are added, until it reaches the fifth part of the subscribed and paid-up capital or of the patrimony, as the case may be ".

- The taxpayer mistakenly has considered the expenses related to the goods of the nature of the stocks found to be missing from management as deductible but not imputable, registered during the verified period. As it emerged from the Explanatory Note requested by the tax inspection team, following the inventories carried out at the end of each year of the verified period, non-attributable shortages were found in terms of raw materials in a total amount of 11,000,313 lei.

The value of the management shortfalls was recorded by the taxpayer in December at the end of each year of the verified period as an expense, this being considered deductible for the calculation of the profit tax.

Regarding this category of expenses, Law no. 227/2015, regarding the Fiscal Code, respectively art. 25, para. 4, letter c) stipulates - "The following expenses are not deductible: (...) c) expenses regarding goods in the nature of stocks or tangible assets found to be missing from management or degraded, non-accountable, for which no insurance contracts were concluded, as well as the tax on the value added related, if this is due according to the provisions of title VII".

It thus results that, the amount of expenses regarding the raw materials found to be missing from the management and not imputable in the amount of 11,000,313 lei, recorded by the taxpayer during the verified period, were erroneously considered by him as deductible when calculating the taxable profit.

- Non-acceptance for deduction of expenses in the amount of 26,792,890 lei, related to some purchases of services provided by the affiliated company "W" in the case of which the company did not prove that they were carried out for the purpose of carrying out the economic activity.

In fact, according to the invoice issued by the affiliated company to the "Y" Corporation was invoiced for the value of some "storage and other auxiliary logistics services" related to the year 2019 in a total amount of 5,605,442 euros (26,792,890 lei), an amount that was considered by the verified company as a deductible expense when calculating the tax on profit related to 2019.

Following the analysis of the information and documents presented by the taxpayer, the following aspects resulted:

- the presented contract was concluded between the verified taxpayer and the affiliated company in November 2020, after the period in which the analyzed services were provided (year 2019);

- according to the mentions in the "invoice" document and the provisions of the presented contract the amount invoiced by the affiliated company to the "Y" Corporation represents the value of some storage, handling delivery services to the clients of the affiliated company, services having as object the tires received from the Y company of the affiliated company.

- in the case of all tire deliveries destined for the warehouse in Hungary, invoices have been issued by the "Y" Corporation to the affiliated company in 2019, the verified taxpayer stating in the Explanatory Note, regarding this subject, the following "the goods did not remain in the property of the "Y" Corporation., the ownership being transferred to the affiliated company before they were stored".

Thus, it was concluded by the fiscal inspection bodies that the amount contained in the analyzed invoice represents the counter value of some related services of some goods (tires) that were no longer in the property of "Y" S.A. at the time of the performance of the services, and in addition, at the date of the provision of these services, there was no contract between the two companies, which would regulate the specific conditions nor the need for the provision of these services for the purpose of carrying out the economic activity by the verified taxpayer.

Conclusion

The profit tax is an important source for the state budget and implicitly for investments at the national level.

The correct declaration and payment of profit tax by all taxpayers is a condition for the existence of fair competition between taxpayers, respectively the reduction of tax evasion. They are also exempt from possible contraventional or criminal sanctions, in relation to the tax authorities, as well as from the establishment of additional amounts that also attract interest, late payment penalties and non-declaration penalties, amounts that increase expenses and reduce the profit of economic agents.

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The contributory benefit in the redistributive pension system

Valentin Stegăroiu²⁴²

This study aims to analyze how the pension system based on intergenerational generosity (PAYG) is sustainable and can continue to provide income to the people who have contributed to this system.

In the PAYG type system, the taxpayer's benefit is directly linked to a number of factors that can influence its size in different periods of time. Given that this type of insurance is an "old" system, this study analyzes the possibility of its continued sustainability, by taking some economic measures, in terms of respecting the principle of transfer between generations.

The conclusion of the study leads to the idea, already recognized, that under current conditions, in order to maintain reliability, these systems should become a mandatory mix of systems necessary for an adequate balance between generations.

JEL Classification: *F02, F15, F53, F59, H55, O11, O52*

KEYWORDS: PAYG system, pension system, social insurance, contributory benefit, insurance mix

Introduction

The issue discussed in this study starts from the simple question: will the public pension systems designed on the principle of intergenerational generosity (PAYG) be sustainable in the near future. If we want a correct and substantiated answer, we can say that yes, they can be sustainable, but for this some economic, political and social measures must be taken, as urgently as possible, to counterbalance the weight between the active person and the retired person work, in favor of the first with direct results for the benefit of the second.

Within this system of redistributive type between generations (PAYG), the taxpayer's benefit is directly linked to a series of factors that can influence its size in different periods of time.

For this reason, more and more present in our current situation, there is talk of demographic changes, of the increase in life expectancy, all of which become a special problem for maintaining pension systems based on this generosity between generations.

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It is known that the basis of these PAYG systems is solidarity between generations based on a "social contract" between the individual and society, an unwritten contract, insured and guaranteed by the state.

Taking into account the trends that are manifested in terms of the major demographic changes that put more and more pressure on public budgets, in the not too distant future these will amount to increasingly higher costs as a percentage of GDP, and for which, governments must take urgent measures to balance these costs in public budgets.

In the face of such challenges, governments must find solutions and propose measures to keep these systems on the path of sustainability. For example, by 2070, the Member States (MS) of the European Union (EU) will have one of the oldest populations in the world, because it is expected that the dependency rate of the elderly population (the ratio between the number of people over 65 and the working age population) will exceed 45%, much higher compared to the rest of the world (European Commission, 2021).

Pension schemes

If we consult the specialized literature, as some authors (Barr&Diamond, 2008) have analyzed and described, we notice that the following pension schemes are known, according to which these public pension systems can be designed:

Contributory basic pension - is the pension paid at a flat rate for a period established as complete for the payment of contributions or proportionally for an incomplete period of payment of contributions;

Defined Benefit Pension (DB) - the benefit is determined based on the worker's pensionable earnings history. The formula can be based on the worker's final salary and length of service, or on wages over a longer period, for example the worker's entire career;

Defined Contribution (DC) Pension - A pension where the benefit is determined by the value of a person's accumulated pension assets;

Funded pension uses an accumulated fund, built up from contributions by or on behalf of its members;

Non-contributory universal pension based on years of residence;

Notional defined contribution (NDC) pension is funded on a pay-as-you-go or part-funded basis, with a person's pension having a quasi-actuarial relationship to their lifetime pension contributions;

Pay-as-you-go pensions (PAYG) - this type of pension is paid from current income (usually by the state, from tax income) rather than from accumulated funds. This type of pension is partially funded.

Social benefit in a PAYG system

In a public pension system based on intergenerational generosity, the size or amount of the social benefit of the pension is given by the relationship (Barr, 2000):

$$rWS = PN \quad (1)$$

Where it was noted:

r = PAYG contribution rate;

W = average nominal salary;

S = number of employees;

P = average nominal pension;

N = number of retirees,

resulting in the average nominal pension (contributory benefit) being given by:

$$P = \frac{rWS}{N} \quad (2)$$

Practically, the amount of the pension is given by the contribution rate to the PAYG system, the nominal salary, the number of employees, all these components being in a direct dependency relationship and the number of pensioners being in an inverse dependency.

Starting from them and modeling on their side, taking into account the increase in the pension per unit of increase in the contribution rate, per unit of the increase in the nominal salary, per unit of the increase in the number of employees, per unit of the increase in the number of pensioners per based on the variables of the increase in the contribution rate, the nominal salary, the increase in the number of employees and the number of pensioners, we can obtain the increase in the pension due to the increase in the contribution rate, or due to the increase in the nominal salary or the increase in the number of employees and implicitly the decrease the amount of the pension as a result of the increase in the number of pensioners, practically (Stegăroiu&Stegăroiu, 2012):

$$\Delta P = \frac{\partial P}{\partial r} \cdot \Delta r + \frac{\partial P}{\partial W} \cdot \Delta W + \frac{\partial P}{\partial S} \cdot \Delta S + \frac{\partial P}{\partial N} \cdot \Delta N \quad (3)$$

or:

$$\Delta P = \frac{WS}{N} \cdot \Delta r + \frac{rS}{N} \cdot \Delta W + \frac{rW}{N} \cdot \Delta S - \frac{rWS}{N^2} \cdot \Delta N \quad (4)$$

and if, we divide both sides of this relation by $P = \frac{rWS}{N}$ we get:

$$\frac{\Delta P}{P} = \frac{\Delta r}{r} + \frac{\Delta W}{W} + \frac{\Delta S}{S} - \frac{\Delta N}{N} \quad (5)$$

in other words, the percentage increase in the contribution rate, the nominal salary, the number of employees minus the percentage increase in the number of retirees. It follows that the size

of the contributory benefit, under these conditions, can only be forecasted if the evolutions of each of the factors that influence it are known.

Advantages/disadvantages of the PAYG system

Among the advantages of a system of this type, we can mention the group solidarity, the redistribution of collected income among the contributing members. Because of such a construction, this system is considered a pyramid type system and from here the size of the benefit can be predicted. The higher the base of the pyramid, which is given by the number of those who contribute to the system, the higher the pension income of the beneficiaries, the top of the pyramid, and vice versa.

As disadvantages, this system is not recommended and is not suitable for countries that have a high life expectancy, or have an aging population, and the degree of dependence of the retired population on the employed one is very high.

Alternatives for maintaining the sustainability of PAYG funds

As an alternative to this contributory benefit system and as a result of the trends shown regarding the sustainability of such schemes, in 1994, the World Bank came up with a new concept of a pension system based on the existence of three pillars or three structures of organization and administration, which differ from each other in terms of objectives, level of contributions and the optional or mandatory component.

This system is composed of a first pillar that is mandatory public, the second is public but privately administered and the third is private (Hemming, 1998).

The first pillar, organized on the principle of the PAYG type system, obligatorily provides a public pension based on the redistributive principle that is guaranteed to all participants, in a certain amount.

The second pillar is represented by a compulsory system, based on capitalization and privately administered, ensuring an additional benefit for the pension granted in the first pillar.

Finally, the third pillar is an optional system, based on the capitalization component through a financing based on defined contributions that can ensure each participant a supplemental benefit as a result of the accumulation of additional savings.

Organization of the public pension system in Romania

In Romania, as a result of the recommendations of the World Bank, the pension system is organized on the principle of the system based on three pillars.

The pension reform began in 1997, when the White Paper on Social Security was published, but the first steps were taken starting in 2001, for Pillar I, followed by the adoption of the legislation necessary for the application and implementation of Pillar II- the privately administered mandatory pension system (Law no. 411/2004, dated 2008), followed by Pillar III - the optional pension system (Law no. 204/2006, dated June 2007).

By adopting new legislation, the pension calculation method was changed, by establishing an average score for the entire period of activity, and the retirement age gradually increased, for men from 60 years to 65 years, for women from 57 years to 63 years.

Regarding the differences between the regulations regarding pension funds administered for pillar II and III, we distinguish:

- Mandatory nature of participation: participation in Pillar II is mandatory, while in Pillar III it is optional.
- Nature of the contribution: for Pillar II the contribution is collected from the individual CAS contribution, while for Pillar III it is a separate contribution that is collected from the gross monthly salary income of the insured.

Conclusions

Pension systems based on the generosity of generations (PAYG) have already reached maturity, which is why the benefits granted are increasingly reduced, this is primarily due to the architecture of their construction (the low number of contributors compared to beneficiaries).

The transition from a PAYG-type system to a mix of insurance systems is the only way that will ensure a decent income for beneficiaries, because the sharp increase in life expectancy, in correlation with the low level of birth and employment in the labor market, are factors which directly influence the level of benefits in such a system and which led to the counterbalancing of the pyramid, in which currently the base is given by the number of beneficiaries and not by the number of contributors.

In such situations, the mix of systems must be implemented with maximum urgency and accuracy, being the only one that can ensure a balanced and sustainable system ensuring an income that also takes into account the savings component, which is the main source of development.

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General considerations regarding the phenomenon of tax evasion

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Abstract

The multitude of obligations that the tax laws impose on taxpayers have stimulated their ingenuity and inventiveness in circumventing the tax laws.

Tax evasion is a mass phenomenon which, although it has been analyzed and studied by politicians and theorists, is still imprecisely defined, dominated by terminological confusions and contradictory opinions. Most frequently, tax evasion is defined as the evasion of paying taxes and fees on income and acquired assets, which fall under the scope of fiscal taxation.

The negative effects generated by the phenomenon of tax evasion are felt directly on the level of tax revenue collections, causing important distortions in the market functioning mechanism.

The negative consequences of the phenomenon of fiscal evasion are reflected in particular in the increase of the budget deficit at the local and central level, as a result of the fact that the degree of collection of public budget revenues decreases and therefore the public expenses provided for in the budget cannot be covered, they can it also reflected on the purchasing power of the national currency and even on the stability of the national economy

Tax evasion, definitions, forms of manifestation, causes

Tax evasion is a mass phenomenon, imprecisely defined, dominated by contradictory opinions. Although it is a very widespread phenomenon, at the Romanian level there is no definition unanimously accepted by politicians and theorists.

In the working rules developed by the Ministry of Finance and in the Explanatory Dictionary of the Romanian Language, the phenomenon of tax evasion is defined as "total or partial evasion by taxpayers in various forms, from paying obligations to the budget". However, there is an inaccuracy from the diversity of words used to denote the same phenomenon - namely the willful failure of taxpayers to pay their obligations to the state, by evading the laws that regulate it.

In specialized literature, tax evasion is classified as legal and fraudulent (tax fraud). Legal tax evasion (improperly said) is that which is intended and is done under the cover of the law, its imperfection or legislative vacuum regarding some aspects (interpretation of tax laws in favor of the taxpayer).

Illegal tax evasion (tax fraud) is determined by the non-declaration or false declaration of taxable matter that escapes taxation and does not give rise to taxation.

When we talk about tax fraud, we can talk about tax evasion, tax havens or abuses such as: hiding taxable material, the underground economy or fictitious accounting operations.

Unlike fraud, evasion consists of a legal means of escaping the tax, namely by refraining from performing the act generating the tax or by the ability of the taxpayer to exploit the loopholes in the legislation.

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We conclude that tax evasion can be committed by a person under the protection of the law (legal evasion) or in violation of legal provisions (fraudulent evasion). In the first case evasion is not a crime and in the second case evasion is considered tax fraud.

Among the illicit activities carried out in the space of the economy and the underground economy, we list:

- Undeclared legal activities: clandestine production, reduced reporting, salaries paid and undeclared or declared at a reduced level;
- Criminal activities: gambling, prostitution, corruption, bribery, drug trafficking, usury
- Illegal activities: illegal work, labor trafficking, clandestine immigration;
- Underground economy: evasion of payments due for taxes and fees, evasion of CAS payments, etc.

For there to be a legal classification of tax fraud we must admit that there are different degrees of tax fraud, some committed occasionally and others committed professionally. In the first case, the excuse of ambiguities in the law can be invoked, while the second manifests a fraudulent intention. There is therefore an administrative fraud that is subject only to fiscal penalties, while fraud bears criminal sanctions.

Tax evasion is considered as a response of the taxpayer to the coercive action imposed by the state.

Among the causes that generate evasion we can mention:

- Fiscal pressure that leads to a reduced degree of affordability of the taxpayer and a tendency to ignore fiscal legislation;
- The tendency of any natural or legal person to obtain as much income as possible with little expenses;
- The existence of thick legislation, in some cases unclear, confusing or interpretable;
- The permissive legislative framework;
- Weak collaboration between the various state control bodies that have this activity as their objective;
- The insufficient preparation of the control apparatus, their lack of knowledge of the legislation and last but not least the fact that they are not sufficiently stimulated, so that they do not easily pass on the irregularities found.

Ways of manifesting tax evasion

In the specialized literature, several manifestations of tax evasion are provided:

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- Fictitious operations;
- Ghost companies;
- Carousel fraud;
- Money laundering;
- Tax havens.

It constitutes *fictitious operations*, any highlighting in accounting documents of expenses that are not based on real operations, carried out with the aim of evading the payment to the consolidated budget of taxes and fees. Thus, the taxpayer registers in the accounting fictitious operations of purchases of goods or fictitious expenses for a product that was not delivered and paid for.

Another form of fictitious operation consists of expenses not actually incurred or which were recorded in the accounting higher than what they were in reality, or for which there are no supporting documents.

In such a situation, the responsibility of the parties involved in an illicit transaction is common both to those who carried out this operation and to those who accepted the transaction, because they checked, targeted and approved its execution.

A *shell company* is an artificial company that is used in transactions for the purpose of evading the duty to pay tax obligations.

Some specific characteristics can be identified in such companies:

- They do not keep correct accounting records;
- Payments made to their accounts are collected in cash by certain persons;
- It does not work at the declared headquarters;
- The company administrator cannot be contacted;
- Operates on the market for a short period;
- They are controlled most of the time by the same people, with whom they are in special relationships;
- They are usually administered by foreign citizens, so that they are difficult to identify;

- Sometimes legally established companies, after a certain time in which they accumulated debts to the budget, disappear from the records.

Carousel fraud is often found in the VAT field, this tax being exempt from payment in the case of deliveries within the European Union.

So, this fraud involves the involvement of at least 2 member states, between which there are hidden links, trying to evade tax regulations. Companies involved in this form of tax fraud remain in operation for a short period of time and then disappear.

This form of fraud harms the receiving state, affecting competition for companies that work properly.

Money laundering refers to acts involving the illicit concealment of ill-gotten gains. In this sense, the National Office for the Prevention and Combating of Money Laundering was established in Romania, whose main task is to receive and process information and notify the competent authorities about cash in foreign currency or in the national currency exceeding a certain limit.

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Tax havens are found in countries with a very low level of taxation, minimal regulations for the granting of authorizations for the operation of companies, the secrecy of banking operations guaranteed by law. These havens have several characteristics:

- Reduced or zero taxation (Cayman Islands, Turks,);
- Confidentiality over all economic operations and especially banking ones;
- In addition to the benefits granted to economic companies, there are also those that benefit the respective states (performing telephone services, telex, air transport, promotional advertising, international seminars).

Tax havens provide taxpayers with documents certifying the correctness of transactions, making it difficult for the control bodies to discover irregularities.

The effects of tax evasion; preventive measures to limit them

- Financial effects
- Economic effects.

As a financial effect, we note that tax evasion contributes to the decrease of budget revenues, which implicitly leads to the non-fulfillment of state functions. Thus, the planned revenues are much reduced compared to the budget provisions and the necessary financial funds can no longer be covered, respectively the expenses that must be carried out from the budget.

So, tax evasion has a direct effect on the financial balance of the budget, contributing to the increase of the budget deficit.

This phenomenon hinders the state's ability to implement economic policies and diminishes the investments made in education, health, administration, etc.

As an economic effect, tax evasion also influences the formation of prices. An evading taxpayer will have the opportunity to offer products on the market at reduced prices compared to the correct taxpayers and creates a competitive imbalance. Also as an economic effect is the fact that investors will lose confidence in the market in that country.

Tax evasion leads to the way of redistributing the revenues collected at the budget, not being able to fulfill the obligations of increasing the salaries of the budget workers, thus increasing social inequalities.

Preventive measures to limit tax evasion

Limiting the tax burden is a key element against the evasive tendencies of taxpayers. This can be done by reducing tax rates and a more correct quantification of the tax base by admitting more expenses to deductible expenses, by exempting certain technological equipment from taxation, by not capping sponsorship expenses or travel allowance expenses.

Taxation, being an attribute of the state that contributes to the formation of budget revenues, must be channeled in such a way that it does not become a brake on the development of commercial companies and does not contribute to their braking. In other words, taxation should not only aim at coercing the taxpayer, and encourage his capital accumulation, which may lead to the voluntary acceptance of the obligations owed to the budget.

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1. *Legislative measures*

As a legislative measure, it is to ensure the simplicity of the tax legislation, the stability, the coherence of the provisions of the legislation thus encouraging the business environment and increasing the country's activity in front of foreign investors.

An opportunity in favor of measures to prevent evasion in this context is the rigorous preparation of tax documents such as the payer's file or his tax record.

Another measure to reduce tax evasion is the obligation of insurance measures in the case of committing an evasive crime, such crimes being the printing, putting into circulation or possession without the right of typed forms, the determination by the taxpayer in bad faith of taxes, fees or contributions with the aim of obtaining sums of money from reimbursements or refunds from the budget.

2. *Changing the mission of the tax* administration by initiating measures to increase the degree of voluntary compliance of the taxpayer, increase the authority and prestige of the tax authority, continue the process of reorganization of the tax authority and, last but not least, increase the degree of stimulation and motivation of the tax inspection apparatus.

Tax education of the taxpayer must also be taken into account, by creating a campaign to raise their awareness regarding the importance and necessity of compliance with the payment of fees and taxes.

Competent institutions with control in preventing and combating tax evasion.

Already in 1991, with the adoption of the law on the organization and operation of financial control, it was stipulated that the state control bodies verify compliance with financial and accounting regulations in relation to the fulfillment of the obligations of economic agents vis-à-vis the state.

So, within the Ministry of Finance, the General Directorate of State Financial Control and the Financial Guard came into existence, the former monitoring the way of using the funds granted from the budget, as well as the way of highlighting the financial and fiscal obligations towards the budget, and the Financial Guard had as its main purpose the application and execution of fiscal laws and customs regulations, through operative and unexpected control.

In 2003, the Financial Guard acquired legal personality, being under the authority of the National Control Authority and financed from the state budget. It operated until 2013 when it was dissolved, the heritage, archive and other assets passed to ANAF.

From that moment, ANAF went through an extensive reorganization process by transforming the 42 County Directorates into 8 Regional General Directorates of Public Finance, the Administration Directorate of large taxpayers remaining within ANAF, and the General Directorate of Customs and the Financial Guard were taken over by ANAF.

ANAF is an organ of the Central Administration directly subordinated to the Ministry of Finance, with its own personality.

This body has concrete powers in the field of preventing, discovering and combating tax evasion and tax and customs fraud. It reports to the Regional Directorates of Public Finance, directly coordinates from a methodological point of view and directs the activity of the customs offices.

Also within ANAF's own apparatus is the General Directorate of Forcible Executions, which carries out cases of forcible execution of the taxpayer.

The General Directorate of Fiscal Anti-Fraud DGAF was organized in 2013 in regional directions, as a directorate without legal personality within ANAF with duties to prevent and combat tax and customs evasion and fraud.

The main attributions of DGAF are:

- Carrying out checks in the premises where goods are stored and sold;
- Confiscation of goods whose manufacture is illegal;
- Ensuring insurance measures if there is a danger of theft or alienation of the patrimony;
- Finds contraventions and applies sanctions;
- Notifies the criminal investigation bodies in case of detection of crimes;
- Stops the means of transport and requests documents for the transported goods.

Fiscal inspection activity is carried out within the Regional General Directorates of Public Finance, taking over the activity and competences of the County Control Directorates.

Also, they also operate:

- General Customs Directorates that apply customs regulations in the field of excise duties
- Interior and border customs offices;
- County Administrations of Public Finances;
- Municipal, town tax services and communal tax offices.

The purpose of the Fiscal Inspection is to verify the legality of tax declarations, the way of fulfilling tax obligations, the verification of the tax base, the establishment of differences in taxpayers' tax obligations.

This is carried out on all taxpayers who have an obligation to pay to the budget and is of two types:

- General – which has the obligation to check all the tax obligations of the taxpayer in a certain period of time;
- Partial, with the obligation to verify only certain obligations in a certain period.

Three control methods can be used within the fiscal inspection, the sample inspection which consists of a selective check, the exhaustive inspection and the electronic inspection.

The taxpayers to be checked are selected based on a risk analysis and it is mandatory to be notified in advance about the object of the control, the period taken under control and the duration of the control, based on a tax inspection notice given by the competent body .

The findings of the tax inspectors are recorded in a tax inspection report which is the basis for issuing a tax decision if differences are found with respect to the taxpayer's payment declaration.

AUDIT OF THE QUALITY OF ACCOUNTING INFORMATION IN THE CONTEXT OF DIGITALIZATION

Iana Traian²⁴³

Abstract

The need for relevant and faithful information has always existed in the sphere of all economic, social or any other activities, but the importance of this process has become evident in the last decade, with the development of information and communication technology and the emergence of the new digital economy, which tends to globalize worldwide. The digital economy is characterized by transparency, and in order for accounting information to meet the requirement to reflect the true picture of the assets, liabilities, profit or loss of an entity or group of companies, or the financial position, it must meet certain quality criteria.

One of the biggest challenges of the internal audit function in recent years has been and remains its positioning as a strategic function that brings added value to a company. Maximizing the added value provided by the internal audit function is imperative in the context of maintaining its effectiveness, and in this sense it becomes necessary to identify innovative practices that support the internal audit function in its transformation process in this era of digitization and big data ("big data"). In an economy where the audit report has become a mandatory element for banks, companies listed on the stock exchange or in the case of other situations provided by law, for making any decision, the quality and relevance of the audit report become some of the essential elements in economic development and social both at the national level and at the macroeconomic level.

Keywords: Auditing, Accounting, digital economy

JEL classification: M41, M42, C82, C87, D83.

INTRODUCTION

The primary objective of the audit has evolved from the detection of fraud and errors to the certification of financial statements, to the verification of their compliance with certain predetermined criteria. The change in the audit objective required the evolution of audit techniques.

In the conditions of the globalization of economies and the internationalization of financial markets, the traditional verification methods, which involved an exhaustive control of transactions, proved to be far too expensive and time-consuming.

Law no. 162/2017 regarding the statutory audit of the annual financial statements and the consolidated annual financial statements reiterates the existing requirement in the Commercial Companies Law 31/1990 and GEO 75/1999, according to which the companies whose annual financial statements are subject to the statutory audit have the obligation to organize and ensure the exercise of the internal audit activity.

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1. Conceptual framework and classifications regarding the audit

We appreciate that the audit is an activity carried out by professionals in the field, who collect and evaluate evidence, in order to express an independent opinion regarding the comparison between the observed aspects and the predetermined ones, according to a quality criterion.

Starting from these general aspects, it can be observed today that the notion of audit has been associated with different fields such as: financial audit, environmental audit, information systems audit, quality audit, intellectual capital audit, etc.

*„Audit operates with abstract ideas; it has its foundations in numerous types of learning... it has a rational structure of postulates, concepts, techniques and rules, based on a rigorous intellectual study that deserves to be called a "discipline" in the current sense of the term.*²⁴⁴”

In other words, the audit is based on a theory.

In a narrow sense, audit theory is a normative theory because it provides a guide to what audit practice should be like. In other words, *„the purpose of audit theory is to provide a rational and coherent conceptual framework for determining the audit procedures necessary to achieve defined audit objectives and for the continuous evaluation of current practices in order to improve them”*.

A review of the specialized literature highlights numerous postulates that are the basis of the audit theory. *„These postulates were not discovered by one or more individuals, in a certain geographical place and at a precise moment of time. Also, they cannot be the result of scientific laboratory experiments. On the contrary, they are subject to change, because they are based on an environment, on a structure of users of financial information and on their information needs, which evolve continuously*”²⁴⁵

The postulates most frequently invoked in audit works are:

1) Financial statements and financial information are verifiable. If this fundamental hypothesis would not be real, the audit would not make sense and would not exist. Verification does not involve irrefutable evidence, but suggests the concept of reasonable assurance. Mautz and Sharaf emphasize that "only on the basis of this postulate, the proof theory, the verification procedure, the application of the audit theory probability and the establishment of the boundaries of the auditor's responsibility can be identified"²⁴⁶.

2) In the long term, there is no conflict of interest between the auditors and the management of the audited entity.

Both auditors and managers should be interested in presenting a true picture of financial statements, because making investment decisions based on relevant information is beneficial to the enterprise in the long term.

However, it should be noted that, in the short term, there may be conflicts regarding:

- ✓ honest disagreement on the application of an accounting policy;
- ✓ the managers' attempt to embellish the financial statements, by improving the published performance or the degree of achievement of other objectives, in order to increase their own remuneration or the granting of additional bonuses;

²⁴⁴ Cornel Crisan, *Unele consideratii referitoare la rolul sistemului de audit in entitatile publice*, Revista Finante Publice si Contabilitate v. 18, nr. 10, p. 51-55, 2007

²⁴⁵ Feleagă, N. (1996): *Îmbilanzirea junglei contabilității, concept și normalizare în contabilitate*, Editura Economică.

²⁴⁶ Mautz and Sharaf, "The Philosophy of Auditing" (Book Review), Miller, Herbert E. The Accounting Review; Menasha, Wis. Vol. 37, Iss. 3, (Jul 1, 1962): 599.

✓ managerial fraud.

For this reason, throughout the activity carried out, the auditors must show a skeptical attitude towards the information provided by the management of the entity.

3) The result of an assignment provides reasonable but not absolute assurance that significant errors caused, in particular, by irregularities, will be detected.

4) The existence of a satisfactory internal control system reduces the possibility of fraud and errors. An internal control system is based on two defining elements: the separation of responsibilities within an organization and the actual internal verification.

5) The constant application of generally accepted accounting principles provides a true picture of the financial statements. When the auditor expresses his opinion in relation to the audited situations, he considers as a reference element the application of generally accepted accounting principles in evaluating the degree of fidelity of the analyzed situations or information. Without such a criterion, it would be particularly difficult to determine, objectively, whether or not the financial statements present a true picture.

6) The current audit activity is structured according to experience and knowledge gained from auditing the client in previous years.

7) Independence is essential in the audit mission. Independence is the "touchstone" of the auditor profession. Without undisputed professional independence, the auditor's opinion becomes suspect. From a theoretical point of view, the factors that allow determining the degree of independence are the auditor's integrity and objectivity.

8) The professional status of an independent auditor imposes certain obligations professional.

In a narrow framework, the audit can be classified, according to the objective of the function it performs, in: Compliance audit; Performance audit; The audit of the attestation of the financial statements (financial audit).

The purpose of the compliance audit is to verify the good application of the rules and procedures, in relation to a given reference system (the internal rules and regulations of an organization, legal provisions and regulation).

The performance audit represents a systematic review of the activities of an organization in correlation with certain objectives established by the management, in order to evaluate the performances, to identify possible improvements and to develop recommendations for the development of these activities.

The audit of the attestation of the financial statements, known as the financial audit, has as its objective the attestation or communication of an opinion, by an independent person, according to which the financial statements are drawn up, under all significant aspects, in accordance with a general reporting framework.

2. Qualitative characteristics of information in financial statements

The annual financial statements represent the main means of communicating information of a financial-accounting nature to users. The quality of the information contained in these situations decisively conditions the behavior and decisions of investors, especially in times of crisis, but also of the other categories of beneficiaries.

"For this reason, financial auditors have a major social responsibility, becoming real guarantors of the veracity and credibility of financial reports communicated by entities. They must ensure that the information presented by individual entities or groups of companies

meets the quality criteria established by accounting regulations and that it reflects reality, a true picture of assets, liabilities, financial position, profit or loss²⁴⁷”.

According to IAS 1 "Presentation of Financial Statements", "the financial statements must present fairly the financial position, financial performance and cash flows of an entity. Fair presentation requires the accurate representation of the effects of transactions, other events and conditions in accordance with the definitions and recognition criteria for assets, liabilities, income and expenses set out in the General Framework"²⁴⁸.

In order for the accounting information to meet the requirement to reflect the true picture of the assets, liabilities, financial position, profit or loss of the entity or a group of companies, it must meet certain quality criteria.

It is absurd to admit that information that does not meet the qualitative criteria is able to ensure the achievement of this fundamental objective of accounting and annual financial statements (financial reports²⁴⁹, according to the IASB). Under this aspect, there is a certain difference in the treatment of qualitative characteristics in the current international accounting regulations compared to the provisions in the Romanian norms.

2.1. Qualitative characteristics in the view of the IASB

The conceptual frameworks of the IASB/FASB specify that financial-accounting information is relevant only if it produces significant effects in terms of the decision-making process of its users²⁵⁰.

The main qualitative characteristics that financial information must fulfill, in the view of the IASB, in order to be useful to existing and potential investors, lenders and other creditors in the decisions they make are: relevance and accurate representation (called fundamental qualitative characteristics)²⁵¹. Financial creditors are interested in repaying the loans on maturity and collecting the related interest²⁵².

Relevance. This fundamental characteristic requires financial information to have the ability to make a difference in the decisions made by users. Information may have the ability to make a difference in decision making even if some users choose not to take advantage of that information or if they already know it from other sources.

Financial-accounting information is considered to be relevant if it has predictive value, confirmation value or both value categories. Information has predictive value if it is used as a data source by users to anticipate future developments. To have predictive value, information need not be a forecast or prediction. Financial-accounting information has confirmatory value if it helps users to confirm or modify their previous assessments.

²⁴⁷ Constantin Toma, *Rolul auditului financiar în creșterea calității informațiilor financiare*, Revista Audit financiar, nr. 95, 2012, <https://www.cafr.ro/uploads/AF%2011-2012%20Site-a9d3.pdf>

²⁴⁸ IASB, *Standardele Internaționale de Raportare Financiară*, Norme oficiale emise la 1 ianuarie, 2011, Partea A Cadrul general conceptual și dispoziții, Ed. CECCAR, București, 2011, p. A387

²⁴⁹ Ibidem, p. A33

²⁵⁰ Andra Maria Achim, *impactul calității raportărilor financiare asupra gradului de eficiență informațională a pieței de capital*, teză de doctorat, 2019, p.5

²⁵¹ Ramona Neag, *Contabilitate Aprofundată*, Târgu-Mureș, Editura "Universitatea Petru Maior Targu Mures", 2010, p. 1-8

²⁵² <https://administrare.info/domenii/economie/15911-caracteristicile-calitative-ale-informa%C5%A3iei-contabile>

Accurate representation. To be useful, financial-accounting information must not only represent the relevant phenomena, it must also accurately represent the phenomena it purports to represent²⁵³. To provide a perfect accurate representation, a description must fulfill three conditions, namely: be complete, neutral and error-free. The IASB itself recognizes that perfection is rarely, if ever, achieved, although the main objective is to maximize these qualities of financial-accounting information as far as possible.

In addition to the fundamental qualitative characteristics, financial information is accompanied by the amplifying qualitative characteristics, namely: **comparability, verifiability, opportunity and intelligibility**.

Comparability is the characteristic of financial information that allows comparisons to be made across time and space. Because user decisions involve choices between alternatives, information about the reporting entity is more useful if it can be compared with similar information about other entities and with similar information about the same entity for another period or date.

Verifiability is the empowering feature that assures users that the information accurately reflects the economic phenomena it purports to represent. This means that different independent and knowledgeable observers could reach a consensus (not necessarily total agreement) that a particular description constitutes an accurate representation.

Opportunity requires that information be made available to decision makers in a timely manner, with the ability to influence their decisions. In general, it is appreciated that in the decision-making process old information is less useful in substantiating decisions. Some information may, however, remain relevant for a long time after the end of the reporting period, as some users need to identify and assess the entity's trends.

Intelligibility requires that financial and accounting information be presented clearly and concisely, be classified and characterized. Financial reports are prepared for users who have sufficient knowledge of business and economic activities and study and analyze the information with due care.

„Even well-informed and careful users may sometimes need to seek the help of an advisor to make sense of information on complex economic phenomena.”²⁵⁴

The qualitative characteristics of financial information are applicable both to information contained in financial statements and to data provided in other ways.

“Cost, which is a general constraint on the reporting entity's ability to provide useful financial information, applies similarly. However, the considerations involved in applying quality characteristics and cost constraints may be different for different types of information.”²⁵⁵

The cost < benefits restriction has an economic rationale, representing more of an efficiency and effectiveness restriction than a qualitative characteristic.

2.2. Qualitative characteristics in the view of Romanian norms

²⁵³ Claudia Cătălina Ciocan, *Respectarea principiilor contabile – rețeta imaginii fidele. O perspectivă teoretică asupra contribuției principiilor contabile la atingerea obiectivului raportării financiare*, CECCAR Business Review, No 9/2021, www.ceccarbusinessreview.ro

²⁵⁴ IASB, *Standardele Internaționale de Raportare Financiară*, Norme oficiale emise la 1 ianuarie, 2011, Partea A Cadru general conceptual și dispoziții, Ed. CECCAR, București, 2011, p. A37

²⁵⁵ Ibidem

In the Romanian accounting regulations, four main qualitative characteristics are nominated, namely intelligibility, relevance, credibility and comparability. Understandability is considered a qualitative characteristic specific to users and requires that the information can be easily understood by decision makers.

Although comprehensibility is considered a fundamental characteristic, however, information on some complex issues, which should be included in financial statements because of their relevance to economic decision-making, „should not be excluded simply because it may be too difficult for certain users to understand”²⁵⁶.

Relevance (pertinence) refers to the quality of information to influence the economic decisions of users, helping them to evaluate past, present or future events, to confirm or correct their previous evaluations. The relevance of information is influenced by the nature and threshold of materiality²⁵⁷.

Information is material if its omission or misrepresentation can influence the economic decisions of users, taken on the basis of the annual financial statements. In analyzing the significance of an element, the size and/or nature of the omission or misstatement considered in the given context are taken into account. It follows that the threshold of significance is more of a limit than a fundamental qualitative feature that information must have to be useful. Information that is not available in a timely manner loses its ability to influence decisions and is therefore irrelevant.

Credibility starts from the premise that the information developed is free of significant errors, is not biased, and users can trust that it correctly reflects the reality of the entities, consistent with their background and economic reality, and not just with their legal form. To be credible, the information contained in the financial statements must be neutral, prudent and complete.

An omission may render the information false or misleading and thus lose credibility and become defective in relevance. In certain situations there may be a certain imbalance between relevance and credibility.

Thus, if there is an exaggerated delay in the dissemination of information, it may lose its relevance. On the other hand, if the reporting of information is delayed until all aspects are known, its credibility cannot be challenged, but its usefulness is reduced for users who have had to make decisions in the meantime.

”Securing the balance between relevance and credibility requires the constant pursuit of the overall objective: adequately meeting the needs of users in the economic decision-making process”²⁵⁸.

Comparability is the characteristic of financial information that allows comparisons to be made across time and space. Thus, users must have the possibility to compare the changes made in the financial statements in order to separate the trends in the financial position and the performances of an entity (comparability over time). Also, decision makers must be able to

²⁵⁶ Constantin Toma, *Contabilitate financiară*, Ed. TipoMoldova, Iași, 2011, p. 27

²⁵⁷ Ordinul ministrului finanțelor publice nr. 3.055/29.10.2009 pentru aprobarea reglementărilor contabile conforme cu directivele europene, publicat în Monitorul Oficial al României, Partea I, nr. 766 și 766 bis/10.11.2009, cu modificările și completările ulterioare, punctul 23, alin. (3)

²⁵⁸ Constantin Toma, *Contabilitate financiară*, Ed. TipoMoldova, Iași, 2011, p. 28

compare the financial statements of various entities to assess their financial position and performance (comparability in space).²⁵⁹

It follows that comparability over time requires the permanence of accounting policies, and comparability in space forces the uniformity of accounting policies. "The comparability requirement should not, however, constitute an obstacle for the introduction of more efficient accounting policies."²⁶⁰

From the analysis of the qualitative characteristics imposed on the information from the financial statements by the Romanian norms compared to the international reference, certain similarities are found, but also main differences, respectively:

- the restriction of benefits > costs is a general constraint pursued in both categories of regulations;
- the Romanian regulations contain roughly the same characteristics, but their presentation or name is significantly different;
- there is no ranking of them into mains and amplifiers;
- some of the conditions imposed on the information, in domestic rules, to ensure a certain characteristic are the main characteristic (for example, accurate or faithful representation) or amplifiers (for example, timeliness) in the IASB standards.

The explanation of the differences between the two categories of rules is the fact that the revisions in the IASB standards regarding qualitative characteristics occurred after the adoption in 2009 of the Romanian regulations, and the latter were inspired by the characteristics applicable before the revision.

Information subject to auditing is par excellence a product of accounting. In these conditions, before the actual approach to the audit, it is necessary to present the connection financial audit - faithful image in accounting.

Conclusions

The quality and credibility of the information disseminated by entities has been a constant concern of the normalization bodies involved at the international, regional and national level and in periods of economic and financial stability.

In times of crisis, however, quality, credibility and a cautious attitude in informing users, sometimes taken to the extreme, become paramount. Considering that external users only have access to the information subject to the legal obligation to publish, contained in the annual financial statements, the decisions they take are deeply marked by the fidelity and quality of the data provided by the issuers of the financial statements.

Although the efforts of the accounting standardization bodies have focused on increasing the quality of information, aiming at the creation of a unitary financial reporting framework and the establishment of an efficient external audit system, some practices of the entities highlight certain "weaknesses" of the information system.

²⁵⁹ Ordinul ministrului finantelor publice nr. 3.055/29.10.2009 pentru aprobarea reglementărilor contabile conforme cu directivele europene, publicat în Monitorul Oficial al României, Partea I, nr. 766 și 766 bis/10.11.2009, cu modificările și completările ulterioare, punctul 23, alin. (5)

²⁶⁰ Toma, C., Op. cit.,

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<https://www.utm.ro/conferinta-imas-2023/>

Such a gap cannot be attributed to the imperfection of the rules, invoked in most cases, but rather to their improper application or even their violation. In this case, the "good faith", sincerity and professionalism of those who build and verify the information disseminated by the units come into play.

The main role in the proper application of the regulations issued by the standardization bodies rests with the financial auditors, who are real guarantors of the quality of the data provided by the organization, strengthening the confidence of users, especially external ones, that they have real, verified and certified information at their disposal. When these professionals violate the fundamental principles that govern their work, the quality of information provided to the general public can be greatly impaired.

Today, in a digitized era, in which the complexity of computerized accounting systems and the volume of transactions have increased significantly, the need for computer-assisted audit techniques that allow an increase in the accuracy and efficiency of the audit mission is recognized.

The need to carry out a financial audit, at the level of an organization, is accentuated by the conflict of interests, by the informational asymmetry created between various users of financial information and, last but not least, by the increasingly complex nature of accounting.

The main aspects considered a priority for the audit plan by the coordinators of the internal audit departments in 2023 are: operational efficiency and effectiveness, alignment of operations with the organization's objectives and compliance with the regulations in force. The determining factors in the development of the internal audit plan consider the use of a risk-based methodology, the requests received from the audit committee or the evolution of legislative requirements.

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**ACCOUNTING DOCUMENTARY CONTROL, A CONTROL PROCEDURE USED
IN PRACTICE, METHODS OR TECHNIQUES OF EXERCISE FOR
ESTABLISHING THE REALITY, LEGALITY, AND EFFICIENCY OF ECONOMIC
AND FINANCIAL OPERATIONS**

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ABSTRACT: In a market economy, the profitable conduct of any economic agent's activity is ensured by understanding the economic and financial conditions in relation to market requirements and regulations. According to its mission, control is a component of management that, through its exercise, serves both the company's management, its partners, and public authorities, even the population. The financial control system is an essential tool for management to regularly oversee the company's activities in order to make timely decisions that are necessary.

The main responsibilities of a manager are to be in contact, be informed, and control ¹. Accounting documentary control is one of the control procedures used in practice, which involves examining primary and summary documents, technical-operational records, accounting status, and balance sheets to establish the reality, legality, and efficiency of economic and financial operations. This is accomplished through a series of methods or techniques that are selectively and combinatively used, with the most important ones being:

- Reverse chronological control;
- Systematic control;
- Reciprocal control;
- Cross-control;
- Control investigation;
- Critical examination;
- Accounting analysis;
- Analysis based on synthetic and analytical control balances;
- Technique of balance sheet correlations.

¹ .Organizational Management, Publisher Tribuna Economică, Bucharest, 2001, page 354.

Keywords: *accounting documentary control, procedures, methods or techniques of exercise, financial accounting.*

JEL Code: A19

INTRODUCTION

Control, as a concept ² , involves verifying established programs, errors, deviations, shortages, and deficiencies in a specific field of activity. There is a close relationship between accounting records and control. *Accounting records are the main source of data and information for conducting control* ³ .

Control, as a function of management, requires both quantitative and qualitative information, as well as observing the consistency between economic and financial activities and management decisions: laws, norms, and orders. In order to obtain a real picture of the controlled economic and financial activities, the sources of information need to be real, concrete, and legal.

To achieve this objective, the system of primary documents and technical-operational and accounting records is used as a source and object of information for control. Accounting documentary control represents a control procedure used in practice, which is carried out by using methods or techniques to establish the reality, legality, and efficiency of economic and financial operations.

1. TECHNICAL-OPERATIONAL AND ACCOUNTING RECORDS, AS WELL AS THE SYSTEM OF PRIMARY DOCUMENTS, SOURCE AND OBJECT OF INFORMATION FOR CONTROL

Control, as a function of management, requires both quantitative and qualitative information, as well as observing the consistency between economic and financial activities and management decisions: laws, norms, and orders, and also establishing ways to correct the organization of activities, deficiencies, and difficulties that hinder the optimal conduct of activities.

S. Mihăiescu, Financial Control, Ed. A-92, Iași, 1996, p. 9. Also, refer to Bank Financial Control, Ed. Sedcom Libris, Iași, 2002, by the same author.

L. Hengiu, Financial Control and Accounting Expertise, Ed. Didactică și Pedagogică, Bucharest, 1976, p. 27.

Records represent the real synthesis of economic and social activities, as well as the control over the conduct of activities and the financial results obtained. Therefore, the system of records is the essential source of information for financial control. To obtain a real picture of the controlled economic and financial activities, the sources of information need to be real, accurate, and legal. That is why the objectives of control include the preparation of primary documents while respecting the form and content conditions, as well as the organization and management of technical-operational and accounting records in accordance with methodological norms.

Primary documents or supporting documents, as written evidence of economic and financial facts, are recorded at the place and time of their occurrence and serve for the operational information of economic agents' management. For accounting purposes, they fulfill the function of supporting documents.

The essential characteristic of documents is that they reflect the financial situation and incur material responsibility. Therefore, documents must meet certain requirements regarding their structure, circulation, and retention.

Each document used as a supporting document must contain certain mandatory elements, as follows: -document name; -name and headquarters of the unit that prepares it; -number and date of preparation; -parties involved in the operations; -quantitative and qualitative data of the performed operations; -signatures of the persons responsible for carrying out the operation, those who verify the documents for preventive financial control or have the right to approve the performance of these operations.

1.1. Methods of Document Control

A. In terms of form the objectives of document control are as follows:

- a) Authenticity;
- b) Accuracy of preparation and validity of documents;
- c) Correct calculation.

a) Authenticity of documents involves their preparation in accordance with legal conditions. The control of document authenticity has the following important objectives:

- proper use of standardized forms;
- accuracy of preparation and completion with all necessary elements;
- identification of possible forgeries and alterations;

- existence of signatures by authorized individuals to initiate, execute, and control the respective operations;

- consistency between documents and the accompanying justifications.

b) Control of the accuracy of document preparation and validity is carried out in relation to the time and conditions of the economic and financial operations they record.

c) Control of correct calculation aims primarily to eliminate calculation errors that can distort the content of economic and financial operations.

B. In terms of content,

The objectives of document control are:

a) Legality or correctness;

b) Reality/accuracy;

c) Efficiency.

a) Legality or correctness is the principle that requires compliance with the provisions of all regulatory acts. Therefore, the content of supporting documents is compared with the current legal provisions and the consistency between them is established.

b) Control of the reality of economic and financial operations determines whether they occurred within the limits, conditions, and locations indicated in the documents. In this case, factual control is used, requesting those who signed the document to confirm the reality of the operations and the authenticity of the signatures on the documents.

c) Control of the efficiency of economic and financial operations considers more complex elements, namely:

c.1) necessity, c.2) cost-effectiveness, and c.3) opportunity.

c.1) Control of necessity considers the degree of usefulness of operations, consumption, or expenses recorded in documents in order to eliminate waste, unnecessary and inefficient expenses.

c.2) Control of cost-effectiveness examines whether the economic operation is necessary and whether it provides an economic and financial advantage.

c.3) Control of opportunity evaluates whether the chosen timing and location for an operation are the most suitable from an economic perspective.

An economic and financial operation may be real and meet legal requirements but may not be opportune from an economic standpoint. Therefore, the economic efficiency of operations needs to be considered, namely, whether the operation was strictly necessary for the smooth conduct of activities and whether it resulted in the lowest cost.

1.2. Use and Record-Keeping of Special Regime Forms

An essential objective of document control is the management of forms with a special regime.

Special regime forms are intended to record the existence, circulation, and use of material and monetary values. Through fraudulent and non-compliant use, these forms can be used to remove material and monetary values from the economic circuit for personal gain. For this reason, a series of forms are subject to special management, use, and record-keeping, constituting an important and efficient means of preventing damage to assets.

Some examples of forms with a special regime include cash checks, settlement checks, and tax invoices.

Technical-operational and accounting records for control are crucial because they are considered a continuous control mechanism over economic and financial activities, a necessary condition for ensuring the integrity of assets and the efficient use of material and monetary resources. Accounting records, registers, financial statements, and their annexes constitute a fundamental element of financial order and discipline because they enable the understanding and control of the financial management situation of economic agents.

Accounting records themselves serve as an effective control means, provided that they are made immediately after the respective operation and for each phase of it. Double-entry accounting also serves as a control measure for each operation, ensuring the accuracy of accounting records and taking immediate action to correct clerical errors.

2. METHODOLOGY OF FINANCIAL CONTROL

2.1. The Methodological System of Financial Control

Through control, it is established whether economic and financial activities are organized and conducted in accordance with established norms, principles, or rules.

The essential moment of the control process is comparison. Thus, any economic and financial operation or activity is examined not only in itself but also in relation to a criterion, a basis for comparison. Control comparison involves specific aspects depending on the nature of the controlled operations and activities, calculation methodology, and record-keeping system. The operations or activities being compared must be homogeneous, calculated, and expressed according to a unified methodology.

2.2. Key Stages in the Methodological System of Financial Control

Methodologically, control is a process of understanding and improvement with the following key stages:

- a) Understanding the established situation (programs, tasks, norms);
- b) Understanding the actual situation;
- c) Determining deviations by comparing the actual situation with the established one;
- d) Conclusions, suggestions, proposals, and measures.

The control methodology involves an interconnected chain of research and action that theoretically unfolds as follows:

- a) Formulating control objectives;
- b) Forms of control and competent bodies responsible for conducting control on the established objectives;
- c) Sources of information for control;
- d) Application of specific control procedures, methods, and techniques;
- e) Identification of deviations and deficiencies;
- f) Control documents that record the findings;
- g) Methods of finalizing the control action;
- h) Efficiency of control in terms of preventing, identifying, and rectifying deviations, as well as improving the controlled activity.

The control methodology represents the interconnection of procedures, methods, principles, and means that make the conduct of control activities possible.

The main component of the control methodology is the set of procedures for researching, understanding, and improving economic and financial activities.

The control methodology utilizes both its own ways and methods of research and action, as well as methodological tools from other scientific disciplines such as economic and financial analysis, mathematics, accounting, law, marketing, etc.

3. FINANCIAL CONTROL PROCEDURES

The research methods of control ensure effective knowledge of economic and social phenomena and their correct interpretation.

Financial control methods involve the use of specific control procedures, which in turn require the use of appropriate control techniques and tools.

3.1. Important Control Procedures Used in Practice

The diversity of activities in the economy necessitates the existence of multiple orientations, which in turn involve several control procedures.

The most important control procedures used in practice include:

- 3.1.1 General preliminary study;
 - 3.1.2 Accounting documentary control;
 - 3.1.3 Factual control;
 - 3.1.4 Economic and financial analysis;
 - 3.1.5 Total control and sampling control.
- 3.1.1. Preliminary General Study

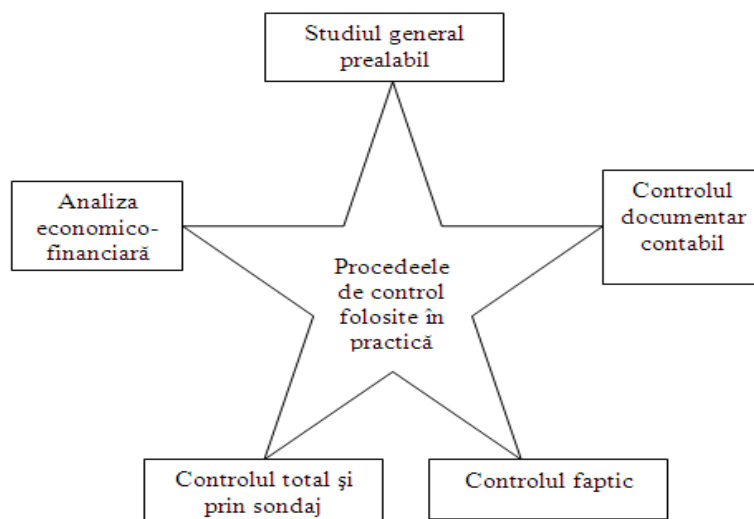


Fig. 3.1 Important control methods used in practice. ⁶

3.1.1. Preliminary general study

This study enables the understanding of essential and specific elements of the activity to be controlled. Based on this study, the organization and implementation of control work can be directed towards remedying deficiencies or mobilizing improvement reserves in economic and financial activities.

The main objectives of this study are:

1. Understanding the tasks resulting from the applicable norms, which ensure the orientation of control bodies regarding the aspects to be considered in the upcoming action. This includes knowledge of instructions, competencies, and responsibilities within the internal structure of the controlled economic entity.
2. Understanding the organization of technical-operational and accounting records as a source of information for control.
3. Understanding the actual situation regarding the activity to be controlled.

The main sources of information for the preliminary general study on the controlled activity are:

- Legal norms related to the activity in question.
- Previous control reports and measures taken based on them.
- Accounting reports and measures established based on them.
- Consultations with the management of the department subjected to control.

3.1.2. Documentary Accounting Control

This procedure involves the control of establishing the reality, legality, and efficiency of economic and financial operations and activities through the examination of primary and summary documents, records in technical-operational and accounting records, accounting situation, and balance sheets.

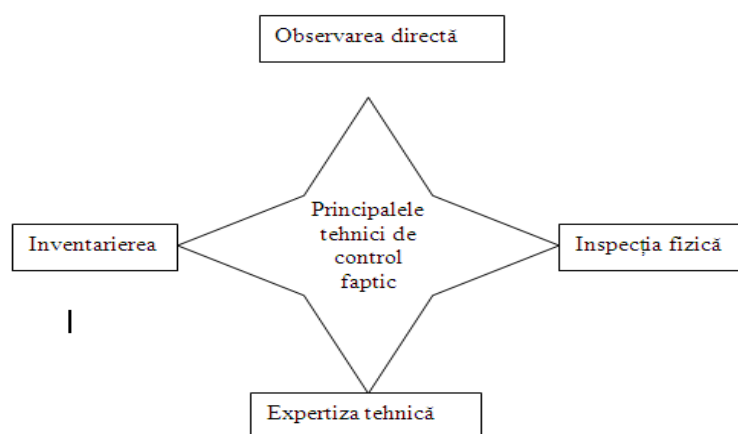
3.1.3. Factual Control

⁴ *This procedure involves the actual determination of the existence and movement of material and financial resources, as well as the conduct of economic and financial activities.*

It is carried out at the location where the material and financial resources exist and aims to accurately determine their quantities, state, processing stage, and compliance with legal regulations in their use.

⁵ *The main techniques of factual control are:*

- a) Inventorying
- b) Technical expertise
- c) Direct observation
- d) Physical inspection



[Fig.3.2 - The main techniques of factual control] ⁶

a.Inventorying: is a set of operations that determine the existence, both quantitatively and in value or only in value, of assets and liabilities in the entity's assets at the time of inventory.

According to legal provisions, ⁷ "commercial companies, national companies, autonomous administrations, national research and development institutes, cooperative societies, and other legal entities, with or without profit, as well as self-employed individuals engaged in independent activities," are obliged to organize and conduct the inventory of their assets.

⁴ Catrina Ioana, Catrina Oana Maria, Catrina Alexandru Nicolae, "Management Control" course support, 2023.

⁵ Catrina Ioana, Catrina Oana Maria, Catrina Alexandru Nicolae, "Management Control" course support, 2023.

⁶ Catrina Ioana, Catrina Oana Maria, Catrina Alexandru Nicolae, "Management Control" course support, 2023

⁷ Law of Accounting 82/1991, republished in Official Gazette No. 629 of August 26, 2002.

The purpose of inventory is to establish the quantitative and qualitative existence of assets and liabilities of a management unit at a specific moment, as well as to verify the proper execution of tasks by managers.

The actual inventory stocks are compared with the recorded ones in the accounting records to determine any differences.

b. Technical expertise: Technical expertise is a method of factual control used to determine material values, the reality of an operation, the quality of products, the volume of work, and the quantity of materials required for their execution. It is carried out by specialists in the technical field at the request of control bodies.

c. Direct observation: Direct observation is used to establish factual situations that do not result from documents. It involves the control body physically visiting the location to observe the implementation of operations, the organization and execution of work in various departments and sectors.

d. Physical inspection: Physical inspection involves examining assets and other resources, including verifying the existence of a specific asset or the supporting documents recorded in the records.

3.1.4. Economic and Financial Analysis

Economic and financial analysis is a methodological and systematic tool used by financial control to break down the controlled activity into constituent elements and study the relationships between them.

Economic and financial analysis examines the following aspects:

- The implementation of established tasks
- Factors and their influences on economic activity
- Possibilities of discovering and mobilizing internal reserves

The general technique of economic and financial analysis for an economic phenomenon involves determining the structural elements, influencing factors, and their correlation. There are direct and reciprocal relationships between documentary accounting control and economic and financial analysis.

Analysis necessarily involves using documentary accounting control to ensure that the information used is real, accurate, and legal.

Documentary accounting control utilizes the conclusions of the analysis to obtain a general orientation on the activities of the controlled economic entities, focusing attention on identifying any negative aspects.

3.1.5. Total Control and Sampling:

Total control encompasses all operations within the established objectives throughout the entire control period. It is the most comprehensive and reliable method but may not always be feasible due to the large volume of work involved.

Control through sampling involves examining the most representative documents and operations that allow for general conclusions about the objective. The effectiveness of this control depends on the selection of the period, operations, and documents that can lead to generalizing conclusions and necessary measures.

The efficiency of sampling control depends on how the main reference points are selected and the proportion of operations within the scope of control.

4. ACCOUNTING DOCUMENTARY CONTROL

⁸ This procedure involves the control to establish the reality, legality, and efficiency of operations and economic and financial activities through the examination of primary and aggregate documents, records in technical-operational and accounting records, accounting situation, and balance sheets.

⁸ *Catrina Ioana, Catrina Oana Maria, Catrina Alexandru Nicolae, "Management Control" course support, 2023.*

4.1 Forms of exercising accounting documentary control Accounting documentary control can be:

A.Preventive - carried out on directive documents;

B. Subsequent - carried out using execution documents that provide evidence of the actual occurrence of economic and financial operations.

The tasks of the entities performing accounting documentary control are complex because they must simultaneously verify whether the supporting documents comply with both formal and substantive requirements.

4.2 Methods or techniques of exercising accounting documentary control

Accounting documentary control is exercised through a series of selective and combined methods or techniques. The most important ones are:

4.2.1 Chronological control;

4.2.2 Reverse chronological control;

4.2.3 Systematic or problem-oriented control;

4.2.4 Reciprocal control;

4.2.5 Cross-check control;

4.2.6 Control investigation;

4.2.7 Critical examination;

4.2.8 Accounting analysis;

4.2.9 Analysis based on the synthetic and analytic control balance;

4.2.10 Technique of balance sheet correlations

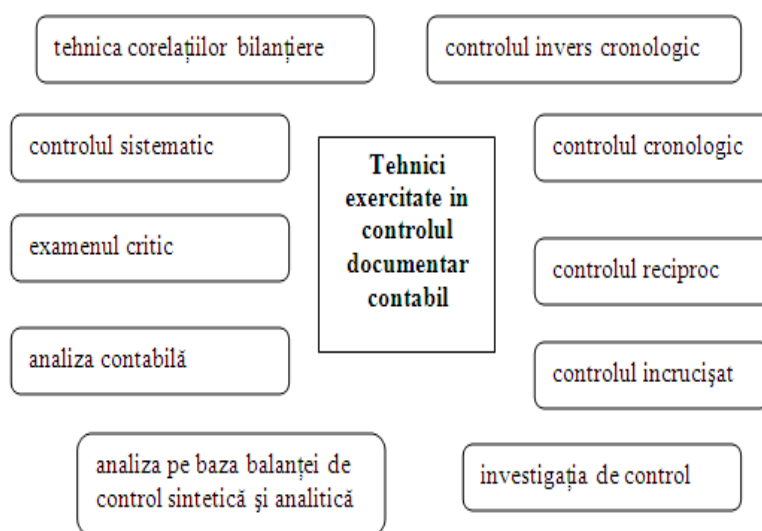


Fig. 4.1 Methods or techniques used in accounting documentary control

4.2.1 Chronological control is exercised in the order of preparation, recording, and filing of documents, involving a large volume of operations of various kinds, the use of extensive legislative material, and not allowing the tracking of a specific issue from beginning to end.

4.2.2 Reverse chronological control is exercised from the end to the beginning of the control period and is usually used when determining the timing of a deviation or when identifying omissions or recording errors that require document-to-document research.

4.2.3 In systematic or problem-oriented control, documents are grouped according to a specific issue and then verified in chronological order. Problem-oriented control is a more efficient method of examining documents because it allows for more careful examination of a particular objective.

4.2.4 Reciprocal control consists of comparing documents or records with identical content but different formats for the same operations or different operations that have a reciprocal relationship at the same unit.

4.2.5 Cross-check control involves examining and comparing all copies of a document existing at the controlled unit as well as at units with which settlements have been made. In addition to comparing all copies of a document, cross-check control includes different documents or records from which inconsistencies relating to the same operation can be identified.

4.2.6 Control investigation this represents the manner in which the control body obtains information from the personnel whose activities are being audited. It involves studying information that does not result from the available documents but provides additional information for the control body.

4.2.7 Critical examination. Involves the examination of acts, documents, and records, focusing on the most important issues. It is used, for example, in the case of future payments. The effectiveness of this control depends on the professional experience of the control team.

4.2.8 Through accounting analysis, the accounts in which the operation must be recorded and the relationship between them are determined. The assets and liabilities are reflected in accounting through synthetic and analytic accounts.

4.2.9 Analysis based on the synthetic and analytical control balance

Synthetic accounts reflect the elements of assets and liabilities in monetary terms by groups or categories, while analytical accounts reflect their component parts in monetary and quantitative terms. There is a close relationship between synthetic and analytical accounts, and the analytical control balance is used to control the consistency between the data of a synthetic account and those of its analytical accounts.

Accounting has a control system in which the reflection of operations resulting from the movement and transformation of material and monetary values is based on the principle of double-entry. This principle allows for the maintenance of a necessary permanent balance to control the accuracy of data recorded in accounts.

The synthetic control balance helps identify incorrect recording of economic operations due to non-compliance with the principle of double-entry. Recording errors are identified through the equalities that should exist between the totals of different columns, as well as through the correlations established using these equalities.

The possibilities of detecting errors using the synthetic control balance in accounting through equalities between columns are limited only to those errors based on inequalities, without detecting errors that distort the meaning of the recordings, such as:

- Omissions of recording operations;
- Compensation errors;
- Attribution errors;
- Recording errors in the journal register.

Omissions of recording occur when an economic operation is not recorded in either the debit or credit. These are identified by marking the documents or by finding documents that do not bear the registration note, as well as through complaints or reports. Compensation errors result from the incorrect reporting of amounts in the journal or supporting documents in the "General Ledger", in which a sum is entered as a negative equal to the sum entered as a positive in the same part of one or more accounts, thus compensating for both categories of errors in total.

4.2.10 Technique of balance correlations

The head of the unit and the head of the financial and accounting department are responsible for the realization and accuracy of data regarding the achievement of economic and financial indicators reported through the financial statements.

In order to submit the financial statements, the head of the financial and accounting department has the obligation to control compliance with the provisions of the methodological norms regarding:

- Preparation, verification, and consolidation of the financial statements;
- Ensuring correlations between the indicators in the forms;
- Consistency of data in the balance sheet annexes with those in the budget of income and expenses.

CONCLUSIONS

Accounting documentary control is a process that involves controlling the reality, legality, and efficiency of economic and financial operations and activities by examining primary and consolidating documents, records in technical-operational and accounting records, the accounting situation, and financial statements.

Primary documents include payment orders, invoices, fiscal invoices, etc. Technical-operational and accounting records are very important for control as they are considered a means of uninterrupted control over economic and financial activities, a necessary condition for ensuring the integrity of assets and efficient use of material and monetary resources.

Accounting entries, registers, accounting statements, the balance sheet, and its annexes constitute a fundamental element of financial order and discipline because they enable the knowledge and control of the financial management situation of economic agents.

Accounting entries themselves are an effective means of control as long as they are performed immediately after the respective operation and for each phase of it. Double-entry accounting is also a means of controlling each operation as it ensures the accuracy of accounting entries and the immediate measures to correct clerical errors.

Accounting documentary control can be preventive, exercised on order documents, and subsequent, carried out with the help of execution documents that prove the occurrence of economic phenomena, and its implementation is done through various specified modalities or techniques of exercise mentioned in section 4, subsection 4.2, and figure 4.1 of this article.

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TYPES OF DATA ANALYTICS TO IMPROVE DECISION-MAKING

Matei Cernăianu Alice – Dalina²⁶¹

ABSTRACT: Data is a powerful tool that is available to organizations in staggering quantities. When used correctly, it has the potential to drive decision making, influence strategy development and improve business performance.

According to business intelligence firm MicroStrategy's Global State of the Enterprise report²⁶², respondents said data analytics enabled their organizations "to make faster, more effective decisions." Data visualization is great for conveying descriptive analysis because charts, graphs, and maps can show data trends, as well as rising and falling trends, in a clear and understandable way. Diagnostic analysis addresses the next logical question: "Why did this happen?" For further analysis, this type involves comparing co-existing trends or movements, revealing correlations between variables, and proving causality where possible. Predictive analytics will be used to predict future trends or events and answer the question "what will happen in the future?" Ultimately, prescriptive analytics answers the question "what should we do next?" when making data-driven decisions. By analyzing historical data and industry trends, you can make informed predictions about the future of your business.

These four types of data analytics should be used together to build a complete picture of the story data and make informed decisions.

Depending on the problem you're trying to solve and your goals, you can choose two or three of these analysis types—or use them sequentially to gain the deepest understanding of your story data.

Keywords: data analytics, diagnostic analysis, predictive analytics, prescriptive analytics

JEL classification: C4, C55, C8

INTRODUCTION

In the era of big data and technological advancements, the volume, variety, and velocity of data have grown exponentially. To derive meaningful insights and make informed decisions, organizations turn to data analytics. Data analytics encompasses a wide range of techniques and methodologies to extract knowledge, patterns, and insights from data. This essay explores the various types of data analytics and their applications across industries.

Descriptive Analytics:

Descriptive analytics focuses on understanding historical data to gain insights into past events and trends. It involves summarizing and aggregating data to create meaningful visualizations, reports, and dashboards. Descriptive analytics helps answer questions such as "What happened?" and "How did it happen?" This type of analysis is commonly used for business intelligence purposes, enabling organizations to track key performance indicators (KPIs) and monitor operational efficiency.

Diagnostic Analytics:

Diagnostic analytics aims to determine the causes of past events or trends. It involves conducting in-depth investigations and applying statistical techniques to identify patterns,

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²⁶² <https://www3.microstrategy.com/getmedia/db67a6c7-0bc5-41fa-82a9-bb14ec6868d6/2020-Global-State-of-Enterprise-Analytics.pdf>

correlations, and relationships within data. Diagnostic analytics helps answer questions such as "Why did it happen?" and "What were the contributing factors?" This type of analysis is particularly valuable in identifying the root causes of problems and understanding the factors that impact business performance.

Predictive Analytics:

Predictive analytics focuses on predicting future outcomes based on historical and current data. It uses statistical modeling, machine learning algorithms, and data mining techniques to identify patterns and build predictive models. Predictive analytics helps answer questions such as "What is likely to happen?" and "What are the possible scenarios?" This type of analysis enables organizations to make proactive decisions, anticipate customer behavior, optimize operations, and mitigate risks.

Prescriptive Analytics:

Prescriptive analytics goes beyond predicting future outcomes by providing recommendations and suggesting actions to achieve desired results. It combines historical and real-time data with optimization algorithms and decision-making models. Prescriptive analytics helps answer questions such as "What should we do?" and "What is the best course of action?" This type of analysis empowers organizations to optimize processes, allocate resources efficiently, and make data-driven decisions that drive performance and competitiveness.

Diagnostic vs. Predictive vs. Prescriptive:

While diagnostic, predictive, and prescriptive analytics are distinct types of data analysis, they are interconnected and often used in conjunction. Diagnostic analytics lays the foundation by understanding the past, identifying patterns, and uncovering relationships. Predictive analytics builds upon diagnostic analytics by leveraging these patterns and relationships to forecast future outcomes.

Finally, prescriptive analytics takes it a step further by recommending optimal actions based on predictions and desired outcomes.

Data analytics plays a pivotal role in extracting valuable insights and driving decision-making across industries. This essay discussed several types of data analytics, including descriptive, diagnostic, predictive, and prescriptive analytics, as well as text analytics, spatial analytics, and social network analysis. By leveraging these analytical approaches, organizations can unlock the power of data, gain a competitive edge, and navigate the complexities of the modern data-driven world. As technology continues to evolve, the field of data analytics will likely expand further, enabling even deeper understanding and more accurate predictions from the vast amounts of data available.

4 TYPES OF DATA ANALYTICS TO IMPROVE DECISION-MAKING

Data is a powerful tool that can be used by businesses on a staggering scale. When used correctly, it has the potential to drive decision making, influence strategy development and improve business performance.

According to the report "The Global State of Enterprise Analytics" by business intelligence firm MicroStrategy, 56 percent of respondents said that data analytics led their organization to "make faster and more effective decisions."

Other benefits mentioned include:

Increased efficiency and productivity (64%)

Better financial performance (51%)

Identify and generate new product and service revenue (46%)

Improved customer acquisition and retention (46%)

Improve customer experience (44%)

Competitive advantage (43%)

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WHAT IS DATA-DRIVEN DECISION-MAKING?

Data-driven decision making (sometimes shortened to DDDM) is the process of using data to inform your decision-making process and validate a course of action before committing to it. In business, there are many forms. For example, a company might: collect survey responses to understand what different customers want, conduct user testing to see how customers tend to use its product or service, and identify potential issues that should be addressed before a full release launches a new product or service in a test market to Testing the waters and determining exactly how a business opportunity or threat will determine exactly how your data incorporation strategy will work depends on a number of reasons, such as your business goals and the type and quality of data you have access to.

For a long time, the collection and analysis of data has played an important role in enterprise-level companies and organizations. But, with humans producing more than 2.5 trillion terabytes of data every day, it will never be easier for businesses of all sizes to collect, analyze, and interpret that data as true, as explained here. This is a true modern image, despite the fact that commerce in one form or another has existed in decision-making for hundreds of years. Examples of data-driven decision-making in today's largest, most successful organizations use data when making high-impact business decisions. To better understand how your organization can incorporate data analytics into its decision-making process, consider these intellectual success stories.

1. Leadership Development at Google

Google's leadership development is firmly focused on "people analysis." Google Project Oxygen scoured the data of more than 10,000 performance reviews as part of its celebrity analysis program and compared the data to employee protection rates. Google used this information to identify commonalities in high performance abilities and created training programs to develop those abilities. These efforts have increased the median percentage managed from 83% to 88%.

2. Real Estate Decisions at Starbucks

After closing hundreds of Starbucks locations in 2008, Starbucks' real estate decisions, when then-CEO Howard Schultz (Howard Schultz) promised that the company would take a more analytical approach to tools to understand future malls Place. Starbucks now works with location-analytics companies, using data such as demographics and traffic patterns to pinpoint ideal store locations. The group also considered the implications of its regional teams before making a decision. Starbucks uses this data to determine success in a particular location before making new investments

3. Driving Sales at Amazon

Drive Amazon Sales Amazon uses data to decide which products they should recommend to customers based on their buy-first and search-for-model. Instead of blindly suggesting products, Amazon uses data analytics and machine learning to power its recommendation engine. McKinsey estimates that in 2017, 35% of Amazon's consumer purchases could be linked to information from the company's recommendation system.

BENEFITS OF DATA-DRIVEN DECISION-MAKING

1. You'll Make More Confident Decisions

Once you start collecting and analyzing data, you will make more confident decisions, you may find it easier to make confident decisions about any business challenge, whether it is easier to start or stop a product, adjust your Marketing information, share to new market or something.

Data performs multiple angles. On the one hand, it serves as a foundational test of what currently exists, which allows you to better understand the impact of any decisions you make on your business.

Beyond that, the data is combined in an almost total image and whole, which is not the case with intuition and intuition. By cutting out key points in business decisions, you can instill confidence in yourself and the company as a whole.

This confidence allows your organization to fully commit to a particular aspiration or strategy without undue fear of making the wrong decision. Just because a decision is based on data doesn't mean it's always right. While management data may indicate a particular pattern or hide a result, any decision based on data will be inaccurate if the data collection process or solution is deficient. Why you should identify reasons to predict and monitor the impact of each business decision.

2. You'll Become More Proactive

When you first implement a data-driven decision-making process, it's likely to be reactionary in nature. The data tells a story, which you and your organization must then react to.

While this is valuable in its own right, it's not the only role that data and analysis can play within your business. Given enough practice and the right types and quantities of data, it's possible to leverage it in a more proactive way—for example, by identifying business opportunities before your competition does, or by detecting threats before they grow too serious.

You Can Realize Cost Savings

There are many reasons a business might choose to invest in a big data initiative and aim to become more data-driven in its processes. According to a recent survey of Fortune 1,000 executives conducted by NewVantage Partners for the Harvard Business Review, these initiatives vary in their rates of success.

One of the most impactful initiatives, according to the survey, is using data to decrease expenses. Of the organizations which began projects designed to decrease expenses, more than 49 percent have seen value from their projects. Other initiatives have shown more mixed results.

“Big data is already being used to improve operational efficiency,” said Randy Bean, CEO and managing partner of consultancy firm NewVantage Partners, when announcing the results of the survey. “And the ability to make informed decisions based on the very latest up-to-the-moment information is rapidly becoming the mainstream norm.”

HOW TO BECOME MORE DATA-DRIVEN

If you have a goal of becoming more data-driven in your approach to business, there are many steps you can take to reach that goal. Here's a look at some of the ways you can approach your daily tasks with an analytical mindset.

1. Look for Patterns Everywhere

Data analysis is, at its heart, an attempt to find a pattern within, or correlation between, different data points. It's from these patterns and correlations that insights and conclusions can be drawn.

The first step in becoming more data-driven is making a conscious decision to be more analytical—both in business as well as in your personal life. While this might seem simple, it's something that takes practice.

Whether you're in the office pouring over financial statements, standing in line at the grocery store, or commuting on the train, look for patterns in the data around you. Once you have noticed those patterns, practice extrapolating insights and try to draw conclusions as to

why they exist. This simple exercise can help you train yourself to become more data-driven in other areas of your life.

2. Tie Every Decision Back to the Data

Whenever you're presented with a decision, whether business-related or personal in nature, do your best to avoid relying on gut instinct or past behavior when determining a course of action. Instead, make a conscious effort to apply an analytical mindset.

Identify what data you have available that can be used to inform your decision. If no data exists, consider ways in which you could collect it on your own. Once you have the data, analyze it, and use any insights to help you make your decision. As with the pattern-spotting exercise, the idea is to give yourself enough practice that analysis becomes a natural part of your decision-making process.

3. Visualize the Meaning Behind the Data

Data visualization is a huge part of the data analysis process. It's nearly impossible to derive meaning from a table of numbers. By creating engaging visuals in the form of charts and graphs, you'll be able to quickly identify trends and make conclusions about the data.

Familiarize yourself with popular data visualization techniques and tools, and practice creating visualizations with any form of data you have readily available. This can be as simple as creating a graph to visualize your monthly spending habits and drawing conclusions from the visualization. You can then use these insights to make a personal budget for the next month. After completing that exercise, you'll have successfully made a data-driven decision.

4. Consider Furthering Your Education

If you're uncomfortable with the idea of learning how to incorporate data into your decision-making process on your own, there are a number of educational options you can pursue to develop the data science skills needed to succeed.

Which option makes the most sense will depend on your personal and professional goals. For example, individuals considering a serious career change might decide to pursue a master's degree with an emphasis on data analytics or data science. But for everyone else, simply taking an online business analytics or data science course could be enough to lay the foundation necessary for success.

DATA VISUALIZATION TOOLS FOR BUSINESS

1. Microsoft Excel (and Power BI)

In the strictest sense, Microsoft Excel is a spreadsheet software, not a data visualization tool. Even so, it has useful data visualization capabilities. Given that Microsoft products are widely used at the enterprise level, you may already have access to it.

According to Microsoft's documentation, you can use Excel to design at least 20 types of charts using data in spreadsheets. These include common options, such as bar charts, pie charts, and scatter plots, to more advanced ones like radar charts, histograms, and treemaps.

There are limitations to what you can create in Excel. If your organization is looking for a more powerful data visualization tool but wants to stay within the Microsoft ecosystem, Power BI is an excellent alternative. Built specifically as a data analytics and visualization tool, Power BI can import data from various sources and output visualizations in a range of formats.

2. Google Charts

For professionals interested in creating interactive data visualizations destined to live on the internet, Google Charts is a popular free option.

The tool can pull data from various sources—including Salesforce, SQL databases, and Google Sheets—and uses HTML5/SVG technology to generate charts, which makes them incredibly accessible. It offers 18 types of charts, including bar charts, pie charts, histograms, geo charts, and area charts.

Members of the Google community occasionally generate new charts and share them with other users, which are arranged in a gallery on Google's website. These charts tend to be more advanced but may not be HTML5-compliant.

3. Tableau

Tableau is one of the most popular data visualization tools on the market for two main reasons: It's relatively easy to use and incredibly powerful. The software can integrate with hundreds of sources to import data and output dozens of visualization types—from charts to maps and more. Owned by Salesforce, Tableau boasts millions of users and community members, and it's widely used at the enterprise level.

Tableau offers several products, including desktop, server, and web-hosted versions of its analytics platform, along with customer relationship management (CRM) software.

A free option, called Tableau Public, is also available. It's important to note, however, that any visualizations created on the free version are available for anyone to see. This makes it a good option to learn the software's basics, but it's not ideal for any proprietary or sensitive data.

4. Zoho Analytics

Zoho Analytics is a data visualization tool specifically designed for professionals looking to visualize business intelligence. As such, it's most commonly used to visualize information related to sales, marketing, profit, revenues, costs, and pipelines with user-friendly dashboards. More than 500,000 businesses and two million users currently leverage the software.

Zoho Analytics has several paid options, depending on your needs. There's also a free version that allows you to build a limited number of reports, which can be helpful if you're testing the waters to determine which tool is best for your business.

There are many other tools that work similarly to Zoho Analytics and are tailored to sales and marketing professionals. HubSpot and Databox are two examples, both of which include powerful data visualization capabilities.

5. Datawrapper

Datawrapper is a tool that, like Google Charts, is used to generate charts, maps, and other graphics for use online. The tool's original intended audience was reporters working on news stories, but any professional responsible for managing a website can find value in it.

While Datawrapper is easy to use, it's somewhat limited, especially compared to others on this list. One of the primary limitations is that it doesn't integrate with data sources. Instead, you must manually copy and paste data into the tool, which can be time-consuming and liable to error if you aren't careful.

Some common outputs include scatterplots, line charts, stacked bar charts, pie charts, range plots, and a variety of maps and tables. Free and paid options are available, depending on how you intend to use the tool.

6. Infogram

Infogram is another popular option that can be used to generate charts, reports, and maps.

What sets Infogram apart from the other tools on this list is that you can use it to create infographics (where its name comes from), making it especially popular among creative professionals. Additionally, the tool includes a drag-and-drop editor, which can be helpful for beginners.

Visualizations can be saved as image files and GIFs to be embedded in reports and documents, or in HTML to be used online. Like most of the other tools on this list, Infogram has tiered pricing, ranging from a free to enterprise-level version.

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CONCLUSIONS

In today's fast-paced and interconnected world, data has emerged as a crucial asset for organizations in making informed decisions. The sheer volume, velocity, and variety of data generated daily present immense opportunities for businesses to gain a competitive edge, optimize operations, and improve overall performance. This essay has explored the importance of data in decision making and highlighted key reasons why data should be at the forefront of every organizational strategy.

Firstly, data provides a factual and objective basis for decision making. By relying on data-driven insights, organizations can move away from subjective judgments and biases, ensuring decisions are grounded in evidence and analysis. Data acts as a reliable source of information that helps in understanding market trends, customer preferences, and operational efficiencies. It enables decision makers to identify patterns, correlations, and causality that may not be apparent through intuition alone.

Secondly, data empowers organizations to anticipate and adapt to changes effectively. By analyzing historical and real-time data, organizations can identify emerging trends, predict future outcomes, and proactively respond to market shifts. Predictive analytics, for instance, allows businesses to forecast demand, anticipate customer behavior, and make timely adjustments to their strategies. In a rapidly evolving business landscape, data serves as a compass, guiding organizations to make agile decisions and stay ahead of the competition.

Furthermore, data-driven decision making enhances risk management. By analyzing data, organizations can identify potential risks, assess their impact, and develop mitigation strategies. Data provides insights into historical patterns, outliers, and anomalies, enabling proactive risk management and the identification of early warning signals. With robust risk analytics, businesses can identify vulnerabilities, make informed trade-offs, and allocate resources strategically to minimize the potential negative impact of risks.

Data also plays a pivotal role in improving operational efficiency and resource allocation. By analyzing data related to processes, supply chains, and resource utilization, organizations can identify bottlenecks, optimize workflows, and allocate resources more effectively. This leads to cost savings, improved productivity, and enhanced customer satisfaction. Data-driven insights allow decision makers to identify areas of improvement, set realistic goals, and monitor performance against key metrics, thereby driving continuous improvement and operational excellence.

Additionally, data fosters customer-centric decision making. By leveraging customer data, organizations can gain a deep understanding of their target audience, preferences, and behavior. This enables personalized marketing, product customization, and tailored customer experiences. By analyzing customer data, organizations can identify patterns, preferences, and sentiment, enabling them to deliver products and services that meet customers' evolving needs and expectations. This customer-centric approach leads to increased customer loyalty, higher satisfaction levels, and improved brand reputation.

In conclusion, data has become an indispensable asset in decision making. It provides a foundation of objectivity, helps in anticipating changes, improves risk management, enhances operational efficiency, and fosters customer-centricity. As technology continues to advance, the availability of data will continue to grow, making it even more essential for organizations to harness its potential. Embracing a data-driven culture and investing in data analytics capabilities will enable organizations to unlock valuable insights, drive innovation, and thrive in an increasingly data-centric world. Ultimately, those organizations that leverage data effectively will be best positioned to make accurate, timely, and impactful decisions, setting them apart as leaders in their respective industries.

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CROSS-BORDER INSOLVENCY OF GROUP OF COMPANIES MEMBERS AT THE INTERSECTION OF UNIVERSALIST AND TERRITORIALIST PRINCIPLES

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Abstract:

The state of insolvency is generally regarded by the Romanian and international academic environment as "a disease" or even as "a disease", "a sin of the over-indebted", a "catastrophe of entrepreneurs", "a consequence of globalization", or as "a sober and gloomy topic of discussion". In the fight against this, the insolvency proceedings can be regarded as the 'remedy', which directly and indirectly combats its effects. The importance of an efficient legal regime of the insolvency procedure is all the more obvious in the current context when business is carried out, in large part, through the international networks created by GTSs, NCMS and TNC's. At the macroeconomic level, the bankruptcy of a partner of theirs can lead to the bankruptcy of all business partners and to the creation of a "snowball", more or less large, of insolvency proceedings at the level of the entire network.

In this context, the need for a homogeneous set of international rules of insolvency proceedings was created, which would ensure a modern judicial management of the insolvency proceedings linked together on multicontinental distances and the avoidance of legislative conflicts. This set of legal rules of insolvency proceedings and economic circumstances can be found, both in legal literature and in the law, as a 'cross-border insolvency procedure'.

It was thanks to these valences of the cross-border insolvency procedure that the imperatives of communication, cooperation and coordination of the procedure were triggered, creating two distinct schools of thought along the way, that of 'territorialism' and that of 'universalism'. These imperatives promoted among specialists serve as a powerful countertrench for issues related to the jurisdiction of the courts, normative compatibility and the recognition of foreign proceedings.

Keywords : *group of companies, cross-border insolvency, succession, schools of thought, globalization.*

§1. Cross-border insolvency proceedings and their valences (in lieu of introduction)

1. What is a cross-border insolvency procedure? The nature of the global economy is, as stated in the doctrine²⁶⁴, fluctuating, due to its expansion and contracting tendencies. In the periods of expansion of the global economy, there are increases in the rates of granting loans by banks or other lending institutions, as well as in the investments made by businessmen, who aim to expand their activity in various fields, over as long distances as possible. In the literature²⁶⁵, however, attention is drawn to an extremely important aspect of the economy, after each period of economic expansion, an equally strong contraction will follow. Economic contractions are usually created by the same conditions that prompted the expansion. A clear example of this trend is the 2008 real estate bubble (The Housing Bubble), whose road was

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²⁶⁴ Amiya Kumar Bagchi, „*Fluctuations and turbulence of the world-economy*”, Review Research Foundation of State University of New York, Vol. 24, Nr. 2/2001, p. 253-p. 299.

²⁶⁵ Michael Pettis, "Will globalization go bankrupt? ", online source <https://foreignpolicy.com/2009/11/18/will-globalization-go-bankrupt/>, accessed on 17.03.2023.

paved in 1999 by the U.S. government, which initiated a real estate loan guarantee program for high-risk borrowers that year. Thanks to this program between 1999 and 2007, there were record purchases of homes in the U.S. territory. The government's intention was to help borrowers who did not meet all the banks' conditions for mortgages, to purchase a home, but these loans had unconventional conditions, such as higher interest rates and variable payments. These loan conditions were very damaging in the long run, as borrowers did not have the financial possibilities to pay the instalments and interest. In the autumn of 2008 the bubble burst, financial markets fell by about 20%, and a number of insolvencies of several U.S. financial institutions, such as: insolvency of Fannie Mae bank and Freddie Mack; that of broker firm Merrill Lynch; the insolvency of Lehman Brothers; etc.; signalled the beginning of a large-scale financial crisis.

In times of financial crisis, the trend of insolvency proceedings is increasing. In a study conducted by the specialists²⁶⁶ of the American research institute Cornerstone, the trend of insolvency proceedings between 2008-2020 on the territory of the USA was analyzed, years with the most serious and large-scale economic crises.

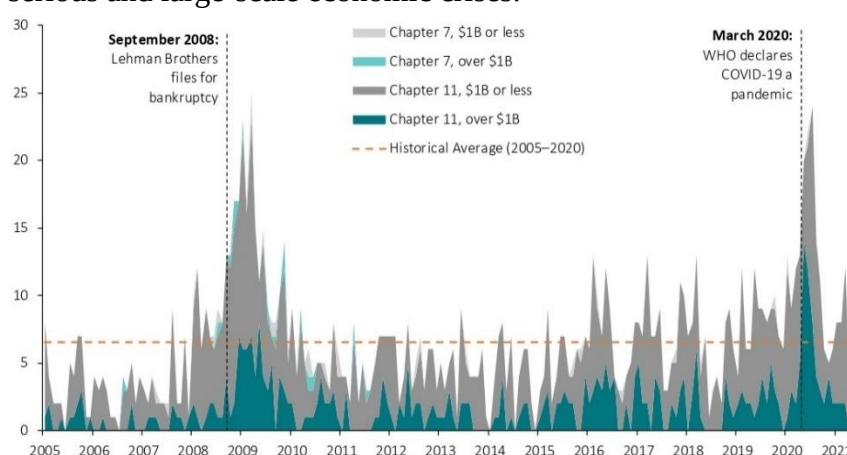


Fig. 14

From the fig. previously exposed it can be seen that the largest number of companies that have opened insolvency proceedings on American territory is recorded in years of economic crisis (2008-2010 and 2020-2021). But between 2021-2022, the specialists²⁶⁷ from Allianz-Trade found a change in the trend of insolvency proceedings, due to the support offered by the states to the enterprises in combating the negative economic effects of the lockdown imposed during the pandemic generated by the COVID-19 virus. The massive support offered by the states keeps the trend of business insolvencies at a minimum, which is down by -12% in 2021. Of the 44 countries studied by Allianz specialists, 24 of them recorded a massive decrease in number newly opened insolvency proceedings, such as: USA with -34%; Japan with -22%; China -28%; Germany -12%; France -12%²⁶⁸.

All these data attest to a deepened fear, both among businessmen and among the states of the world, about the state of insolvency. It has been generally appreciated, in various

²⁶⁶ Allie Schartz, Joseph B. „J.B.” Doyle, Nick Yavorsky Xingyi Chen, „Trends in large corporate bankruptcy and financial distress”, sursă online <https://www.cornerstone.com/wp-content/uploads/2021/12/Trends-in-Large-Corporate-Bankruptcy-and-Financial-Distress-Midyear-2021-Update.pdf>, accesată la data de 25.03.2023.

²⁶⁷ Maxime Lemerle, Ano Kuhanathan, Aurelien Duthoit coordinators and collaborators, "Global insolvency report – Growing risks and uneven state support", online source https://www.allianz-trade.com/content/dam/onemarketing/aztrade/allianz-trade.com/en_gl/erd/publications/pdf/2022_05_18_Insolvency-Report.pdf, accessed on 25.03.2023.

²⁶⁸ Ibid., online source.

papers²⁶⁹ published in the doctrine, as "a disease" or even as "a disease", "a sin of the over-indebted", a "catastrophe of entrepreneurs", "a consequence of globalization", or as "a sober and gloomy topic of discussion".

In our view, everything being viewed in a manner as plastic as that of the opinions formulated in the doctrine, the state of insolvency is a veritable "contagious business virus", a virus that at first manifests itself in the form of debts that do not seem to be so dangerous, but which are allowed to cumulate interest and implicitly to add up with other debts for a longer period of time, the virus grows and spreads rapidly throughout the structure of the business, in some cases even causing its disappearance. In the fight against this virus, the insolvency procedure can be regarded as the "remedy", which directly and indirectly combats its effects. The insolvency procedure directly helps, right from the moment of its opening, the debtors because it stops the accumulation of more debts and interest by them, instills in the creditors the hope that they will recover their claims in full, allows the renegotiation of the outstanding debts of honest debtors during the procedure. It also helps debtors directly with identifying and dissolving fraudulent contracts made by them, as well as in finding out the persons to whom it can be imputed to attract liability for the occurrence of insolvency. Indirectly, it helps the economic environment by offering the legal framework to "clean" the economy from the ballast of non-performing companies that do not have a real object of activity, and when certain businesses of strategic importance become insolvent, it allows the identification, as well as the regulation of certain inefficient domestic and international corporate, financial or fiscal policies by the competent bodies.

The importance of an efficient legal regime of the insolvency procedure is all the more obvious in the current context when business is carried out, in large part, through the international networks created by GTSS, NCMS and TNC's. At the macroeconomic level, the bankruptcy of a partner of theirs can lead to the bankruptcy of all business partners and to the creation of a "snowball", more or less large, of insolvency proceedings at the level of the entire network²⁷⁰. In this context, the need for a homogeneous set of international norms has been created of insolvency proceedings, ensuring a modern judicial management of insolvency proceedings linked to each other over multicontinental distances and avoiding legislative conflicts. This set of legal rules of insolvency proceedings and economic circumstances can be

²⁶⁹ I. Schiau, "Legal regime of commercial insolvency", Ed. All Beck, Bucharest 2001, p. V-VI; Radu Bufan, Andreea-Deli Diaconescu, Mihaela Sărăcuț coordinators and collaborators, "Practically insolvency treaty, ed. a II-a revised and added", Hamangiu Publishing House, Bucharest 2022, p. 1; John R. Sutherland, "The ethics of bankruptcy: a biblical perspective", Journal of Business Ethics, Vol. 7, no. 12/1988, p. 917; article consulted online, source <https://www.jstor.org/stable/25071853>, accessed on 25.03.2023; Gheorghe Piperea, "Insolvency: Introduction", online source <https://www.juridice.ro/35124/insolventa-introducere.html>, accessed on 27.03.2023; Gheorghe Piperea, "Insolvency cross-border", Revista Romanian de Drept al Afaceri, nr. 5/2006; article consulted online, source https://sintact.ro/#/publication/151001765?keyword=insolven%C8%9Ba%20transfrontalier%C4%83&cm=SRES_I, accessed on 14.03.2023; C. Warren, Bankruptcy in United States history 3 (1935); apud Lisa J. Mackintyre, "A sociological perspective on bankruptcy", Indiana Law Journal, Vol. 65, no. 1/1989, p. 123; article consulted online, source <https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1248&context=ilj>, accessed on 25.03.2023.

²⁷⁰ Domenico Delli Gatti, Mauro Gallegati, Bruce C. Greenwald, Alebrto Russo, Joseph E. Stiglitz, „Business fluctuations and bankruptcy avalanches in an evolving network economy”, Journal of Economic Interaction and Coordination, vol. 4, nr. 2/2009, p. 195 – 212; articol consultat online, sursă online https://www8.gsb.columbia.edu/faculty/jstiglitz/sites/jstiglitz/files/2009_Business_Fluctuations_and_Bankruptcy_Avalanches.pdf, accesată la data de 25.04.2023 .

found, both in legal literature²⁷¹ and in the law, as a 'cross-border insolvency procedure'. Cross-border insolvency is 'defined' in²⁷² the thesis not published in the legal literature of an author as insolvency proceedings in which there are one, or more foreign elements. The foreign element is an abstract concept of international law that may arise from different economic or legal circumstances, but a generally accepted 'definition' of it by specialists²⁷³ is that a foreign element is a factual circumstance, due to which a legal relationship is linked to two or more systems of law. The foreign element is not a distinct element of the legal relationship alongside the subjects, content and object, but it is part of them.

The cross-border insolvency proceedings have, as has been stated in the literature²⁷⁴, several characteristic elements. This is, in principle, a coordinated insolvency procedure, of two or more entities in a state of insolvency in different territories, which are united by various legal or economic circumstances. The opening of cross-border insolvency proceedings aims to conduct proceedings in a more or less common manner through judicial and economic communication and cooperation. The coordination of insolvency proceedings allows for better control of the joint assets and of the whole business, wherever the debtors taking part in it are. The initiation of cross-border insolvency proceedings also allows debtors access to more than one source of funding and to more diverse government support, as a larger category of public and private institutions are involved in the insolvency process. Through these specific features of cross-border insolvency proceedings, it is ensured that the value of the whole business is maximised at its international value, as well as the fair distribution of this value among the debtors taking part in the proceedings.

The cases that lead to the interconnection of insolvency proceedings in a cross-border insolvency procedure are diverse, but the most common ones encountered in practice are those when debtors are part of a GTS, NCM, TNC, and their insolvency cases are cross-border coordinated as a single cause of insolvency. Another common cause in practice is when the debtor has assets to be recovered within the territory of several states and applies for the opening of secondary insolvency proceedings in order to be allowed access to those assets. Another situation where it is necessary to open cross-border insolvency proceedings is when the nationality of the creditors differs from that of the

²⁷¹ Radu Bufan, Andreea Deli Diaconescu, Mihaela Sărăcuț, coordinators and collaborators, Op. cit., Bucharest 2022, p. 1001 – p. 1002; "Cooperation, communication and coordination in the cross-border insolvency of the group of companies", Universul Juridic Publishing House, Bucharest 2022, p. 7.

²⁷² Marcela Dogar (Comșa), "Cross-border Insolvency", PhD thesis defended at the University of Bucharest – Faculty of Law, Bucharest 2011, pp. 105 - 109; apud. Radu Bufan, Andreea Deli Diaconescu, Mihaela Sărăcuț, coordinators and collaborators, Op. cit., Bucharest 2022, p. 1002.

²⁷³ M. Jean Jacques Gaspard Foelix, Charles Demangeat, 'Traite du droit international prive ou du conflit de lois de different nations en matiere de droit prive', Ed. Gale The Making of Modern Law, Detroit 2013, p. 21; Ion Deleanu, "Private International Law, The General Part", Universul Juridic Publishing House, Bucharest 2013, p. 11; Claudiu-Paul Buglea, "Romanian Private International Law, ed a 3-a", Universul Juridic Publishing House, Bucharest 2021, p. 7; Laura Cetean-Voiculescu, "Private International Law, ed. a 3-a", Ed. Pro Universitaria, Bucharest 2020, p. 21; Cosmin Dariescu, "Fundamentele legea internațional privat, ed a V-a", Ed. Universul Juridic, Bucharest 2018, p. 10; Dan Lupașcu, "Private International Law", Ed. Universul Juridic, Bucharest 2012, p. 12-p.14; Ioan Macovei, "Tratat de drept internațional privat", Ed. Universul Juridic, Bucharest 2017, p. 12; Ovidiu Ungureanu, Călina Jugastru, Adrian Circa, "Manual de drept internațional privat", Ed. Hamangiu, București 2008, p. 3-p. 4; Bianca Maria Carmen Predescu, "Private International Law", Universitaria Publishing House, Craiova 2002, p. 22; Ion P. Filipescu, Andrei I Filipescu, "Tratat de drept internațional privat", Ed. Universul Juridic, Bucharest 2008, p. 21; T. Prescure, C.N. Savu, "Private International Law", Lumina Lex Publishing House, Bucharest, 2005, p. 24; D.A. Popescu, M. Harosa, "Private International Law, Elementary Treaty, vol. I", Lumina Lex Publishing House, Bucharest, 1999, p. 124.

²⁷⁴ Nicoleta Maria Năstăsie, Op. Cit., Ed. Universul Juridic, Bucharest 2022, p. 7.

debtors against whom they wish to open the insolvency cause and they submit applications for recognition of their claims as well as for registration with the debtors' insolvency estate. Due to these circumstances by which the insolvency cases are interconnected, the need has been generated to develop specific problems of cross-border insolvency, which would allow the settlement of cases and the resolution of disputes arising from their development, in a common manner²⁷⁵.

2. Specific valences of cross-border insolvency proceedings. Cross-border insolvency proceedings are a contemporary legal concept that has certain peculiarities in the matter of conflicts of jurisdiction. It has been stated in the legal literature²⁷⁶ that cross-border insolvency proceedings raise 3 (three) main issues in the field of judicial conflicts, relating to the determination of the court with jurisdiction, the determination of the law applicable to the procedure and the recognition of its opening, as well as the enforcement of judgments handed down in such insolvency cases in another State.

The international conflict of jurisdictions, or the conflict of jurisdiction, is, as stated in the doctrine²⁷⁷, that situation in which the courts of two or more states are called upon to settle disputes with foreign elements. In order to resolve this situation, the court entrusted with the settlement of disputes with foreign elements will determine whether it has jurisdiction to hear the case or not, according to the law of the forum, in this case applying the principle of conflicting rules.

When the courts determine whether they have jurisdiction to hear cross-border insolvency cases, things are a bit different, in the sense that the law of the forum is no longer a priority in determining jurisdiction, it will be determined by the court taking into account the debtor's centre of main interests (COMI). The court that has jurisdiction to hear the case of cross-border insolvency of debtors will be that court in whose district their COMI is located. The term debtor's COMI refers to the place where the debtor habitually manages his interests and which can be verified by third parties. In the case of legal persons in cross-border insolvency proceedings, their COMI may be presumed to be, until proven otherwise, the place where their registered office is situated. In the case of self-employed or professional natural persons, their COMI is presumed to be the principal place of business. In the case of both legal persons and natural persons engaged in professional activities, the presumption may be rebutted if it is proved by third parties that the seat of their principal interests is different from that available in the public registers.

Debtors operating within the global economy automatically also create legal relationships governed by at least two or more legal systems. In the case of these legal reports with a foreign element, the courts must determine what is the law governing the report and implicitly settle a possible "conflict of laws". On the subject of the "conflict of laws", it has been stated in the doctrine²⁷⁸ that in such situations it is not, in general, a real normative conflict, but rather a doubt that persists in the conscience of the interpreter of the foreign legal norm. That doubt arises automatically in the subconscious of any litigant because of the elementary differences between two or more sets of rules of the different states concerned, differences which give rise to suspicions and doubts as to whether the case is expeditiously resolved

²⁷⁵Pedro Jose F. Bernardo, „Cross-Border Insolvency and the Challenges of the Global Corporation: Evaluating Globalization and Stakeholder Predictability through the UNCITRAL Model Law on Cross-Border Insolvency and the European Union Insolvency Regulation”, sursă online <https://ssrn.com/abstract=211211>, accesată la data de 21.01.2022.

²⁷⁶ Radu Bufan, Andreea Deli Diaconescu, Mihaela Sărăcut, coordinators and collaborators, Op. cit., Bucharest 2022, p. 1003 et seq.

²⁷⁷ T.R. Popescu, "Private International Law", Ed. Romfel SRL, Bucharest 1994, p. 17 – p. 35.

²⁷⁸ V.P. Arminion, "Precis de droit international prive", vol. I", Ed. Dalloz, Paris 1947, p. 21.

whether foreign rules are applied in the present case, as well as the guarantee of the fundamental rights and freedoms of the parties by those rules. The question of the applicable law is resolved by the court after the determination of its jurisdiction. In order to be able to determine the applicable law, the court will determine with which legal system the legal relationship subject to judgment is most related. In the doctrine²⁷⁹ it has been stated that other European legal systems also give practical efficiency to the procedure for establishing the connecting points, such as German law naming the process as "anknupfungspunkt", French law that has "point de rattachement", Anglo-Saxon law "connecting factor" and Italian law with "criterio di collegamento", all of which use the same principle of determining the competent law as Romanian law in cases with cross-border valences.

The centre of main interests will also serve in determining the law applicable to the cause of cross-border insolvency as a connecting point. Debtors to rely on certain "tougher" insolvency laws can move their registered office to a state with more favourable insolvency laws (forum shopping) when they provide that insolvency is imminent. In order to avoid international judicial tourism in terms of insolvency law, the law applicable to cross-border insolvency proceedings will be determined using a temporal analysis of the situation of the debtor's COMI in the territory of a particular state. In most of the soft or hard law rules of the insolvency proceedings, this time criterion has been included in order to solve the problem of the applicable law and to avoid judicial tourism in this field. EU Regulation No... Regulation (EC) No 848/2015 provides, for example, for the determination of jurisdiction and the applicable law for the debtor to have had its registered office for at least 3 months in the territory of the Member State where the application for the opening of cross-border insolvency proceedings was submitted.

The procedure for recognising the opening of insolvency proceedings and subsequently enforcing judgments of foreign courts in cross-border insolvency cases is one that must be carried out taking into account the observance of the public order of private international law. In the case of Romania and the Member States of the European Union, the cross-border insolvency procedure is governed by the provisions of EU Regulation no. 848/2015 on insolvency proceedings, which guarantees that any judgment given by a court having jurisdiction in one Member State will be recognised and enforced in all the other States involved in the proceedings.

The problem of recognising the opening and enforcement of foreign judgments given in cross-border insolvency cases arises among third states between which international agreements or conventions do not operate, and recognition operates through the common law in the matter. In order for recognition to operate, in general, certain conditions laid down by the States where recognition is sought must be met cumulatively. e.g. for as a procedure insolvency, started in a third state, to be recognized by the Romanian courts this must be a collective public procedure that is carried out in accordance with the insolvency law of the foreign state seeking recognition. Recognition must be requested by a foreign representative, legally invested in the insolvency proceedings with such competences under the law of the foreign state in the field of insolvency, through an application addressed to the competent Romanian court. In the case of Romania, the General Court in whose district the debtor's registered office or the assets wishing to be used in the proceedings is located is the court of first instance competent to hear cases of national or cross-border insolvency. The foreign representative is recognized as a procedural capacity and the attributions he has in relation to the cross-border insolvency procedure if his/her application for recognition is accompanied by specific documents (Art. 287 para. 2 of

²⁷⁹ Radu Bufan, Andreea Deli Diaconescu, Mihaela Sărăcuț, coordinators and collaborators, Op. cit., Bucharest 2022, p. 1008.

Law no. 85/2014) which have the role of proving that he/she was sworn in as a practitioner of the insolvency in question and the connection that that procedure has with the Romanian legal system. In order for the Romanian court to be able to grant the recognition of the foreign insolvency procedure between the Romanian state and that foreign state, there must be reciprocity in the matter of the recognition of the procedure. The procedure for the recognition of cross-border insolvency proceedings governed by the provisions of Law no. 85/2014 had as a "source of inspiration" both within the old forms of legislation, namely the rules contained in Title I of Law no. 637/2002 which were subsequently taken over by Law no. 85/2006, as well as in its current form, the norms of the UNCITRAL Model Law of 1997 with subsequent amendments and completions²⁸⁰.

Another relevant ex. of proceedings for the recognition of cross-border insolvency proceedings is the Hong Kong procedure, which derives from the common law in the matter. Hong Kong is not a state that has transposed the UNCITRAL Model Law on Cross-Border Insolvency Proceedings into its national law. The main law governing insolvency and bankruptcy in Hong Kong consists of the Companies Ordinance (Liquidation and Miscellaneous Provisions Chapter 32, "CWUMPO"), the Rules for Companies (Ch. 32H), the Bankruptcy Ordinance (Ch. 6) and the Bankruptcy Rules (Ch. 6A), which had their own regulatory model. The doctrine²⁸¹ stated that the courts of Hong Kong seek to cooperate with the courts of other jurisdictions in a fair manner in order to ensure that all the assets of the company are distributed to its creditors in a distribution system that does not alter the value of their claims and that they can be treated fairly and in accordance with a common set of rules that apply equally to all those interested in the recognition of the procedure collectives on the territory of Hong Kong. The purpose of applying a common set of rules is to guarantee a high degree of flexibility with regard to companies holding assets to be used in Hong Kong and to deal with cross-border insolvency issues in a common way.

A Hong Kong court will recognise foreign insolvency proceedings if those proceedings are opened under the foreign state's insolvency law and the main proceedings are opened in a country in respect of which there is precedent of recognition with Hong Kong. The jurisdiction and jurisdiction of hong kong courts are limited in situations where there is no equivalent under Hong Kong law or jurisprudence on the assistance requested.

In the case of Joint Administrators of African Minerals Ltd v. Madison Pacific Trust Ltd, the Hong Kong court refused to recognise an insolvency proceedings opened in the UNITED KINGDOM on the grounds that there was no equivalent in Hong Kong law to the procedure of moratorium on the execution of a debt secured by preference clause . Because of this, the court was unable to extend its jurisdiction and powers to give effect to the UK moratorium procedure²⁸².

In another case, Re CEFC Shanghai International Group Ltd the liquidators of the companies of a transnational group of companies requested the realisation of the assets located in Hong Kong. The liquidators in the People's Republic of China this time received recognition

²⁸⁰ Nicoleta Mirela Năstăsie, "International cooperation in insolvency matters, a judicial perspective I", Revista Phoenix nr. 4/2017; article consulted online, online source <https://www.universuljuridic.ro/cooperare-internationala-in-materia-insolventei-o-perspectiva-judiciara-i/#f7>, accessed on 07.04.2023.

²⁸¹ Lake, Kevin Tso, „Cross border insolvency in Hong Kong”, sursă online <https://my.slaughterandmay.com/insights/briefings/cross-border-insolvency-in-hong-kong-an-order-to-recognise-and-assist>, accesată la data de 28.01.2022; Simon Powell, Viola Jing, „Cross border insolvency, the law and development in Hong Kong”, sursă online <https://m.lw.com/thoughtLeadership/hong-kong-cross-border-insolvency>, accesat la data de 28.01.2022.

²⁸² [2015] HKEC 641.

and assistance from the Hong Kong court, because in the common law there were precedents at hand and it was possible to cooperate with the Chinese authorities²⁸³.

It was thanks to these valences of the cross-border insolvency procedure that the imperatives of communication, cooperation and coordination of the procedure were triggered, creating two distinct schools of thought along the way, that of 'territorialism' and that of 'universalism'. These imperatives promoted among specialists serve as a powerful countertrench for issues related to the jurisdiction of the courts, normative compatibility and the recognition of foreign proceedings. The doctrine has stated²⁸⁴ that an inadequate legal framework for cross-border insolvency has a negative impact on financial, judicial stress and the security of the countries that adopt it. As a result of the failure of a cross-border insolvency law, foreign investors are discouraged from doing business with those countries, judicial systems fail to manage cross-border insolvency cases, national assets are liquidated, or lose their international value and the recovery time after periods of financial crisis increases considerably. In our view, the proper harmonisation of the rules of cross-border insolvency proceedings is essential in the proper management of the global economic order, as it increases the level of trust of businessmen in the capacity of judicial systems to face any type of challenge associated with the conduct of modern business, thus being able to attract investments and limit the risks associated with lending.

§2. Schools of thought of the principles of cross-border insolvency proceedings – universalism or territorialism or a middle ground?

1. The school of universalist thought and its principles. The regulation of cross-border insolvency rules is based on two schools of thought, in principle opposite, universalism and territorialism²⁸⁵. The universalist school is, as stated in the doctrine²⁸⁶, a promoter of the idea the administrative unification of foreign insolvency proceedings related to each other, as well as the amalgamation of the assets of foreign debtors, into a single case administered by a single court. The universalists' thesis on the process of unifying all elements incidental to cross-border insolvency cases proposes a substantial consolidation in the event of cross-border insolvency. This consolidation is carried out both legally and economically, by bringing together the cases of all debtors subject to cross-border insolvency proceedings before a single court, with the debtors also carrying out the transfer of all the debtors' assets to the chosen

²⁸³ [2020] 1 HKLRD 676. This was subsequently followed by the Re Liquidator of Shenzhen Everich Supply Chain Co Ltd [2020] HKCFI 965, which was the second decision of the Hong Kong Companies Court to grant recognition and assistance to an administrator in the continental PRC.

²⁸⁴ Jack Jason, „*A Missing Variable: The Impact of Cross-Border Insolvency Laws on Foreign Direct Investment*”, Minnesota Journal of International Law 2018, p.313-p.337. Richard Sheldon, „*Cross-border insolvency*, 3rd ed.”, Ed. Bloomsbury Professional, Londra 2012, p. 46.

²⁸⁵ Nicoleta Mirela Năstăsie, Op. Cit., București 2022, p. 43 și urm.; Irit Mevorach, „*Cross Border Insolvency of enterprise groups, the choice of law challenge*”, sursă online <https://brooklynworks.brooklaw.edu/cgi/viewcontent.cgi?article=1019&context=bjcfcl>, accesat la data de 28.01.2022; Irit Mevorach, „*Insolvency Within Multinational Enterprise Groups*”, Ed. Oxford University Press, Oxford 2009, p. 66 și urm.; Jay L. Westbrook, „*A comment on universal proceduralism*”, Columbia Journal of Transnational Law, vol. 48, nr. 2/2010, p. 503-p. 518; Nigel John Howcroft, „*Universal vs. territorial models for cross-border insolvency: the theory, the practice, and the reality that universalism prevails*”, University of Columbia Journal of law n. 4/2008, p. 366; Diana Maria Ilie, Op. cit., București 2021, p. 402 și urm.

²⁸⁶ Irit Mevorach, „*On the road to universalism, a comparative and empirical study of the UNCITRAL Model Law on cross-border Insolvency*”, European Business Organization Law Review, Vol. 12, nr. 4/2011, p. 517 și urm.; Irit Mevorach, Op. Cit., Oxford p. 66-68; Nicoleta Maria Năstăsie, Op. Cit., București 2022, p. 43-p.44; J.L. Westbrook, „*A global solution to multinational default*”, Michigan Law Review, vol. 98/2000, p. 2276 și urm.; A.T. Guzman, „*International bankruptcy, in defence of universalism*”, Michigan Law Review, vol. 98/2000, p. 2177 și urm.; J.L. Westbrook, „*Theory and pragmatism in global insolvencies, choice of law and choice of forum*”, American Bankruptcy Law Journal, vol. 8/1991, p. 457-p. 461. .

jurisdiction, under a single law, with bodies applying the common procedure, as well as the creation of a single body of creditors. This thesis of the Universalists on the approach to cross-border insolvency proceedings has been argued in the doctrine that it²⁸⁷ is appreciated and promoted approximately unanimously by the international academic environment. As far as we are concerned, we are rallying to the universalist thesis on a theoretical and principled level, because we cannot fail to raise questions about the practical feasibility of this consolidation process.

The Universalist approach to cross-border insolvency promotes a legislative model that is either symmetrical to the world economy, which is in principle unique and covers all or almost all transactions that take place worldwide, as well as the recognition of all stakeholders. Ideally, the universalist court has a single cross-border insolvency package and the handling of cases by a supranational court to which exclusive jurisdiction is conferred on each of the parties taking part in the proceedings.

In the absence of courts with global jurisdiction and unified supranational institutions to ensure that the cross-border insolvency case is handled in an impartial manner, the universalist thesis proposes other solutions. One of these is the harmonisation of insolvency law rules among states by transposing into national law models of single laws by states. Another solution of the Universalists would be to assign exclusive jurisdiction to one of the courts of the participants in the proceedings where the centre of the debtors' main interests lies and the transfer of the debtors' assets within the jurisdiction of that court, as well as the recognition of all foreign creditors. By this universalist method, the forum competent to investigate the case would be determined by determining the debtors' country of origin, or if this cannot be determined, the country where it carries out its activities is used, namely the forum with which the debtor has substantial links. The forum administering the case would apply its own rules of the insolvency proceedings governing the commencement, conduct, administration and conclusion of the insolvency proceedings, and thus would have avoided conflict of laws.

The application of the universalist thesis and the administration of the cause of cross-border insolvency by a common forum, helps to avoid the creation of potentially costly or extensive litigation over a long period of time. As long as cross-border insolvency rules are harmonised among states in a single form, the cross-border case is handled on the basis of a coherent regulatory system. The doctrine²⁸⁸ stated that through a universal approach to insolvency cross-border, stakeholders benefit from increased predictability, which in turn can reduce transaction costs and the risks associated with this type of insolvency procedure.

The regulatory model of cross-border insolvency proceedings on the basis of the universalist thesis is, in our view, a utopian one aimed at collectively resolving all the problems of cross-border insolvency, such as: setting a common standard in the field of cross-border insolvency; recognising the rights of all participants in the proceedings; avoiding conflicts of jurisdiction and rules; etc., but very difficult to achieve.

A first obstacle difficult to overcome is the strong self-preservation instinct of state sovereignty, manifested by most political systems. In the face of these tendencies of self-preservation, any limitation of sovereignty constitutes a big problem in the optics of any national political system. A second obstacle is represented by the implications that the insolvency causes have in various branches of law, a situation that requires a very high degree of normative compatibility that prevents the achievement of a high degree of harmonization.

²⁸⁷ Nicoleta Mirela Năstăsie, Op. Cit., Bucharest 2022, p. 45.

²⁸⁸ Irit Mevorach, „*Overlapping international instrument for enforcement of insolvency judgments: undermining or strengthening universalism?*”, European Business Organization Law Review, nr. 22/2021, p. 283-p. 315.

As a result of the problems encountered, a new model of universalist theory was trained, namely modified universalism²⁸⁹. The modified model of universalism derogates from the classic universalist model by promoting the possibility for national courts of justice to recognise cross-border insolvency proceedings by making use of ordinary law or their own case-law. The case-law sets a precedent in the field of the recognition of foreign proceedings among the courts of justice on the basis of universalist principles in the field of cross-border insolvency.

Such conduct, in our view, is difficult to implement, being a relatively small number of states that have such a recognition procedure deriving from common law, e.g. Hong Kong or Singapore²⁹⁰. The doctrine²⁹¹ criticized the adjustment of the conduct of the organs applying the procedure, because this method that wants to be "universalist" is only an alternative way of territorialism and not a real form of universalism. The universalist or universalist model modified in the regulation of cross-border insolvency proceedings is specific to common law systems, which have different means to facilitate the transposition of universalist theses into practice for other legal systems.

2. The school of territorialist thought and its principles. The thesis of territorialism²⁹² advances an internal approach to cross-border insolvency proceedings by taking control by each state individually over the assets of debtors located in their territory and distributing them among local creditors. Territorialists advance principles of preserving state sovereignty and highlighting the particular distinctions of various national legal regimes. This thesis is widely criticized by specialists²⁹³ in doctrine, being accused by them of promoting the putting of a "veil" of state sovereignty over the problems incidents in cross-border insolvencies, which leaves foreign creditors vulnerable to abuses, reduces transparency institutional, as well as makes it difficult to resolve the case of cross-border insolvency promptly, which decreases the efficiency of the debtors' reorganisation or liquidation frameworks. Territorial theses are generally promoted by representatives of states that want as little interventionism as possible from international bodies in domestic affairs and issues related to cross-border insolvency.

In our view, the problems associated with cross-border insolvency are some that go beyond the borders of states and their ability to cope with the resulting 'lumps' of procedures, especially when the subjects of the proceedings are complex economic entities, such as GNS or GTS. E.g. in the case of the insolvency of the Lehman Brothers financial GTS²⁹⁴, composed of a parent company organized as a holding company and approximately 7,000 (seven thousand) of member financial companies, the insolvency "snowball" consisted of more than 100 (one hundred) separate insolvency proceedings, 8,000 (eight thousand) member companies in the proceeding, 100,000 (one hundred thousand) creditors and 26,000 (twenty-six thousand) employees. In the case of the insolvency of this GTS, the regulatory compatibility problems have been evident since the attempt to save it by selling the group to Barclays, an attempt that

²⁸⁹ Michael Tsimplis, „*Modified universalism and cross-border insolvency of shipping companies*”, Journal of Business Law, nr. 5/2020, p. 345-366; Irit Mevorach, „*Modified universalism as customary international law*”, Texax Law Review, nr. 96/2017, p. 1403; Adrian Walters, „*Modified Universalisms & the role of local legal culture in the making of cross-border insolvency law*”, sursă online http://irep.ntu.ac.uk/id/eprint/33436/7/9725_a963_Walters.pdf, accesat la data de 30.05.2022.

²⁹⁰ Diana Maria Ilie, Op. cit., Bucharest 2021, p.305.

²⁹¹ Irit Mevorach, Op. cit., TLR 2017, p. 1410.

²⁹² L.M. LoPucki, „*The case for cooperative territoriality in international bankruptcy*”, Michigan Law Review, nr. 98/2000, p. 2216-p. 2218; articol consultat online, sursă online <https://repository.law.umich.edu/cgi/viewcontent.cgi?article=2795&context=mlr>, accesată la data de 08.04.2023.

²⁹³ J.L. Westbrook, Op. Cit., Michigan Law Reiew, 2000, p. 2276; L.M. Lopuki, „*Cooperation in international bankruptcy, a post-universalist approach*”, Cornell Law Review, nr. 84/1999, p. 696.

²⁹⁴ Diana Maria Ilie, Op. Cit., Bucharest 2021, p. 403-p. 405.

ultimately led to the insolvency of the entire group. The main issue of law in the present case was the inattention given to the compatibility of the Anglo-Saxon commercial rules incidental to the group transaction. In order to carry out the group's transaction, Anglo-Saxon law provided for the organisation of a vote of Barclays' shareholders in order to receive approval of the transaction by the English Financial Services Authority (FSA). Due to this impediment, the parent company of the Lehman Brothers Holdings INC. group filed the application for entry into insolvency proceedings within less than 24 (twenty-four) hours from the failure of the transaction with the English company. As a result of the submission of the application for insolvency by the parent company, all the assets in its estate were blocked. The effect of the asset freeze on the group was devastating, as it deprived the other member companies of access to finance, as a result of which the group's member companies in England and Hong Kong, which coordinated the group's activities in Europe and Asia, were also forced to go bankrupt within hours of their parent company. The investigation of the insolvency proceedings of this financial GTS was a cumbersome one, due to the failure to provide the information requested by the courts, which led to contradictory judgments and to a tendency to prioritize domestic law. It has been stated in legal literature²⁹⁵ that the Lehman Brothers Group's insolvency case indicated the limits of the UNCITRAL Model Law and of European cross-border insolvency law, since not all jurisdictions have embraced such models.

Differences between the legal systems of different states and territorialistic tendencies constitute genuine obstacles to cross-border insolvency proceedings, but in judicial practice they are also an example of good practice. In the case of the insolvency of the US company Lyondell²⁹⁶, a strategy was applied to expand the priority of creditors in order to find new sources of financing in order to support the reorganization of the company. The practices in the present case could be classified as a genuine forum shopping, since Lyondell was looking for new sources of financing in order to exit the insolvency proceedings, thus using the provisions of ch. 11 of the United States Company Law, a German holding company that owned the assets of another also insolvent Dutch company that merged with the American company to form lyondellbasell could be included as a creditor in the proceedings. This operation was also possible because Basel also had business on American soil, but the high level of flexibility of U.S. and Dutch insolvency law facilitated the merger of companies.

The territorial thesis is intended to protect national law, especially in countries where insolvency law intersects with other sensitive branches of it. More moderate variations of the territorial thesis have been engaged in the doctrinal space²⁹⁷, such as cooperative territorialism that promotes the idea of international cooperation by signing agreements between the bodies applying the procedure and providing more extensive information, without substantially strengthening the procedure. In our view, the territorialist thesis protects certain jurisdictions perhaps unprepared by the desired global harmonisation in terms of cross-border insolvency, but the effects that the territorial trends of certain states have are the loss of assets, the reduction or even non-recognition of creditors' claims, the decrease in speed, etc., effects that affect both debtors and their creditors.

3. What is the middle ground (instead of conclusions)? We do not entirely rally to either of the two theses promoted by international schools of thought, even if we most embrace the regulatory model of cross-border insolvency proceedings based on the principles of the universalist thesis. In my opinion, the most appropriate solution in dealing with the problems incident in this type of insolvency cause is located somewhere at the intersection of certain

²⁹⁵ Ibid., p. 405.

²⁹⁶ Ibid., p. 406.

²⁹⁷ Nicoleta Mirela Năstăsie, Op. Cit., Bucharest 2022, p. 47-p. 48.

strengths of the two theses. As has been stated in the doctrine,²⁹⁸ the sovereign right of different jurisdictions cannot be disregarded regardless of the seriousness of the insolvency cause. The most appropriate response to the current challenges is to identify all the common elements between the legal systems that, converted and transposed into legislative guides, international regulations, treaties, or other such soft law or hard law instruments, can lead to a precedent of good practices in the field of cross-border insolvency between all the states of the world. Surely this kind of approach at first glance does not seem appropriate, since the totality of states cooperates in the widest possible manner with the aim of attracting foreign assets under their management in order to cover the need to satisfy their national claims, but when it comes to ceding their sovereignty over the assets located on their territory, the majority embraces the territorial thesis. In this "unfriendly" context, the thesis we embrace is placed at the intersection of the principles of universalism with the opportunism of territorialism, which generates a procedural consolidation of cross-border insolvency. This thesis proposes a joint management of cross-border insolvency cases through communication, cooperation and coordination mechanisms, between the bodies applying the procedure, without sovereignty over assets or claims being lost.

²⁹⁸ S. Block-Lieb, T. Halliday, „Harmonization and modernization in UNCITRAL legislative guide on insolvency law”, Fordham University School of Law, Fothcoming: Texas International Law Journal 2007, p. 2 și urm.; articol consultat online: https://www.academia.edu/49745747/Harmonization_and_Modernization_in UNCITRALs_Legislative_Guide_on_Insolvency_Law, accesat la data de 08.04.2023; Nicoleta Mirela Năstăsie, Op. Cit., București 2022, p. 50.

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The use of a sustainable model for the management of a crisis in the context of economic development

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Abstract. The article aims to offer a qualitative method that incorporates a sustainable vectorial model on the phenomenon of crisis management in the context of sustainable economic development. Both the theoretical part underlying the model and its applicability will be described further. Also, this qualitative method is based on a transdisciplinary vision through the multitude of subjects it addresses, as well as the fact that it manages to capture a diversity of perspectives, being a complex system of simple equations. At the same time, this modeling involves the transfer of information that is written in a practical language into the characteristic language of feedback contained in cellular automata and algebraic fractals. Therefore, this modeling will later describe much more complex objects based on the feedback cycles, and commutative diagrams based on automorphisms, being able to progressively develop new and stable self-determining structures.

Keywords: crisis, management, economic development, sustainability, feedback.

JEL Classification: A12, C02, O10.

1. Introduction

In the face of economic instability, identifying a reliable solution for effective management within the scope of sustainable economic growth is of paramount importance (Smith & Krugman, 2012). Sustainable economic development fosters a transition towards a crisis-free society, characterized by economic expansion and improved living standards (United Nations, 2015).

A crisis-free society primarily depends on human development, placing significant emphasis on educating individuals across all age groups in the application of cognitive tools that enable them to understand the complexities of the universe, the environment, and human abilities (Gardner, 2006). Concurrently, attaining such a society requires the integration of communication and collaboration within all network systems, as well as a focused approach towards existing industries and programs aimed at restoring balance in nature and the socio-economic landscape (Hawken, Lovins, & Lovins, 1999).

This article introduces a cybernetic model derived from the analysis of diverse theories and research, providing technological solutions for crisis management through the application of cellular automata (Wolfram, 2002). Coinciding with the advent of computers, scientists have demonstrated the validity of cellular automata theory, suggesting that information underpins

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this model, echoing the concept that the universe consists of information, and every structure within the universe comprises a mini-computer forming automata cells that subsequently create an information universe (Lloyd, 2006).

Furthermore, this study delineates the strategies and feasibility of transitioning from the prevailing economic model to a sustainable one by altering the operational principles of this economic system. Recognizing and consolidating eco-economic circuits is essential for establishing a sustainable economic system that achieves resilience over time (Daly & Farley, 2011).

2. Literature review

2.1. The theoretical elements of the sustainable vectorial model

The sustainable vector model used in crisis management is based on theoretical elements that combine notions from cellular automata, projective geometry, feedback, and the feedback contained in algebraic fractals.

The cybernetic model based on qualitative modeling is a model developed based on algebraic fractals used in the generation of feedback, being a feedback loop based on a mathematical procedure that includes the theory of cellular automata, thus this model can offer technical solutions in the development of economic, biological, IT, etc. applications.

The idea of the theory of cellular automata comes from (Neumann 1948), who, being present at a conference, specified that it is not just a theory, but rather an "imperfectly articulated and difficult to formalize", which contains implicit mathematics both logical and probabilities.

Delorme (1999) claims that a cellular automaton, viewed from the informational perspective, represents an abstract object that contains two intrinsically linked components, namely: The first component is represented by architecture, by the Universe, having a utility function, and the second component is represented by the finite automaton, containing a copy of it at each node of the network.

From the research and perspective of Colceag (2001), a cellular automaton represents the universe as information, and each structure in this Universe is composed of a minicomputer, and these minicomputers induce a universe of information.

The information has the property of universality, and this can develop another type of mathematical approach, capable of detecting informational connections between different types of structures.

Therefore, this new approach can be used in complex systems from different fields, such as living structures, economic processes, and so on. (Colceag, 2001).

This new approach gives us the possibility to understand the functioning of a complex system, viewed from different perspectives and on different levels of conception, being developed based on the use of structural algebraic properties of space in which different levels of complexity can be created on the same system feedback generation (Colceag, 2004).

This space in which different levels of complexity can be developed is projective space contained in projective geometry.

Girard Desargues, a connoisseur of the theory of perspective drawing, being a renowned architect and mathematician, determined a conceptual scheme that later gave the name projective geometry, a purely projective theorem (1593 - 1662) (Lord, 2013). Girard introduced the notion of a point and a line leading to infinity, and his works became the basis of the research of many other mathematicians who discovered those theorems that form the basis of today's theory of projective geometry.

The principle of duality theorem claimed by Lord (2013) for planar projective geometry is described as follows: "if two triangles lie in the same plane then the following actions are an immediate consequence of each other":

Axiom 1: "if two triangles are perspective from a vertex then they are an axis".

Axiom 2: "if two angles are perspective from an axis, then they are from perspective a vertex" (Desargues theorem).

Since the theorem of projective geometry is scientifically proven, the dual theorem that follows from it is automatically true and does not require a separate proof, and the set of axioms is the same for three-dimensional projective geometry.

Therefore, duality remains a central concept in projective geometry, for however many dimensions there may be.

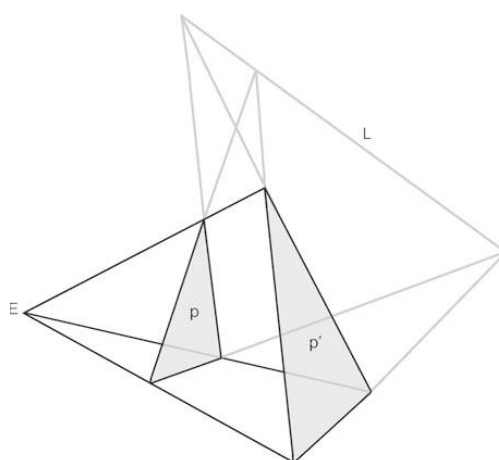


Figure 1. Desargues' theorem in three dimensions, taken from (Lord, 2013)

For the three-dimensional case of Desargues' theorem, we can see that the perspective of two triangles from point E, are in different planes, intersecting in a line L, this leads to the similarity of the other two pairs of edges that intersect on L. Leaving from the fact that, two edges of the two triangles lie in the plane E, but one of the edges is in p and the other in p', this leads to their intersection on L, thus proving the three-dimensional theorem of Desargues.

An informational interconnection model is characterized by the decomposition of feedback cycles based on a perspective that describes the behavior of a basic mathematical

theory, in the universal projective space. This projective space is universal due to the universal relationships between different objects, leading to a mathematical perspective that describes a basic dialogue for the development of algebraic fractals. This type of modeling provides an appropriate understanding and description of high-precision experimental data. For example, research by neuroscientists uses projective space to describe neural networks. For this reason, an algebraic fractal could correspond to a real situation describing a macro-structure, resulting from neural structures modeled in projective spaces (Colceag, 2001).

Wiener (2019) states that feedback is an intelligent behavior that can be simulated by robots and is applicable in various sciences.

From the perspective of Hlaváč (2019), feedback cycles are represented by functions connected with vectors in a circuit, connecting the structures at the vertices. This type of modeling leads to the characterization of the function of a global structure viewed from the same level of perception, but also the same perspective.

In the projective space there is a group of automorphisms consisting of a set of six equations, which can result in a feedback loop:

- $f_1(x) = x;$
- $f_2(x) = 1-x;$
- $f_3(x) = 1/x;$
- $f_4(x) = 1-1/x;$
- $f_5(x) = 1/1-x;$
- $f_6(x) = x/x-1.$

The essence of each function is described in (Colceag, 2003), as follows:

- f_1 represents the identity of the function,
- f_2 represents symmetry,
- f_3 represents the inversion,
- f_4 represents the 60 degree rotation,
- f_5 represents the 120 degree rotation,
- f_6 is polar.

Colceag (2003) demonstrates that based on this set of six equations there is an example where two parallel mirrors will reflect an image to infinity, and the reflections created by them are the feedback cycles that will be transformed into new feedback cycles, but of order superior, isomorphic to the first subgroup of equations (f_2, f_3, f_6). From this model we can conclude that a small amount of information can change the balance of information by creating information storms (catastrophe theory).

The simplified feedback scheme comes from the mathematician Pappus and has the following form:

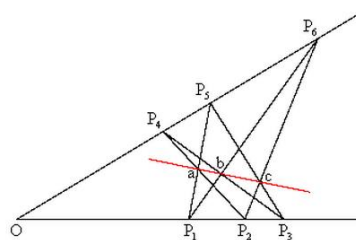


Figure 2. Exemplification of Pappus' theorem, taken from (Pappus' Theorem)

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Pappus' theorem is an essential theorem in geometry, being valid for a projective plane if and only if this projective plane is a commutative field (Braun & Narboux, 2016).

This theorem boils down to establishing that if P1, P2, P3, and P4, P5, P6 are two triplets of collinear points, then it follows that their points of intersection, a, b, c, are also collinear (Pappus Theorem).

Starting from this theorem, Colceag created the following feedback cycle:

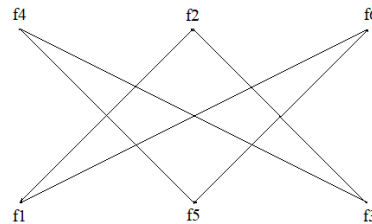


Figure 3. The feedback cycle, taken from (Colceag, 2003)

At the same time, from feedback cycles and cellular automata formed by such cycles, it emerges that the planetary ecosystem has its own intelligence, and the relationships can currently be described using computer programs, based on the theory of algebraic fractals that describe behavioral feedback cycles (Colceag, 2001; Colceag 2003).

The description of an informational interconnection model is obtained if we divide the feedback loops into factors, as the behavior of a basic mathematical theory is described. This mathematical theory contains the six functions that represent the subgroup of automorphisms of the projective space, which can be composed, using circular permutations, as follows:

Table 1. Composition of functions, taken from (Colceag, 2003)

Function	f1	f2	f3	f4	f5	f6
f1	f1	f2	f3	f4	f5	f6
f2	f2	f1	f4	f3	f6	f5
f3	f3	f5	f1	f6	f2	f4
f4	f4	f6	f2	f5	f1	f3
f5	f5	f3	f6	f1	f4	f2
f6	f6	f4	f5	f2	f3	f1

It can be seen that any row or column is formed by feedback loops obtained by circular permutations. It is an implicit argument for rotations in cubic structures, that the lines are obtained by circular permutations of the first line (Colceag, 2003).

With a closer look at these feedback cycles, can be noticed that there are four categories of cycles with symmetric properties, this leads to a composition table for a new set of functions,

starting from the next level of complexity of algebraic fractals, identical with the composition table for the initial automorphisms in the projective space (Colceag 2001; Colceag, 2003).

Grundhöfer and Stroppel (1992) state that large groups of automorphisms, in the study of geometry, are the address to desirably limit the action of the group to a certain sub-geometry.

Any feedback, according to the unfolding of events, is characterized by three active factors that generate it (according to Ilya Prigogine, in the theory of dissipative systems):

source (S) = is a generator of variation

a sensor (&) = is able to know the essence of the variation

a decider (D) = is able to decide the subsequent behavior of the source, thus being able to decrease the level of variation (self-inhibition) or increase the amplitude of variation (self-simulation cycle).

The self-adjustment cycle (or commutative diagram) between two systems is a way of analysis based on relating the sustainability model to various phenomena.

2.1. The technique addressed in the sustainable vector model

The technique used in the sustainable vector model is mainly based on trivalent and hexavalent logic.

Trivalent logic was discovered by the logician Lukasiewicz, also called three-valued logic (Borkowski, 1970).

In the trivalent logic, Kleene (1952) invented the first system that analyzed each instance of failure as an instance that had an unknown value, believing that all possible values lead to the same outcome.

Trivalent logic was developed to give us new definitions of truth and falsity (Riplay, 2012).

From Prigogine's perspective (Prigogine and Nicolis, 1985), any phenomenon can be characterized among instances: a source that represents the key point of the phenomenon, a sensor that evaluates the influence of the source on the context, and a decision maker that decides which solutions are possible for further development of the source. This leads to a heterogeneous approach to modeling complex systems.

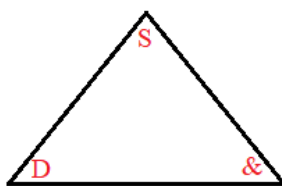


Figure 4. Triangular structure in which any phenomenon can be described, taken from (Colceag, 2001)

Colceag (2001) states that trivalent logic applies to triangular structures and contain a generation operation, adding the meanings of vectors. This logic is complete due to the semantics of the nodes and the meanings of the vectors connecting these nodes. For example, if we take two variables $A = \text{"management"}$ and $B = \text{"crisis"}$, then the semantics of the meanings of the vectors between A and B can be: the meaning $AB = \text{"crisis management"}$, and the meaning $BA = \text{"management crisis"}$, noting that they are completely different meanings. Hence the property that AB is non- BA follows.

Hexavalent logic has its roots in trivalent logic, so if there are two triangular schemes with the properties of trivalent logic, a hexavalent logic obtained from the trivalent one is obtained, generating new functionalities. Up to a point, the Fit bulb scheme and the hexalent scheme are similar, then each has different properties at different levels.

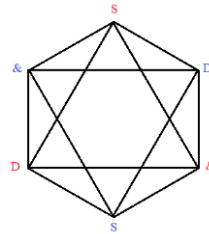


Figure 5. The hexagonal scheme, taken from (Colceag, no data)

It can be observed that the superposition of two triangular structures with trivalent logic, generates two other triangles with trivalent logic, thus obtaining a hexagon with hexagonal logic.

2.3. Semantic, symbolic, and semiotic interpretation.

The principle of information triangulation in feedback is based on three elements: semantic, symbolic, and semiotic.

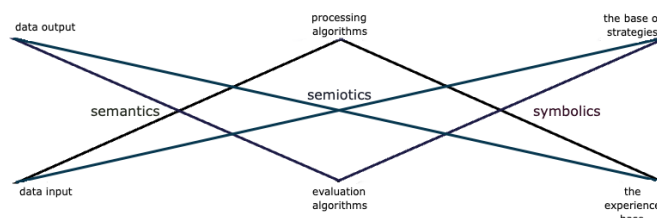


Figure 6. The information triangulation principle, from Colceag's research

In the previous figure, each point defined in the system is described as follows:

- Data input - represents the way in which information comes compatible with a structure so that it can penetrate the structure to be assimilated and produce effects.
- Semantics represents the processing resonance on a component (sensations, perceptions, representations, and memory are part of this component)
- Processing algorithms represent analysis classifications, namely: associative, correlative, quantitative, qualitative
- The symbolism is represented by the graphics or topology of the system,
- The base of experiences represents the objective reality on which the representations are built,
- Semiotics represents the point towards which the analysis tends - to gravitate,

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- Data output represents the generation of new symbols or meanings, which can form new levels of granularity,
- Evaluation algorithms represent the conclusion reached based on comparative logic foundations (symmetry, evolution, circuit coherence),
- The strategy base is composed of the definition of the initiatory path and linearity,

Returning to the initial position can be done, but looking from a different perspective, starting from the semantics of the point in another layer.

The essence of trivalent logic is represented by the fact that any two contents on the nodes of a triangle generate the third one, thus easily observing the fact that trivalent logic has the ability to determine the causes of a phenomenon. Trivalent logic generates qualitative mathematics containing specific operators (Colceag, no data).

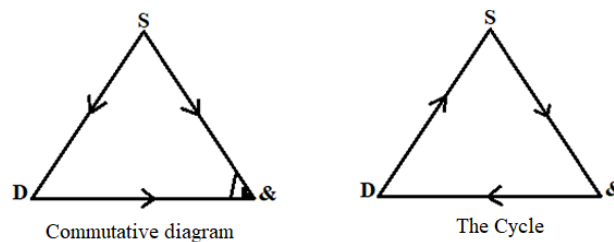


Figure 7. Commutative diagram and feedback loop, taken from (Colceag, no data)

The meanings of the arrows are fundamental in understanding semantic phenomena, and from the previous figure we can see that the first triangle has a commutative diagram, that is an accumulation point, and the second triangle is a cycle because it can be seen that the arrows go one after the other.

For example: in the commutative diagram we have the crisis as the source, the sensor is communication, and the decision maker is balanced. These three are the elements of a crisis resolution generation system.

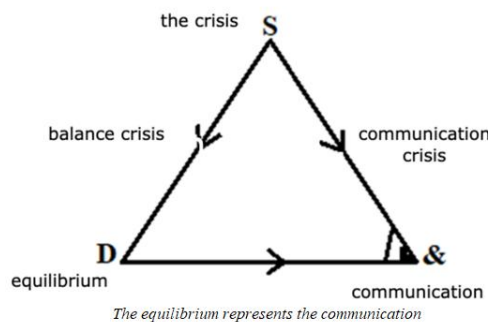


Figure 8. Semantics in the commutative diagram, adapted from current research.

From this example, we can conclude that trivalent logic is natural to man, but it was not used to make the man a conscious being. From another perspective, we can say that the semantics of trivalent logic allows us to avoid dire or even catastrophic consequences.

Starting from these triangles of trivalent logic, we can say that they are based on semiotics. The semiotic theory has foundations in the Shannon and Weaver communication model, belonging to the theory of positivist mathematics of information (Sonesson, 2000).

In the field of cybernetics, semiotics represents an evolutionary theory of mind consistent with the theory of continuity between mind and matter, including the mind of the perceiver (Brier, 2001b).

Also, in these triangles we can see that there are various symbols. The notion of the symbol was introduced as being considered the determining element of a subject (Sheridan, 1994).

3. The description of the general sustainability model.

The sustainability model consists of two overlapping triangles described by source, sensor, and decision-maker and which have the following meaning: the triangle with the top up is the phenomenon to be modeled, and the triangle with the top down is the context in which the phenomenon is active. This model is based on triangular categories of dissipative systems that are in a relationship of similarity, forming a balanced vector and fractal formations that determine a mirror-type symmetry.

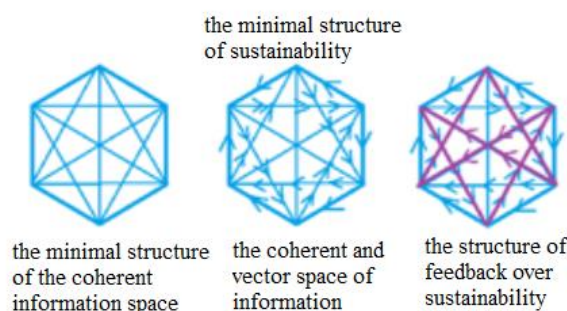


Figure 9. Basic structures of the qualitative analysis model, taken from (Colceag, 2014)

The main elements that make a model, a sustainability model, are commutative diagrams and cycles.

In the sustainability model there are four main commutative diagrams, each surrounded by three cycles that have common sides, but also four main cycles that are surrounded by three commutative diagrams with which they have common sides.

It should be noted that any main commutative diagram is generated by three cycles, and any main cycle is generated by three commutative diagrams.

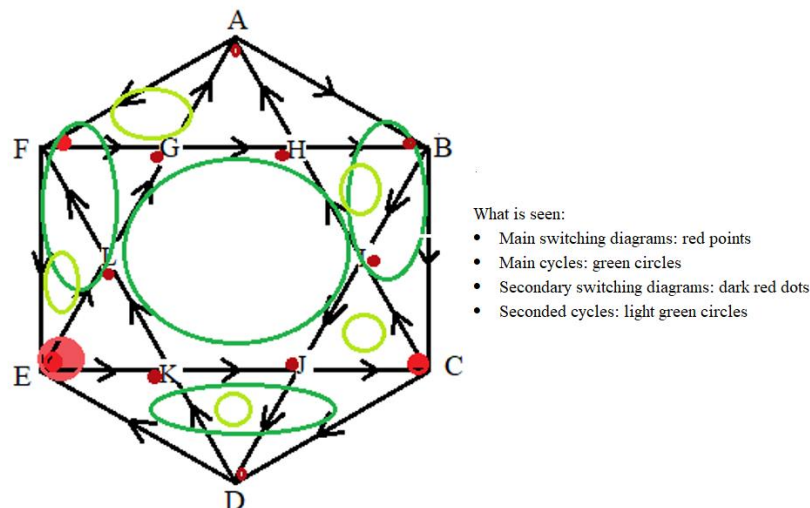


Figure 10. Description of all commutative diagrams and cycles in the sustainability model

4. Applicability of the sustainable vector model.

The sustainable vector model for economic crisis management has the following composition:

- the phenomenon is represented by the management of the economic crisis.
- the context in which the phenomenon is applicable is represented by sustainable economic development.

The phenomenon characterized by economic crisis management represents the identification of strategies that can offer solid solutions that lead to economic progress. At the same time, management represents the "art of leading" according to those actions with a realistic character that can withstand the harsh opposition shown by society to the server measures that are the basis of the restructuring and reform of the system (Vanghele, 2016).

Triangulation of information from the phenomenon is rendered by the source, the sensor, and the decision-maker, as follows:

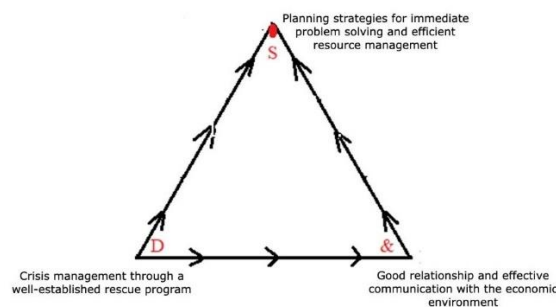


Figure 11. The phenomenon in the sustainable vector model.

In the phenomenon triangle, the source (S) represented by planning strategies for immediate problem solving and efficient resource management can be seen to be the point of accumulation in the commutative diagram, thus leading to its ability to generate power. This in

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collaboration with the sensor (&), defined as a good relationship and effective communication with the economic environment, produce a qualitative management perspective having an influence on the business environment. Likewise, the collaboration between the source and the sensor generates the decision-maker (D) characterized by crisis management through a well-established rescue program, offering a possible solution in the further development of the phenomenon.

The context in which the phenomenon acts is represented by economic development. Economic development is the process by which both the quality of life and the economy increase, based on programs or activities useful in developing and expanding the workforce, but also in maintaining existing businesses and obtaining new businesses.

The context represents the observation environment of any phenomenon at a given moment. If a phenomenon is observable then it proves that it acquires its own coherence, relevance and utility, and the context determines these characteristics.

In the present model, the process of triangulating information for the context is as follows:

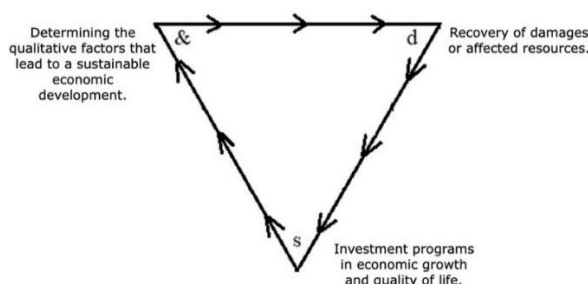


Figure 12. The context in the sustainable vector model

In the triangular context, characteristic of sustainable economic development, there is the generating source of variation, represented by investment programs in economic growth and in the quality of life, it is in relation to the sensor defined by determining the qualitative factors that lead to sustainable economic development, being an element that influences the source, feels its variation and can assess its influence on the context. These two points in collaboration with the element defined by the decision-maker, i.e. in the recovery of damages or affected resources, make this context a feedback cycle that provides sustainability to economic development.

From a general point of view, it can be mentioned that the three elements are essential to each other in determining sustainable economic development.

We notice that the context triangle is a cycle, and each of the elements is of equal importance.

The new system formed by phenomenon and context will create a sustainable vector model whose main objectives are the management of economic crises, from which it is charged, and the economic development that will bring to the system the characteristics from which it acquires its own coherence and utility.

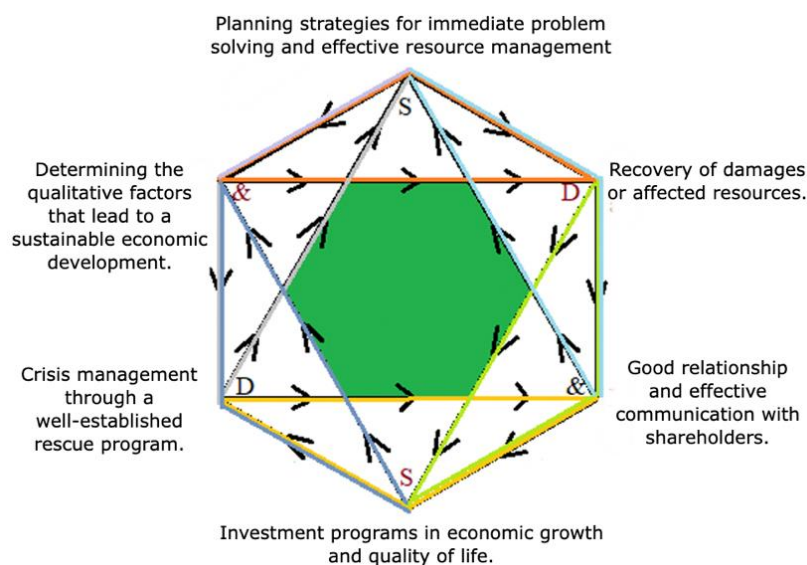


Figure 13. The new system consists of phenomenon and context.

We can see that in the new system all the points correlate, thus it assimilates the relevance for further development of all the points on different levels of fractalization but also finds its utility. If we describe the points in different triangular structures, it should make sense.

Also, this new system consists of a sustainable and an unsustainable hexagon, as follows:

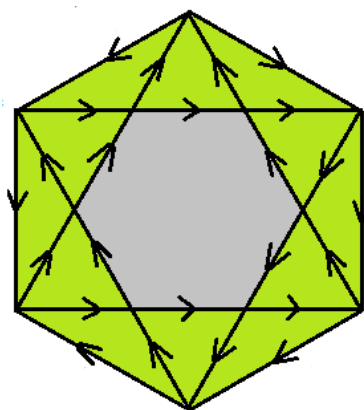


Figure 14. Sustainable hexagon (green), unsustainable hexagon (grey).

The sustainable hexagon, resting on the top, has four vectors in one direction, and two vectors in the other direction, being previously defined, both by the elements of the context triangle and those of the phenomenon triangle, characterizing each point separately.

The unsustainable hexagon contains elements characterized by a new level of fractals that generate new situations.

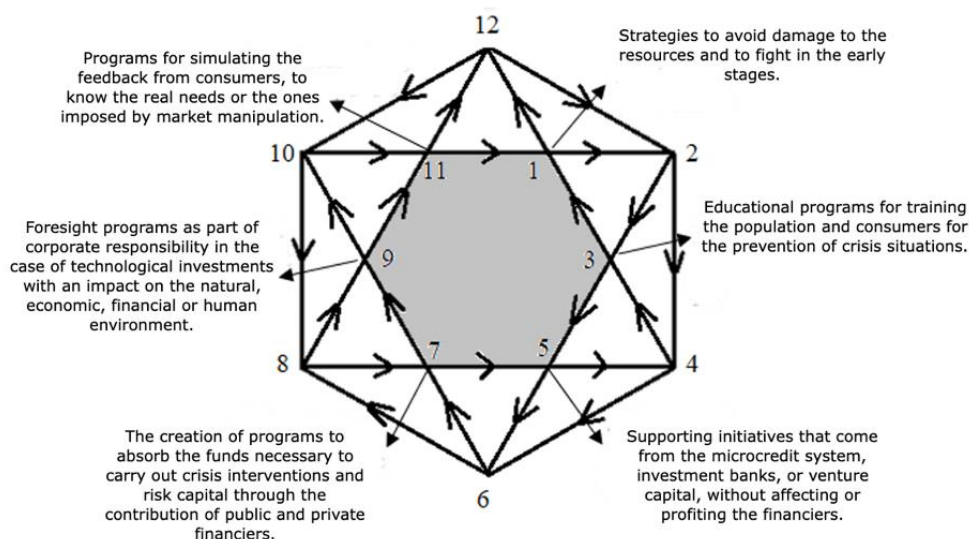


Figure 15. The unsustainable hexagon in the new system

The hour 1 is the development of strategies to avoid harming existing resources and to collaborate in the early stages. This leads to the fact that in a system it is an absolute necessity to make strategies to avoid the alteration of resources in case of a crisis, but also the development of collaboration strategies, necessary in the immediate phases of a crisis.

The point 3 is characterized by educational programs to train the population and consumers to prevent crisis situations. This leads to the creation of opportunities for the population, so that they are informed about what they can do in a crisis situation, but also how to prevent it.

The point at 5 o'clock, is characterized by supporting initiatives originating from the microcredit system, thus developing financing solutions for small businesses so that they do not disappear. At the same time, initiatives from investment banks are also needed, thus leading to complex financial transactions.

The point at 7 o'clock is characterized by the creation of programs necessary for the absorption of funds indispensable for carrying out interventions in case of crisis, thus supporting economic development.

Point 9 constitutes foresight programs as part of the responsibility of the economic environment, especially necessary when the economic environment invests in technologies with an impact on the natural, human, economic, or financial environment.

The point at 11 o'clock is responsible for projects regarding the assimilation of feedback from consumers, useful in knowing the real needs of the market

5. Discussion

The aim of the discussion section in the article titled "The use of a sustainable model for crisis management in the context of economic development" is to summarize the results, clarify their implications, and suggest future research directions. The study introduced a cybernetic model that is founded on cellular automata, which provides technical answers to crisis management issues in the context of sustainable economic development.

One of the primary discoveries of this study is the significance of human development and education in achieving a society free of crises (Gardner, 2006). The emphasis on cognitive tools and comprehension of the complexities of the universe, environment, and human abilities aligns with the present literature on sustainable development education (Tilbury, 2011). This study adds to the existing knowledge by suggesting a cybernetic model that can be included in educational programs to enhance individuals' capacity to manage crises efficiently.

Furthermore, the research highlights the importance of communication and cooperation within all network systems (Hawken, Lovins, & Lovins, 1999). The inclusion of various stakeholders, such as governments, businesses, non-governmental organizations, and citizens, plays a crucial role in implementing sustainable solutions (Kates, Parris, & Leiserowitz, 2005). The proposed cybernetic model can serve as a plan for promoting cooperation among these actors, guaranteeing that crisis management strategies are well-coordinated and effective.

The use of cellular automata as the foundation for the cybernetic model provides promising avenues for future research. As the study showed, cellular automata theory is compatible with the information-based view of the universe (Lloyd, 2006). Further exploration of the uses of cellular automata in different contexts, such as climate change adaptation, resource management, and urban planning, could provide valuable insights into the potential of this approach in promoting sustainable development (Batty, 2007).

Lastly, the study's examination of the transition from the current economic model to a sustainable one emphasizes the need to recognize and consolidate eco-economic circuits (Daly & Farley, 2011). This research adds to the ongoing discussion on the operational principles and strategies necessary for establishing a sustainable economic system (Meadows, Randers, & Meadows, 2004). Future research could investigate the practical implications of these principles and strategies, analyzing case studies of countries or regions that have successfully implemented such transitions.

6. Conclusions

From this approach it can be concluded that the sustainable vector model is an evolutionary model characterized by fractalization, being able to create new levels of fractalization, on different levels of granularity. This model is based on two overlapping triangles, being able to reach hexagonal shapes described on different levels of complexity.

Following a comprehensive analysis of the use of a sustainable model for crisis management in the context of economic development, we can draw the following conclusions:

- Importance of the sustainable model: In a world of constant transformation, with economic, social, and environmental challenges, adopting a sustainable model for crisis management becomes essential. This model not only allows us to cope with critical situations but also to prevent them and prepare for a more stable and sustainable future.
- Integration of the three pillars: A sustainable crisis management model entails integrating the three pillars of sustainable development - economic, social, and environmental - into the strategies and policies adopted. This ensures a balanced approach that considers the current and future needs of society and the environment.
- Involvement of relevant stakeholders: To ensure the success of the sustainable model, it is crucial to involve all relevant stakeholders in the decision-making process and implementation of solutions. This includes governments, companies, non-governmental organizations, and citizens, who must collaborate and contribute to building a more resilient future.
- Education and awareness: An essential component of the sustainable model is raising the level of education and awareness of the importance of sustainable development and efficient crisis management. Through education and information, we can establish a solid foundation for informed and responsible decision-making.
- Flexibility and adaptability: A sustainable crisis management model also requires a high capacity to adapt to new challenges and critical situations. Thus, it is essential to develop flexible strategies and quickly adapt to changes in the economic and social environment.

Therefore, the decision to model a system composed of the phenomenon of crisis management and the context of economic development is the basis of the fact that we are in moments of crisis.

This research emphasizes the process of exiting the crisis through sustainable management of natural, social, and economic resources.

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EXAMINING THE REVENUE IMPLICATIONS OF TAXING THE INFORMAL SECTOR

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Abstract

The increasing interest of government to tax the informal sector is driven by pressure on government to generate more revenue for the purpose of embarking on more socio-economic development programmes. Over the years, however, this effort has not yielded meaningful results owing to operational constraints. The Nigerian government is losing out on this crucial source of revenue; yet it contributes greatly to its Gross Domestic Products (GDPs). This paper examined the revenue implications of taxing the informal sector in Nigeria. Methodology made use of in writing the work is mainly doctrinal; the bulk of the research is conducted in the library and materials from the internet were also used extensively.

This research revealed that the country's tax system is lopsided and dominated by oil revenue. It is also characterized by unnecessary complex and largely inequitable taxation laws that have limited application in the informal sector that dominates the economy.

The paper concluded that taxing the informal sector would boost revenue generation and also impact positively on the economic development of the country. For Nigeria to bring the informal sector into the tax bracket, however, there is consensus that tax authorities will have to work around the clock. Efforts by the government to widen tax base will greatly increase revenue, leading to a reduction in the reliance on donor funding and also in incidences where government is forced to increase taxes on basic commodities. But a large chunk of this sector continues to slip through the noose of tax authorities, even as government grapples with the complex problem of how to avoid this. The paper recommended that taxation of the informal sector should focus on incorporating the culture of compliance rather than short-term revenue generation.

Keywords: Revenue, Tax, Informal Sector, Economy

I. Introduction

Nigeria's economy is mono-culturally depended on oil. The implication is that large proportion of the Country's revenue is based on crude oil sales and the gap is often financed with borrowings and aids (external and internal) which makes the Country's economy totally dependent on variables beyond its control. Recent global economic downturn due to fall in the price of oil and the weak value of Nigerian currency (the Naira) in the global market of economy have raised many critical challenges and economic questions as to how the three tiers (Federal, State and Local) of government will finance their budgets in the coming years. The shortfall from oil revenue accruing to the government in recent years have negatively affected the economy with many implications as well as evoking the questions of whether taxing or not taxing the informal sector for revenue and for economic reasons should be undertaken²⁹⁹. Taxing the informal sector of the economy in recent times have received greater economic attention and occupies an important domain in revenue generation among developing economies.

The International Labour Organization³⁰⁰ (ILO) was responsible for the elevation of the Informal Sector to the global spectrum in its Kenya Mission Report of 1972 when it defined informal activities as 'all economic activities that are neither monitored nor taxed by the government, and not included in the government Gross National Product (GNP) statistics.' According to ILO, the informal sector is characterized by certain drivers: (a) ease of entry; (b) reliance on indigenous resources; (c) family ownership; (d) small scale operations; (e) labour intensive and adaptive technologies; (f) unregulated and competitive markets. Initially, informal sector was seen as survival strategy arising from lack of capital and requisite skills; but it has now become a permanent characteristic of the economies of developing countries because the formal sector lacks the capacity to accommodate all the new entrants, thus serving as alternative to the alarming rate of unemployment in the formal sector. Informal economy has

²⁹⁹ Three important issues have influenced this thinking. They are: (1) how to create additional sources for more revenue generation; (2) how to improve upon economic growth and (3) the quality of governance.

³⁰⁰ ILO, 'Employment, Incomes and Equality: A Strategy for Increasing Productive Employment in Kenya', (International Labour Organization, Geneva 1972).

been described in many other terms such as ‘black market’, ‘shadow economy’, ‘the underground economy’, ‘under the table’, ‘off the books’, and ‘working for cash’. It is also described as a grey market in labour.³⁰¹

II. The Informal Sector and the Nigerian Economy

Informal sector is viewed as an economic unit occupying the most challenging domain in taxation³⁰². Economic indicators are pointing to the direction of taxing the informal sector of the economy for increased revenue, which has been neglected in the past years. Taxing the informal economy in most developing countries has enlisted greater attention reflecting the increased recognition of the potential benefits to the economy.

Nigeria has come to rely on the economic activities in the informal sector. The sector is reported to constitute about 58% of the GDP in Nigeria after the rebasing in 2014³⁰³. This is up from 35% as at 2012 and it is also reported to employ over 80% of the workforce in the country. Nigeria’s informal sector came as a result of excessive regulatory system, high cost of entry into the formal sector, bureaucracy and corruption, high level of unemployment, culture of self-reliance or entrepreneurship, low literacy level, low income levels in the public sector and poor infrastructural facilities.³⁰⁴

However, despite the economic advantage of this sector, the headache with most governments for the past few decades revolves around structuring a tax administrative model that can best work in the informal sector. Taxation is believed to be the most affected and most hit by existence of informal activities. Examples of activities carried on in the informal sector of Nigerian economy are transport, rural and urban agriculture, construction, animal husbandry, entertainment, milling business, recreational hall, several small and unregistered sole

³⁰¹ “Ending the Shadow Economy Myth” <<https://www.wiego.org/informal-economy#:~:text=The%20informal%20economy%20tends%20to,as%20illegal%20or%20inethical%20activity>>Accessed on 10 January, 2023.

³⁰²Hart K, *Formal Bureaucracy and the Emergent Forms of the Informal Economy*, (Oxford University Press 2006).

³⁰³National Bureau of Statistics, 2014.

³⁰⁴ “The Informal Economy in Nigeria” <<https://www.thisdaylive.com/index.php/2022/07/11/the-informal-economy-in-nigeria/>>Accessed on 10 January, 2023.

proprietor businesses and in some instances joint partnership businesses which can be found both in rural and urban settlements across the country, trading, small scale manufacturing and repair industries, such as carpentry, upholstery, furniture making wood works, metal works, bakery, tailoring, bricklaying and printing. The private services providers include those in the repairing occupations like the automobile mechanics, electricians, clock and watch repairs and cobblers, among others.

Payment of taxes is considered a primary civic responsibility of every citizen and foreigner, including an informal sector operator, carrying on business in Nigeria. Taxation of the informal sector should be a veritable and sustainable source of revenue for the government, yet informal sector in Nigeria contributes little to the government revenue, and it is not easy to work out a taxation model that is suitable for activities in the sector. The sector is made up primarily of self-employed persons, small and micro-enterprises and other forms of economic activities. Incomes generated by the operators in the sector, in many cases, are not officially captured into the tax net of the States or Nation. Operators in the sector conduct their businesses using the facilities provided by government from taxes paid by other taxpayers in earning income, without paying taxes. Informal sector forms a greater percentage of tax defaulters, increasing cases of tax evasions leading to leakages in government revenue.

Taxation is predominantly a game of information; it is concerned with who has access to information.³⁰⁵ Thus, when the necessary information for taxing an area of economy cannot be obtained then businesses within that area of economy cannot be subject to tax; and this can be said of the informal sector which is that area of the economy for which accurate statistical data are largely unavailable. Therefore, the sector is not fully captured into the tax bracket of the State.

In a bid to increase revenue generation, governments at the state levels are introducing several initiatives in order to bring the informal sector into the tax bracket. The state and local governments established new and several levies and set up task forces to collect them. But effort to improve taxation on this sector by undertaking several measures has not only been unsuccessful but also proved counter-productive. There are claims and counter claims about

³⁰⁵Timilehin O, 'Presumptive Taxation: A Solution to Taxing the Informal Sector in Nigeria', <http://www.academia.edu/36352946/PRESUMPTIVE_TAXATION_A_SOLUTION_A_SO_LUTION_TO_TAXING_INFORMAL_SECTOR_IN_NIGERIA> accessed on 31 July, 2022.

the existence of multiple taxations between the different tiers of government and the application of unethical tax collection methods sometimes involving violence and extortion and collection of illegal monies from persons in this sector by unauthorized persons, thereby creating harsh environment for owners of small scale businesses. This trend has the potentials of negatively affecting livelihoods and household income thereby contributing to poverty and inequality.

The increased thinking of taxing the informal sector by some major stakeholders in the Nigerian Tax System, bearing in mind the National Tax Policy (2012) is founded on the importance to good governance, growth and increased revenue.

III. Rationale for Taxing the Informal Sector

The idea of taxing the informal sector was informed by three important issues, namely: how to create additional source of revenue generation; how to improve upon economic growth; and the quality of governance. The direct revenue benefits of taxing the informal sector are likely to be relatively modest, and the implications for vertical equity potentially adverse.³⁰⁶ Therefore, argument for taxation of the informal sector is founded on potentially more indirect revenue benefits, the possibilities of rapid growth and the prospect for governance gains. Empirically, these consequences are less well established. On balance, they, however, present a convincing argument for increased efforts to enlarge the taxation of the informal sector, but there is a need to take cognizance of potential costs and greater research needs to be conducted into predicted benefits.³⁰⁷

Section 14(2)(b) of the Constitution³⁰⁸ provides that the welfare of the people shall be the primary purpose of the government. Thus, if the government has responsibility to provide social services, then by necessary implication the people (operators in informal sector inclusive) also have responsibility to perform their duties to the government, one of which is payment of tax

³⁰⁶ Joshi A, Prichard W. and Heady C, 'Taxing the Informal Economy: Challenges, Possibilities and Remaining Questions', (Being a Working Paper for Institute of Development Studies, 2013) p. 9.

³⁰⁷ *ibid.*

³⁰⁸ Constitution of the Federal Republic of Nigeria 1999 (as amended).

in line with the provision of section 24(f) of the Constitution³⁰⁹ which states that it shall be the duty of every citizen to pay his tax promptly. This is because they are benefitting from the services provided by government. But this is not to say that payment of tax is a reciprocal obligation to provision of welfare because a person, although under obligation to pay tax, cannot lay claim to commensurate provision of social service by the government by reason of the tax paid by him. Because tax has been described as ‘... any compulsory payment to government imposed by law without direct benefit or return of value or a service whether it is called tax or not.’³¹⁰ It is thus an established law that tax is compulsory payment, and the discretion of those to whom it applies is of no import. In other words, it is not open to an option to do or not to do. The National Tax Policy (2016) states expressly that any compulsory payment to the government, and which is imposed by law without any direct benefit or return of value, irrespective of the name by which it is called is tax.³¹¹

Informality has attracted many conceptualizations but the general agreement in the literature is that large informal sectors are detrimental to the economy.³¹² Informal sector has the consequences of narrowing the tax base and a potential grave distortion of activity of the economy.³¹³

The rationale for taxing the informal sector is, therefore, the efficiency and equity implications, governance implications and the revenue implications. The focus of this research work is, therefore, the revenue implications of taxing the sector.

IV. Efficiency and Equity Implications of Taxing the Informal Sector

Taxing the informal sector raises the issues of equity and efficiency. In economy, taxation has the capability to distort economic decisions. Taxation creates a loss of welfare higher than the

³⁰⁹ibid.

³¹⁰National Tax Policy, Federal Ministry of Finance, 2016.

³¹¹ 'Presumptive Taxation : A Solution To Taxing The Informal Sector In Nigeria', p. 2.

³¹²Kanbur, R, 'Avoiding Informality Traps', (Draft Paper, Cornell University, New York, 2010), in Godwin Dube, 'Informal Sector Taxation: The Case of Zimbabwe' (PhD Thesis, University of KwaZulu-Natal, Howard College Campus Durban, South Africa, 2014) p. 38.

³¹³ Keen M, 'VAT, Tariffs, and Withholding: Border Taxes and Informality in Developing Countries', 92 Journal of Public Economics 1892–1906.

revenues collected – the deadweight loss or excess burden of taxation³¹⁴. Small businesses are absconding the distortionary effects of taxation by refusing to upgrade to the formal sector; and their growth may be hindered if they are drawn into the tax bracket. Yet, while taxation and its distortionary effects may be escaped by operators in the informal sector, inefficiencies can also be created by remaining informal. This is because by remaining informal thus becoming invisible to tax authorities, such businesses cannot afford to be too successful as this will attract the attention of tax authorities; and it is submitted that remaining informal can serve as hindrance to a business' full potential³¹⁵. Thus, if being in the informal sector impedes the growths of these businesses, economic growth may be affected as well.

On the other hand, from the perspective of equity, arguments have been proffered for a nearly entire exclusion of informal sector from direct taxes. This is because informal sector taxes tend to be regressive, threatening the survival of small businesses, and bearing in mind that most of the operators in this sector are already paying levies such as trading licenses, operating permits and user fees³¹⁶. In Nigeria, informality is the only viable option for unemployment. Thus, attempting, to reduce informality by taxing operators in the informal sector will destroy informal jobs and at the same time results in inequities. Although, this does not mean that operators in the informal sector are always poor³¹⁷, because there is no nexus between informality and poverty on one hand, and formality and affluence on the other hand. Thus, not taxing these informal businesses can also give rise to clear inequities and much discontent from those with similar or lower incomes in the formal sector. Empirical evidence shows that wage

³¹⁴ Rosen H. S, *Public Finance*, (Boston McGraw-Hill,1995).

³¹⁵ Hillman A. L, *Public Finance And Public Policy*, (Cambridge University Press, New York, 2009).

³¹⁶ Parts II and III of the Taxes and Levies (Approved List for Collection) Act *CAP. T2 LFN 2004* contain various taxes and levies, being collected by State and Local Governments, some of which are applicable to the operators in the informal sector.

³¹⁷ ILO, 'Women And Men In The Informal Economy', (Geneva, 2002) in Godwin Dube, 'Informal Sector Taxation: The Case of Zimbabwe', (PhD Thesis, University of KwaZulu-Natal, Howard College Campus Durban, South Africa, 2014) p. 40.

earners in the formal sector in developing countries always have the feeling that they are taxed more heavily than people at equal level of income in the informal sector³¹⁸.

V. Governance Implications of Taxing the Informal Sector

Political and governance considerations have also been emphasized in taxing the informal sector in developing countries³¹⁹. Taxing the informal sector can increase the political participation of tax-payers through reciprocity and accountableness in exchange for taxes paid; in view of this, taxing the informal sector should be viewed beyond ordinary revenue considerations. Paying taxes may motivate governance in three ways. First, the state may be more responsive and accountable to tax-payers as a way encouraging quasi-voluntary compliance. Second, by paying tax tax-payers are more likely to make demands for responsiveness and accountability. Third, by taxing the informal sector operators, bargaining between State and informal sector associations may be encouraged.

If this nexus between taxation and governance actually exists, then taxing informal sector could be an important way of increasing government accountability and making sure that those in the informal sector are heard. A very good example of this is that of Ethiopia cited by Prichard³²⁰, where it was found that expanding the taxation of small businesses just before the 2005 elections resulted in some public mobilization that prompted the government to work with the business sector in overseeing the presumptive tax regime.

Although, it is submitted that the Ethiopian evidence of connection between taxation and governance is rather far-fetched, because governance is an area that is entirely outside the scope of taxation; and as noted earlier it is an established principle of taxation that payment of tax attracts no 'direct benefit or return of value or a service' from government to the tax-payer.

³¹⁸ 'Informal Sector Taxation: The Case of Zimbabwe', p. 41.

³¹⁹ Ibid.

³²⁰ Prichard W, 'Taxation, Responsiveness And Accountability in Sub-Saharan Africa', (PhD Thesis, Institute of Development Studies, University of Sussex, 2010).

VI. Revenue Implications of Taxing the Informal Sector

In many developing countries, informal sector forms a large and sometimes increasing part of the economy³²¹. In order to fund the ever increasing expenditures of the government therefore, tax authorities are required to seek ways to tax the income of those carrying on business in the informal sector. In sub-Saharan Africa, the contribution of informal sector to the GDP is estimated at 24 percent³²²; in Asia its contribution is estimated at 22 percent while it is 23 percent in Latin America³²³. The National Bureau of Statistics stated in its 2015 GDP report of formal and informal sector that the informal sector's share of the Nigerian economy was about 41.1%³²⁴. By drawing attention to its size and the increasing share of its contribution to the GDP in Nigeria, the informal sector does appear to be a potentially significant source of revenue for the government. But large informal sector may have the consequence of weakening the Country's growth prospects (through the loss of revenues from tax) and broader development agenda³²⁵. Developing countries like Nigeria have been called by international financial institutions to fund their own developments by harnessing their local resources rather than depending on aid or foreign loans³²⁶. The inclusion of informal sector in taxation could thus be a pertinent part of taxation-development connection³²⁷. Although, taxing the informal sector is not without its problems, because the sector is made up of low income-earning businesses and it is that sector of the economy for which accurate statistical data are not readily available. Apart

³²¹Godwin Dube, 'Informal Sector Taxation: The Case of Zimbabwe', (PhD Thesis, University of KwaZulu-Natal, Howard College Campus Durban, South Africa, 2014) p. 38.

³²²ibid.

³²³ibid.

³²⁴ 'Presumptive Taxation : A Solution To Taxing The Informal Sector In Nigeria', p. 5.

³²⁵Mbaye, M, 'The informal Sector, Employment, and Structural Transformation: Some Operational Recommendations For A Productive Policy', in Godwin Dube, 'Informal Sector Taxation: The Case of Zimbabwe' (PhD Thesis, University of KwaZulu-Natal, Howard College Campus Durban, South Africa, 2014) p. 38.

³²⁶ 'Informal Sector Taxation: The Case of Zimbabwe', p. 38.

³²⁷ IMF, 'Developing the International Dialogue on Taxation: A Joint Proposal By The Staffs Of OECD And World Bank', <<http://www.imf.org/external/np/fad/itd/2002/031302.htm>> accessed on 09 July 2022.

from these, this sector is yielding low revenue to the government, thus the costs of collecting and administering informal sector taxes in Nigeria can be high. Due to these low revenue and high costs of administration, experts on tax tends to view taxation of informal sector with skepticism. Their argument is that a reasonable allocation of resources in a developing country like Nigeria should be focused on the formal sector which has the greater revenue yield³²⁸. It is therefore not surprising that taxing the informal sector is only recently gaining prominence in the Nigerian taxation priorities.

However, taxing the informal sector is not limited to mere considerations of revenue. This is because government is losing revenue for non-payment of tax by operators in this sector and this has the effect of increasing tax rate for those who are paying taxes. Moreover, by not taxing the informal sector, not only will other operators in the formal sector may be tempted to informalize their enterprises as well in order to avoid tax, informal sector will avoid growth (so as not to attract attention from revenue authorities)³²⁹. And not taxing the informal sector may demoralize compliance behaviour in the formal sector³³⁰. Taxation of businesses in the informal sector should be viewed as a first step towards business formalization instead of being seen from a short-term revenue perspective³³¹. Taxation of informal sector is viewed as building a culture of tax compliance (despite the low short-term revenues) which ensures that these businesses continue to pay their taxes as they grow. Growth of business (as a result of greater access to markets, credit and finance) is viewed as providing opportunities for small businesses to move out of penury and the 'informality traps'.

VII. Challenges of Taxing the Informal Sector

³²⁸ Keen, M, 'Taxation And Development – Again', (IMF Working Paper WP/12/220, Washington DC, 2012) in Godwin Dube, 'Informal Sector Taxation: The Case of Zimbabwe' (PhD Thesis, University of KwaZulu-Natal, Howard College Campus Durban, South Africa, 2014) p. 39.

³²⁹ 'Informal Sector Taxation: The Case of Zimbabwe', p. 39.

³³⁰ *ibid.*

³³¹ Loeprick J, 'Small Business Taxation: Reform To Encourage formality And Firm Growth, Investment Climate In Practice', (Washington DC, World Bank, 2009) in Godwin Dube, 'Informal Sector Taxation: The Case of Zimbabwe' (PhD Thesis, University of KwaZulu-Natal, Howard College Campus Durban, South Africa, 2014) p. 39.

A lot of challenges have bedeviled taxation of informal sector. These range from lack of statistical database due to non-registration of businesses in the informal sector. Also, there is lack of accounting record keeping of business transactions and incentives to official by government. Issues relating to residence of the taxpayers resulting from unstable nature of business carried out by operators in the informal sector which makes it difficult to establish a tax base. Also identified as a challenge is lack of trained and skilled personnel of relevant Tax Authority and modern operational vehicles and equipment and security of staff.. Another challenge is corruption on the part of tax officials and government. a corollary of this is high level of political interference, where tax officials and politicians (government in power) jettison payment of tax but opt to spend money on electorates for their selfish interest.³³²

VIII. Conclusion and Recommendation

It is submitted that taxation of informal sector may yield huge benefits in terms of economic growth, the quality of governance and long-term revenue collection. But the evidence of this nexus remains limited generally. First, tax morale and a culture of tax compliance can be built by taxing the operators in the informal sector. Second, the growth of SMEs (Small and Medium-Size Enterprises) can be enhanced by taxing the informal sector. Yet, questions remain about how enormous these effects are, whether smaller businesses are likely to benefit, who may be disadvantaged, and which particular policies may be most significant. Finally, pertinent attention has been paid to the prospect for informal sector taxation to prompt state–society bargaining (i.e governance). But evidence is still specifically limited, with a need for research into hindrances to collective action and constructive bargaining. Cognizance should also be taken of power imbalances that always characterize the dealings between State and the informal sector, and the corresponding vulnerability of informal sector operators.

From the submissions made in this research work, the following recommendations are made:

³³² **Adekoya A. Augustine and Babatunde Akeem Lawal** “Informal Sector and Tax Compliance in Nigeria-Challenges and Opportunities”<
https://www.researchgate.net/publication/342451989_Informal_Sector_and_Tax_Compliance_in_Nigeria-Challenges_and_Opportunities>

- **Effective Customer Relations:** Maintenance of very good customer relations is key; thus tax collectors should apply marketing, human resource strategies and a high sense of diplomacy to convince and encourage taxpayers to make good their respective tax liabilities. However, when the need arises the rules and regulations governing tax compliance must be applied. Again, tax net should be widened further so as to capture much more lower income earners. Taxpayers and general public should also be involved in decision making processes as far as taxation is concerned for this will be of great help since it will ensure commitment.
- Tax laws should be made simple and to the understanding of informal sector operators; this will enhance voluntary compliance.
- Informal sector taxation should be focused on incorporating the culture of compliance rather than the short-term revenue generation.
- **Harmonisation of Taxes:** Proliferation of taxes should be discouraged because there is no correlation between multiple taxes and increase in revenue to the government. Thus, taxes should be harmonized so as to reduce illegal charges on the people as well as boost revenue generation for the government because quite a lot of these multiple collections go into private pockets; moreover, harmonisation will also encourage small business to grow.

An Impact of Socio economic factor and Usage of ICT in Pandemic Situation

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Abstract

The coronavirus disease (COVID-19) is dangerous and it affected not only the life of the people , it also affected all the business unit in India.It is seriously threatening the world public health and it crashed the economic value of the all the country. Almost all the countries were affected and India is highly affected by the epidemic, with the number of infections and increasing trend of deaths. It is an extreme and unpredictable event, has greatly damaged the global economic growth and crashed and spoiled the environment. This paper takes an clear information how the business can be survived and how ICT plays an important role in the business.

Introduction

COVID-19 has affected all the communities, businesses organisation , school and college education, trade between other countries affected globally, It is affecting directly in the financial markets and the global economy and the economic condition of India is affected. Uncoordinated and not following the government responses and major lockdowns have led to a disruption in the supply chain. Those business they are doing with digital platform , can able to survive. Lot of small and cottage business were affected because of not able to use technology based selling the products and not aware about the digital platform. The covid -19 changed the business from traditional to modern. The demand for the products is very low and the purchasing power from the customer are also very low. All the primary sectors like agriculture has also been tested by the COVID-19 pandemic. A global crash and no demand from hotels and restaurants has seen prices of agricultural commodities drop by 20%.Because hotels and restaurants were closed and people are not interested to go outside to buy food items. Petroleum & oil prices were reduced because of less demand of usage of the products due to lockdown. The schools and colleges were closed and they are studying through online classes. The IT sectors were working through online based working environment.

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All the retail sectors were closed and all the manufacturing units were closed because of lack of employees were unable to turned up and non-availability of the transport during lock down period.

Review of Literature

Leena Jenefa et.al (2020), The researcher used Chi-square test towards perception towards online platform for ticket booking. Digital platform plays an important role during Covid pandemic and technology plays an important role. In their research work, the researcher intended to analyze the gender perception towards online ticket booking (Railways, bus and Airlines) and to analyze the level satisfaction of the customer in Delhi NCR. The study was based on structural questionnaire with a sample of 150 respondents.

Jabir singh and et.al (2020) Internet plays an important role in today's life especially during pandemic situation. Majority of the business and service organization used electronic platform for various purposes. Digital marketing helps the customer to shop online at flexible timing at any time from any place and purchased through internet without spending extra amount.

Bherwani, H et.al (2020)The lockdown strategy in India during COVID-19 pandemic disaster gave a good lesson to all the countries through out the world for restoring the environmental quality as well as natural ecosystem stability. In West Bengal , the view of Himalayan range were protected with pollution. The COVID-19 pandemic forced the Government to have constant lockdown and create unpleasant situations .But during that period , it purify the environment along with air quality modification.

Leena Jenefa et al (2013);(2015) The study was conducted about the preference towards retail shop and the influencing factor to attract the customer in various field of variable to buy the products. In this research it was found that customer delight differs with various variable like time of purchase, gender preference, place , status, income and budgeting.

Research Methodology

It is an empirical study. The data were collected through primary and from Secondary sources. The primary data were collected through structural questionnaire from different level of respondent.355 samples were selected from West Bengal using google form using convenience sampling method. The data were collected and analysed using IBM SPSS software

25. The secondary data were collected using books, journals, and websites. The scope of the study is limited to West Bengal state.

Analysis

Table 1: Gender of the Respondents

Particulars		Frequency	Percent
Gender	Male	177	49.9
	Female	178	50.1
	Total	355	100.0

Source: Primary data

Inference: 49.9 percent are male respondents. 50.1 respondents are female.

Hence it is concluded that , the majority of the respondents are female .

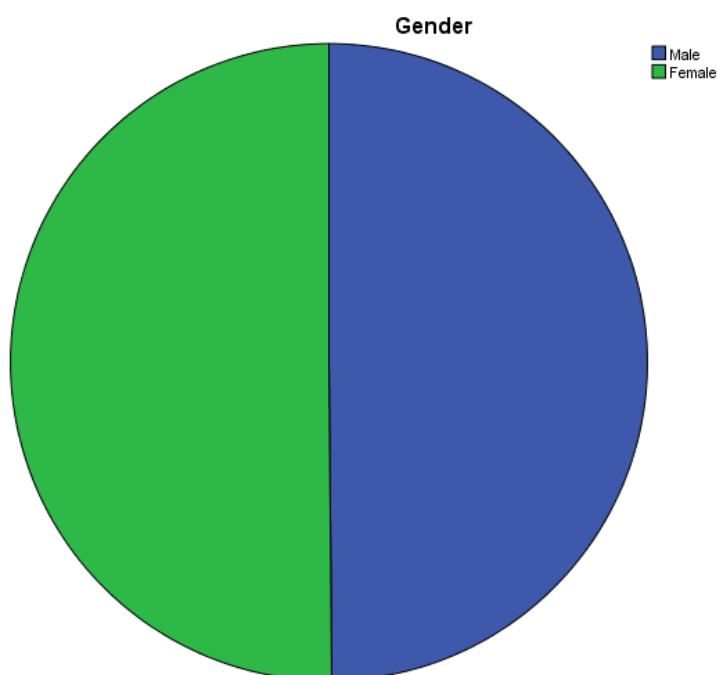


Figure1: Gender

Table 2: Age of the Respondents

Particulars		Frequency	Percent
Age	less than 20 years old	85	23.9
	21 to 40 years old	210	59.2
	41 and above years	60	16.9
	Total	355	100.0

Source: Primary data

Inference:

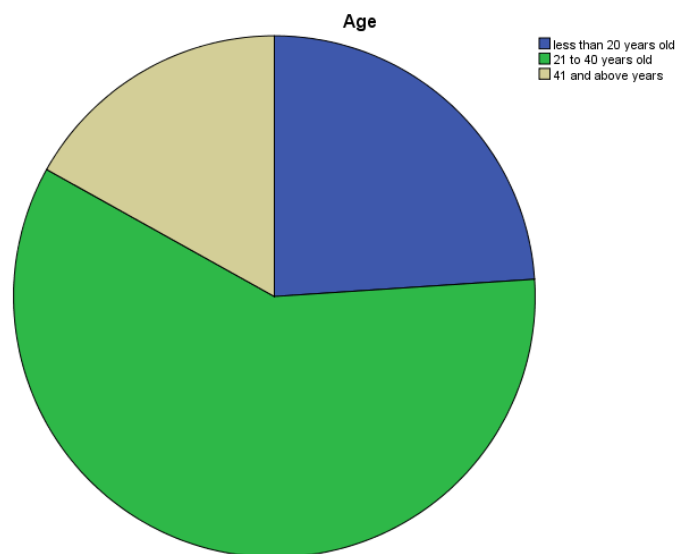


Figure 2: Age

Table 3: Income of the Respondents

Income		Frequency	Percent	Valid Percent	Cumulative Percent
Income	Less than INR50,000 pm	175	49.3	49.3	49.3
	INR50,001 and above pm	180	50.7	50.7	100.0
	Total	355	100.0	100.0	

Source: Primary data

Inference:

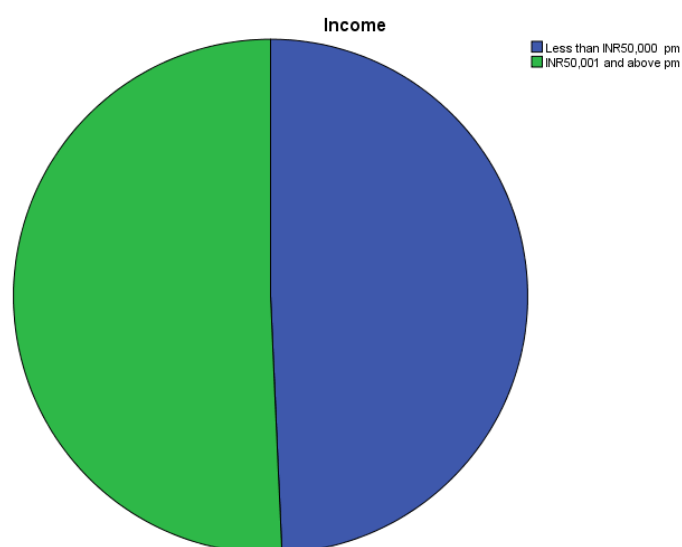


Table 4: Cross tabulation between Gender and Industry they are involved

		Industry				
		Manufacturing Industry	Education Industry	Agricultural activities	Petroleum Industry	Finance Industry
Gender	Male	81	50	3	14	29
	Female	34	61	53	20	10
Total		115	111	56	34	39

Source: Primary data

Inference:

Hypothesis framed

H₀: There is no association between Gender and Industry they are involved

H₁: There is an association between Gender and Industry they are involved

Table 5: Association between Gender and Industry they are involved

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	75.255 ^a	4	.000
Likelihood Ratio	85.834	4	.000
Linear-by-Linear Association	4.337	1	.037
N of Valid Cases	355		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.95.

Source: Computed data

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Inference: From the above Table.5 shows that chi- square test at 5% level of significance p-value is less than the 0.05. So, null hypothesis is rejected. Hence, there is a significant difference between Gender and Industry they are involved.

Conclusion

All the people who are engaged in their working organisation faced problem during covid lock down period. These people are working with fears of a new recession and financial collapse, and it will take time for resilient and need strong leadership in healthcare, business, etc .The relief measures need to be implemented immediately and new policies should be their to safe guard the situations. Medium and short term planning is needed to re-balance and re-energise the economy following this crisis. Those companies they shifted their business from traditional to Morden by using digital platform can able to plough back their money and have a little bit positive side to survive in the industry. New technology with the help of electronic commerce gave a new channel for them to increase their demand for their products.

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PART 3: HEALTH SCIENCE CHAPTERS

SURGICAL NURSING IN CHRONIC VENOUS INSUFFICIENCY

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Abstract

Chronic venous insufficiency is the stage of decompensation of venous circulation in the lower limbs. The basis of this condition is varicose disease, postthrombotic syndrome and some congenital venous anomalies. Clinical disorders appear only when the obstacle is located on the axis of one of the popliteal or common femoral veins or when venous collaterals are also involved through trophic lesions. The anatomopathological lesions of the chronic venous insufficiency syndrome are characterized by variety and polymorphism, with the involvement of all tissues of the lower limb. The diagnosis of this condition is based on the history, clinical examination, functional tests and the results of Doppler ultrasonography and phlebography. The most common complications dreaded symptoms of chronic venous insufficiency syndrome are represented by subcutaneous sclerosis and calf ulcer, the severity of which dominates the clinical picture. The drug treatment consisted in the administration of phlebotonics. It is able to improve clinical signs and symptoms and, in particular, accelerate ulcer healing, when combined with compression therapy. The study group was represented by a number of 76 patients hospitalized between May 2018 and May 2022 in the Surgery department of the Turceni Hospital, of which 23 (30.26%) underwent medical treatment, out of a number of 53 (69.73 %) patients underwent surgical intervention, 38 (71.69%) patients benefited from saphenectomy by stripping, 11 (20.75%) patients underwent excisional debridement of the varicose ulcer and 3 (3.94%) patients presented pathology cardiovascular and hepato-renal important which required the transfer to the higher echelons. The diagnostic algorithm must be implemented right from the presentation of the patients in the specialized outpatient clinic in close connection with the family doctors and the other members of the multidisciplinary medical team.

Key words: varicose veins, insufficiency, ulcer, prophylaxis, treatment.

Chronic venous insufficiency is the stage of decompensation of venous circulation in the lower limbs. The basis of this condition is varicose disease, postthrombotic syndrome and some congenital venous anomalies. "Chronic venous insufficiency disorders of the lower limbs are due to the alteration of the venous system, represented by Ferreira's "triple venous

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insufficiency": superficial, deep venous roots and perforating veins" (Ignat 1983, p.43). Clinical disorders appear only when the obstacle is located on the axis of one of the popliteal or common femoral veins or when venous collaterals are also involved through trophic lesions. These disorders secondarily cause perivenous lesions that include the artery, nerves and lymphatic vessels. As a result, vasomotor disorders, arterio-venous dysfunction and lymphatic stasis occur, disorders that are associated with venous stasis, affect the function of the capillaries, having repercussions on the soft parts and on the osteo system -articular. The anatomopathological lesions of the syndrome of chronic venous insufficiency are characterized by variety and polymorphism, with the interest of all tissues of the lower limb. Chronic venous insufficiency syndrome includes the decompensated stage of varicose disease, postthrombotic syndrome and, to a lesser extent, congenital syndromes, especially that described by Klippel-Trenaunay. Venous stasis is compensated for a long time and to a great extent, with the help of the musculo-venous pump of the ankle and through the lymphatic system that compensates for the impairment of venous circulation. When the musculo-venous pump becomes partially ineffective, due to the appearance of insufficient perforators that allow reflux from the depth to the surface, to which is added the insufficiency of the overloaded lymphatic system, irreducible or partially reducible edema occurs, an alarm signal of the transition to the decompensated stage in chronic venous insufficiency. Arterial damage through the process of cellulitis and edema causes the disruption of arteriolo-capillary and lymphatic circulation, followed by the appearance of lymphatic stasis and peripheral neuritis with a major impact on tissue trophicity. Chronic venous insufficiency is variable, ranging from a discrete malleolar edema and a simple aesthetic embarrassment, to the most serious forms of post-thrombotic syndrome, such as calf ulcer, its most formidable and serious complication. This condition can be superficial, deep or mixed – the association of superficial and deep venous network damage. Deep venous insufficiency can be secondary to a superficial insufficiency, the deep overload determining in the medium or long term the secondary insufficiency. Chronic venous insufficiency, in addition to the major impact it has on the quality of life of the affected population, also causes increased costs borne by healthcare.

Worldwide, approximately 5% of the population shows signs of chronic venous insufficiency, and 1% have had or have varicose ulcers. Medical costs for the treatment of chronic venous insufficiency are estimated at \$192 million per year in the U.S. and \$230-600 million pounds per year in the United Kingdom. It is estimated that the prevalence of varicose veins is between 7 and 60%, with the presence of clinical venous reflux in 40% of the population. In our country, through the studies conducted, an incidence of 32% was found, with a preponderance in the urban environment" (Socoteanu, 2007, p .2115).

The etiology of chronic venous insufficiency is represented by: postphlebotic syndrome – 50% of deep thrombophlebitis; advanced hydrostatic varicose veins, neglected, with decompensation of the deep and superficial venous system; congenital venous malformations; arterio-venous fistulas of various etiologies.

The diagnosis of this condition is based on history, clinical examination, functional tests and the results of Doppler ultrasonography and phlebography. The most common symptoms are various sensations in the lower limbs, ranging from discomfort to pain (cramps, dull pain, heaviness, fatigue, restlessness in the legs). The pain occurs after long periods of standing, is more intense towards the end of the day and improves when standing or walking. Unlike pain

caused by arterial insufficiency, pain from chronic venous insufficiency is aggravated by heat and improves with elevation of the lower limb and compressive treatment.

"Venous claudication, occurs in the case of venous occlusion, does not stop immediately after the end of the effort, requiring the lifting of the lower limb" (Ignat, 1976, p.43).

Edema of the lower limbs from chronic venous insufficiency initially leaves a hole, in time it becomes hardened. It is difficult to differentiate it from edema of other causes: cardiac, liver failure, renal failure, infection. Lymphatic edema can be caused by the obstruction of lymphatic vessels but also by a hyperproduction of lymph due to venous hypertension. At the beginning, located perimalleolar, it has the following characteristics: extensive, persistent and progressive. In prolonged orthostatism it increases a lot, and in clinostatism it decreases, but does not disappear completely. Skin changes include hyperpigmentation, due to the deposition of hemosiderin, venous dermatitis is usually located in the lower 1/3 of the calf - the skin is shiny red or pink, warm to the touch and sometimes with painful sensitivity to touch; eczema is characterized by a polycyclic form, imprecise outline, often with an exudative character; the brown pigmentation is due to hemosiderin pigments, secondary to small interstitial hemorrhages, determined by the capillary fragility and the lattice; pruritus, chronic cellulitis, white atrophy (skin infarction). The calf trophic ulcer is an oval trophic lesion, with irregular edges, it gradually expands on the surface and towards the depth. The bottom of the ulcer is red-brown in color, sometimes covered with serous or serous secretions, possibly purulent. An insufficient vein or a thrombosed vein may be present in the indurated base of the ulcer (Tănase, 1976, p.118). Superficial varicose veins - dilated, tortuous, with a thickened or very thin wall; some represent collateral drainage pathways – in postphlebotic syndrome. Some insufficient perforating veins can be detected clinically.,,In the case of induration cellulite, the varicose veins are palpable as true rigid grooves in the hard plaque of inflammation" (Angelescu, 2003, p.2242).

Continuous Doppler ultrasonography indicates: lack of flow increase when the muscle is compressed distal to the probe (in the obstructive syndrome), respectively the presence of reflux during the Valsalva maneuver or compression proximal to the transducer (in the avalvulation syndrome).

Duplex Doppler allows simultaneous visualization of the vein and flow measurement. The permeability of the veins is appreciated, considering the fact that normal veins are compressible and thrombosed ones are incompressible. It provides important data about the functionality of the venous valves. Nuclear magnetic resonance is the most sensitive and specific investigation for evaluating veins in the pelvis or distal leg, hard-to-reach areas. It also contributes to the differential diagnosis of chronic venous insufficiency with other non-vascular causes of edema.

The most feared complications of chronic venous insufficiency syndrome are represented by subcutaneous sclerosis and calf ulcer, the severity of which dominates the clinical picture. These lesions respond more difficult to treatments aimed at reducing phlebohypertension, even if the interventions to correct the venous circulation lead to healing, they are short-lived, and relapse is frequent. "At the level of the trophic ulcer of venous origin, limited, circumscribed, surrounded by an area of cellulitis, acute bouts of streptococcal cellulitis can occur with a trailing character that evolves into lymphatic thrombosis and aggravation of circulatory disorders" (Bucur, 1987, p.132). A local tissue aggravating factor is subcutaneous sclerosis that

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leads to the appearance of chronic proliferative endophlebitis-type lesions with thrombosis and vascular sclerosis (Tănase, 1976, p.127).

Medical treatment is the basic therapy applied in most cases of chronic venous insufficiency. A first objective is to educate patients to understand the chronic and insidious nature of the condition and the importance of simple therapeutic measures, which must be followed throughout life. Patients hardly accept the obligation of this prolonged treatment, but which has a beneficial role, stagnating the evolution of the disease for long periods. "The control of phlebohypertrophy and edema is achieved simply by permanently wearing elastic stockings, by avoiding prolonged orthostatism and by frequently raising the lower limbs above the level of the heart" (Angelescu.2003, p.2243). Bed rest is reserved for those with difficult-to-treat calf ulcers. Gradual elastic compression, with the help of elastic bandages or medical stockings, achieves a more pronounced compression at the ankle level: 30-40 or 40-50 mmHg and gradually decreases above. Pharmaceutical treatment consists in the administration of phlebotonics. It is able to improve clinical signs and symptoms and, in particular, accelerate ulcer healing, when combined with compression therapy.

The objective of this study is to provide data on the contribution of nursing in assessing the type and complications of chronic venous insufficiency of the lower limbs, as well as its role in the therapeutic scheme in order to achieve an acceptable survival and a superior quality of life.

In the nursing process for patients with chronic venous insufficiency, an important role is to educate patients to use elastic restraint in order to be able to prevent the appearance of edema, prevent varicose degeneration of the superficial venous network and also prevent the installation of stasis dermatitis, since early stages of the disease.

In front of a patient with a calf ulcer, the main objective is the healing of the ulcer, which from a clinical point of view coincides with the reduction of pain, frees the patient from local dressings, partially integrates him into a convenient work and life regime.

The study group was represented by a number of 76 patients hospitalized between May 2018 and May 2022 in the Surgery department of the Turceni Hospital, of which 23 (30.26%) underwent medical treatment, out of a number of 53 (69.73 %) patients underwent surgical intervention, 38 (71.69%) patients benefited from saphenectomy by stripping, 11 (20.75%) patients underwent excisional debridement of the varicose ulcer, one patient (1.88%) benefited from sclerotherapy and 3 (3.94 %) patients presented significant cardiovascular and hepato-renal pathology that required transfer to higher echelons. The study has a retrospective character, it did not take into account the cases of chronic venous insufficiency that presented significant cardio-respiratory and renal comorbidities, that contraindicated surgical intervention or that after a first clinical evaluation did not return to hospitalization. . From the study group, 46 (60.52 %) patients were male and 30 (39.47 %) were female. In the 53 patients who underwent surgery, there were no intraoperative incidents and no postoperative complications.

The inclusion criteria were: the diagnosis of chronic venous insufficiency of the lower limbs, the complications of this syndrome and the absence of ambulatory adjuvant treatments.

The exclusion criteria were: patients' refusal to submit to the investigation algorithm and contraindications to the application of the different stages of the investigation and treatment algorithm. The data source was the observation sheets, treatment registers/protocols, diagnostic

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registers. The specific nursing objectives were the following in the short term: for the patient to benefit from emergency care to favor the evolution and minimize the risk of complications, for the patient to be volemic and hydroelectrolytic balanced, to present physiological eliminations, to have normal and efficient breathing and circulation and to also to have a physiological and efficient sleep.

The specific medium-term nursing objectives: the patient to mobilize and adopt comfortable positions, to present a satisfactory evolution, without complications. to acquire the necessary knowledge to regain health.

The long-term specific nursing objectives were the following: the patient should present a physical state of well-being and not be left with acute inflammatory lesions. Although the study carried out included only a number of 76 clinical cases, the results obtained are in accordance with the data from the specialized literature, the location of the lesions was predominantly at the level of the left calf in people who, by the nature of the profession, benefit from long periods of orthostatism. In the antecedents of the patients, the genetic predisposition as well as the presence of conditions that predispose to the development of chronic venous insufficiency can be found.

Considering the fact that the treatment of this condition requires special attention from the entire medical team and not least the patient's compliance with the investigation and treatment algorithm, it is necessary to constantly improve the nursing process for this category of patients.

The investigation algorithm of this condition was limited to the usual diagnostic means and could not benefit from the direct help of Duplex Doppler ultrasonography or MRI angio.

Cases with cardio-respiratory and hepato-renal pathology, as well as those in which the clinical and ultrasound evaluation indicated damage to the pre-perforating veins or the existence of a deep venous insufficiency due to valvulation, were referred to the higher echelons that benefit from the contribution of vascular surgery.

The cases that at the first evaluation benefited from the existing treatment algorithm at the ward level refused hospitalization, it was found that on the subsequent return to the hospital ambulatory, they were in an advanced stage of the disease, which is why they were referred to the phlebology clinics. It is necessary to start a population awareness program on the impact and complications of venous diseases preceding the installation of chronic venous insufficiency in parallel with the continuous improvement of the nursing process at the level of the medical staff at a theoretical but also a practical level, by participating in specialized courses and conferences.

The management of patients with varicose ulcers requires compliance with a rigorous investigation and treatment algorithm considering the frequency of relapses but also the social and economic impact. In the foreground must be the permanent education of patients in order to understand the chronic and insidious nature of this condition and the importance of simple therapeutic measures, but which must be applied throughout life.

The patients hardly accept the obligation of this prolonged treatment and the prophylaxis measures, but which have a beneficial role, stopping the evolution for long periods.

The control of venous hypertension and edema is achieved simply by permanently wearing elastic stockings, by avoiding prolonged orthostatism and by frequently raising the lower limb above the level of the heart.

The diagnostic algorithm must be implemented from the presentation of patients to the specialized outpatient clinic in close contact with family doctors and other members of the multidisciplinary medical team – internist, surgeon, cardiologist, neurologist, emergency physicians, dermatologist, diabetologist and medical assistants. The treatment algorithm includes, in addition to the administration of phlebotonics, the administration of antibiotics and antibacterial solutions only in definite bacterial contaminations, the administration of anti-inflammatory drugs and surgical treatment to restore venous flow and suppress venous reflux by removing non-functional veins.

In this sense, the periodic reevaluation and processing of the diagnostic and treatment protocols of chronic venous insufficiency with the medical personnel involved is required in order to improve the therapeutic results. The treatment algorithm includes, in addition to the administration of phlebotonics, the administration of antibiotics and antibacterial solutions only in definite bacterial contaminations, the administration of anti-inflammatory drugs and surgical treatment to restore venous flow and suppress venous reflux by removing non-functional veins.

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POSTTRAUMATIC STRESS DISORDER

Ana Maria Cîmpeanu

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"Posttraumatic Stress Disorder" (PTSD) is a mental disorder that occurs as a result of prolonged exposure to a traumatic event: child abuse, sexual abuse, domestic violence, natural disasters (fires, earthquakes, floods, etc.), road accidents or negative experiences from wars.

As symptoms, PTSD includes thoughts, feelings, dreams related to the trauma, reliving the traumatic events, altered emotional reactions that are dysfunctional and a hypersensitivity in response to the trauma.

These symptoms appear one month after exposure to psycho-trauma and can appear in the form of memories of negative events even in children.

People with PTSD have a high risk of suicide.

Not all people who are exposed to and experience traumatic events develop PTSD.

Children and women who are more frequently exposed to violence, sexual abuse, incest, domestic abuse develop PTSD more frequently than those exposed to accidents or natural disasters.

People who are subjected to prolonged traumatic events such as domestic abuse, soldiers on the battlefield develop a distinct entity of "Complex Post-Traumatic Stress Disorder" (CPTSD), respectively Traumatic Stress Complex, which is similar to PTSD, but which has a distinct effect on the emotional regulation of patients and on their identity.

It is possible to prevent the occurrence of post-traumatic stress in those individuals who present a faint (mild) symptomatology.

In the United States, 3.5% of adults have a PTSD diagnosis in a given year and 9% of the population develops PTSD during their lifetime. This disorder is more common in areas of armed conflict and more common in women than in men.

Posttraumatic Stress Disorder is an integral part of the Chapter of Disorders Associated with Trauma and Stress Factors, along with the following entities:

1. Posttraumatic Stress Disorder;
2. Reactive Attachment Disorder (found in children);
3. Disinhibited Social Behavior Disorder;
4. Acute Stress Disorder;
5. Adjustment Disorders.

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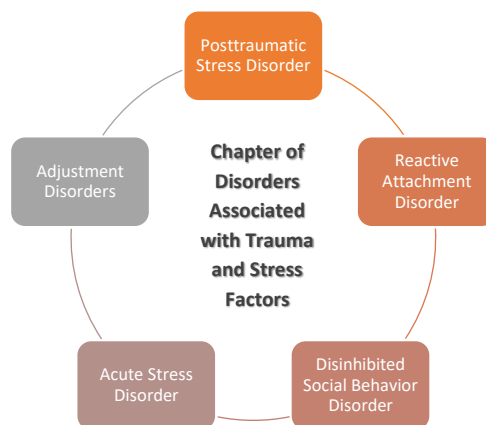
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The first symptoms of PTSD were described by Samuel Pepys, who described the distress symptoms following the fire of London in 1666. During wars, PTSD was variously described, for example as "combatants' neurosis".

The term "Post-traumatic Stress Disorder" was recommended for the first time in 1978 in a working group at "The Committee of Reactive Disorders". The term was then introduced in DSM V in 2012.

PTSD has also been closely linked to disasters (September 11 attacks, Hurricane Katrina). These events led to the emergence among the population of PTSD and the neurological implications associated with the disorder.

Thus, considering the implications arising from PTSD in DSM IV and DSM V, the diagnostic criteria for this disease were established.

The term PTSD came into use after the Vietnam War, when it was diagnosed in military veterans of the war and officially recognized as a diagnostic entity in 1980 by the American Psychiatric Association in DSM-III.

Other authors have used the terms "Post-traumatic Stress Syndrom" or "Post-traumatic Stress Symptoms" (PTSS).

There are several diagnostic elements of PTSD, namely the onset of PTSD and the development of symptoms after exposure to one or more traumatic events.

The symptoms are varied. Behavioral symptoms, emotional symptoms, emotional reactions and recall of trauma events may predominate.

Interventions in the first days or weeks after the trauma reduce PTSD symptoms.

ETIOLOGY

There are several risk factors in the occurrence of PTSD.

Thus, the risk factors for PTSD are more severe in military combatants, survivors of crimes, survivors of traffic accidents, rapes, soldiers on the battlefields, survivors of natural disasters (fires, floods, earthquakes).

The occurrence of PTSD is higher in certain occupations, which require a long-term and more prolonged exposure to traumatic events (these include police officers, firefighters, paramedics, emergency medical personnel, car drivers).

PTSD is more common in women than in men, most frequently appearing in sexual abuse and domestic violence, peritraumatic dissociative manifestations being a predictive indicator for PTSD.

There is a strong link between the development of PTSD in mothers who experienced domestic violence during the perinatal period of pregnancy.

Refugees have always presented a risk factor for PTSD due to exposure to war, hardship and traumatic events. There is an increased rate of PTSD among the refugee population, from 4%-86%. The appearance of PTSD in refugees is also due to the change in social status, the change in the existential level. Among the refugees, some were more affected, depending on their vulnerability. Among the refugees, the most affected are women, the elderly and unaccompanied minors. PTSD and depression in the refugee population tend to affect educational success.

A large number of patients developed PTSD after the unexpected death of a loved one (the disease rate was 20%).

There are also a number of medical conditions frequently associated with the development of post-traumatic stress. Among these somatic diseases we mention heart attack, stroke, cancer (breast cancer with mastectomy), as well as parents whose children have disabling chronic diseases.

RISK AND PROTECTION FACTORS

The risk and protection factors are classified into:

1. Pretraumatic factors

- They include the existence of previous mental disorders: panic disorder, obsessive-compulsive disorder; emotional disorders in childhood.
- Environmental factors: educational level; exposure to previous trauma; low IQ; family history.
- Genetic and physiological factors - There are certain genotypes that offer protection against trauma.

2. Peritraumatic factors – These factors include the severity of the trauma, the perception of the threat to life and the dissociative syndrome, which occurs during the trauma and is a risk factor.

3. Posttraumatic factors

- Temperament factors – Inadequate coping strategies, coping mechanisms, negative appraisals, Acute Stress Disorder.
- Environmental factors – Subsequent and repetitive exposures to events that cause memories of the trauma.
- Social and family support is a protective factor that mitigates the consequences of trauma.

GENETIC FACTORS

It is obvious that susceptibility to PTSD is hereditary. About 30% of PTSD cases are caused by single genes. Studies conducted on soldiers in Vietnam, monozygotic twins showed a higher risk of developing PTSD than dizygotic twins.

In the first findings, it was found that women with a small hippocampus develop PTSD more easily.

Research has shown that PTSD has multiple genetic influences that are common with generalized anxiety and panic (60% of cases). There are genetic links (in 40% of cases) and with alcohol, nicotine and drug addiction.

Several biological indicators have been identified as being related to the subsequent development of PTSD.

Intense sensory responses together with a reduced hippocampal volume have been identified as risk biomarkers for the development of PTSD.

Later studies showed that the soldiers whose leukocytes presented a higher number of glucocorticoid receptors, were more likely to develop PTSD after a traumatic experience.

NEUROENDOCRINE AND NEUROANATOMIC FACTORS

PTSD symptoms occur when a traumatic event causes an excessive adrenergic response, which causes deep neurological patterns in the brain. These patterns can persist long after the event and attract emotions, marking a hyper-responsivity to the future and to emotional situations.

During traumatic experiences, a high level of secreted stress hormones suppresses the activity of the hypothalamus, which can be an important factor leading to the development of PTSD.

PTSD produces biochemical changes in the body and brain that are different from those produced in major depression. Patients diagnosed with PTSD have a stronger response to the suppression test with Dexamethasone than individuals diagnosed with depression.

Many patients with PTSD have a low secretion of cortisone, but a secretion of catecholamines in the urine with a higher ratio of norepinephrine/cortisol than in the undiagnosed.

This finding is a contradiction in the "fight-or-flight" response, in which both catecholamines and cortisol levels are elevated after exposure to the stressful factor.

Catecholamine levels are high and the concentration of corticotrophic factor RF is high.

Together, these changes suggest abnormality of the hypothalamo-pituitary-adrenergic axis (HPA axis).

Fear maintenance has been shown to include the HPA axis, the locus coeruleus-noradrenergic system and connections between the limbic system and the frontal cortex.

The HPA axis, which coordinates the hormonal response to stress, activates the LC Noradrenergic system that intervenes in consolidating the memory of trauma-related events. This memory consolidation increased the possibility of developing PTSD.

The amygdala plays an important role in the production of PTSD. The basal lateral amygdala nucleus is responsible for the development of associations between responses to conditioned and unconditioned stimuli, the result of which is, in conditions of fear, PTSD. The basolateral amygdala nucleus (BLA) activates the central amygdala nucleus (CeA), which elaborates the fear response, including the behavioral response and the sensory response. Descending inhibitory impulses from the prefrontal cortex regulate the transmission from the baso-lateral nucleus to the central nucleus in the amygdala, this representing the hypothesis of the conditioned response to fear.

MRI studies have shown that the entire amygdala hyperactivity is involved in PTSD, there is a great degree of heterogeneity compared to social anxiety and phobic anxiety.

Comparing the dorsal portion of the amygdala (CeA) and ventral (BLA), a ventral hyperactivity was found, while hypoactivity is evident in the dorsal cluster. These explain hyperemotional states and hypersensitivity.

In 2007, studies of Vietnam War veterans showed a 20% reduction in hippocampal volume in those with PTSD compared to those without such symptoms.

Studies from Germany (in patients with PTSD) have highlighted a decrease in the level of endogenous cannabinoids in PTSD (in particular anandamides) and with an increase in cannabinoid receptors (CB1) in a compensatory way.

It seems that there is a link between the increase of cannabinoid receptors (CB1) in the amygdala and threatening manifestations or hyperexcitability, but they do not disappear in trauma survivors.

A meta-analysis of MRI examinations in Vietnam War veterans found an association between reduced total cranial volume, hippocampus, insular cortex and anterior cingulate gyrus and PTSD symptoms.

Patients with PTSD have a decrease in brain activity in the dorsal and rostral anterior cingulate gyrus in the cortex and the ventromedial frontal cortex, which is closely related to emotional experiences and emotion regulation.

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In PTSD, a series of changes occur at the brain level, which we can conclude as follows:

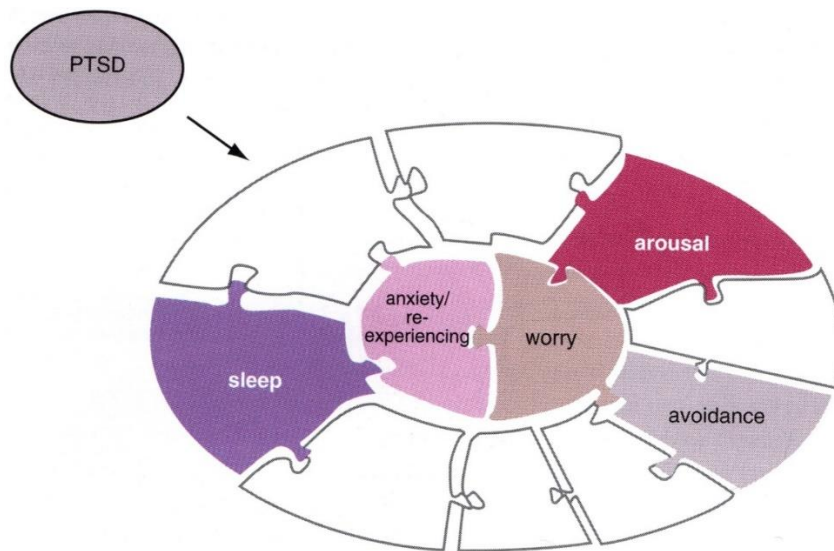
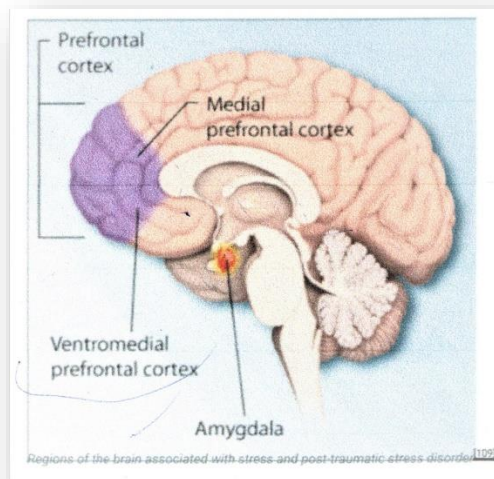
- The amygdala is hyperactive - which leads to increased emotional responses, which exceed the modulatory mechanisms;
- The hippocampus - has reduced dimensions (by 12%). This atrophy is considered to be due to the decrease in neuronal density. The atrophy of the hippocampus would be due to the atrophy of the whole brain, as I mentioned, and the generalized atrophy is due to the white matter. In patients with PTSD, it is considered that the reduction of the hippocampus would be a risk factor for the development of this disorder, not a consequence.
- The decrease in the activity of the anterior cingulate gyrus would be due to a failure of the cortex to modulate the responses of the amygdala and not to a cognitive deficit.
- The modification of BDNF (brain derived neurotrophic factor) at the hippocampal level was demonstrated.
- Also, exposure to glucocorticoid hormones leads to the inhibition of neurogenesis, as well as to the atrophy of the dendrites. Antidepressants have the opposite effect, they decrease the amount of cortisol, leading to cell growth.

The amygdala-centric model is that the amygdala is insufficiently controlled by the medial prefrontal cortex and the hippocampus. This is considered a deficiency in modulating the activity of the amygdala and its response to determining conditioned and unconditioned stimuli.

The hypothalamic-pituitary axis is responsible for coordinating the response to stress.

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A strong suppression test to dexamethasone is due to HPA axis abnormalities, which give us predictions on a strong negative feedback of inhibition to cortisone due to the increased sensitivity of glucocorticoid receptors.

It was hypothesized that PTSD represents a maladaptive conditioning to the emotional response, characterized by hypersensitivity, hyperreactivity and hyperresponsiveness of the HPA axis.

It is known that the locus coeruleus - noradrenergic system - mediates emotional memory. High cortisol levels reduce noradrenergic activity, but because PTSD patients have low cortisol levels, they cannot modulate their noradrenergic increase in response to post-traumatic stress.

Intrusive memories and emotionally conditioned responses are believed to be a response to associated triggers.

Neuropeptides (NPY) reduce the increase in norepinephrine and have an anxiolytic effect in animal models.

People with PTSD, with low levels of neuropeptides, have increased levels of anxiety. These changes that appear in patients show us the role of the bio-psycho-social model. PTSD is one of the mental disorders that overlaps the bio-psycho-social model. The social part is

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represented by the existence of an external precipitating event - the social component of the model.

This event immediately surpasses the adaptive mechanisms of the autonomous adaptive system and the HTP that represents the biological component of the model.

In conclusion, all the hormonal mechanisms are different from those that appear in periods of short stress or from depression.

After traumatic events, corticotropin-releasing hormone is increased, individuals show low levels of cortisone due to the amplified negative feedback exerted by cortisol and the increased sensitivity of tissue receptors for glucocorticoids.

In patients with PTSD, elevated plasma levels of thyroid hormones were also found, which can explain the somatic symptoms of PTSD.

Other changes that include other neurotransmitters are:

- The decrease in serotonin levels in PTSD patients with chronic evolution associated with behavioral symptoms such as anxiety, rumination, irritability, aggression, suicide, impulsivity. Serotonin has the role of stabilizing the production of glucocorticoids.
- Low levels of dopamine in people with PTSD contribute to symptoms such as apathy, anhedonia, attention disorders and motor deficits. Increased dopamine leads to psychosis and agitation.

These two allostatic types of adaptation contribute to increasing sensitivity to catecholamines and other stress mediators.

Hyperresponsiveness of the noradrenergic system can lead to continued exposure to high stress. The activation of receptors in the prefrontal cortex may be related to the occurrence of flashbacks and nightmares frequently experienced by those with PTSD. The decrease in norepinephrine prevents the cerebral memory mechanisms in the brain from processing the experience and emotions of people during flashbacks and makes them not associated with the current events in the environment.

There has been much controversy regarding the neurobiology of PTSD. Studies from 2012 showed that there is no definite link between cortisol levels and PTSD, PTSD patients have high levels of corticotroph-releasing hormone, low cortisol levels and hyperresponse to negative feedback in the dexamethasone suppression test.

DIAGNOSIS

The diagnosis is based on:

- I.Exposure to a concrete situation or severe injury, sexual violence. (The individual is always exposed or the intensity of threatening events is particularly high.)
- II.The existence of several symptoms that are closely related to the event:
 1. Recurring dreams;
 2. Dissociative reactions - in which the individual behaves as if the event were to repeat itself;
 3. Involuntary and intrusive memories of traumatic events;
 4. Significant reactions to external or internal stimuli that symbolize trauma;
 5. Intense psychological discomfort to stimuli that symbolize trauma.
- III.Alterations of cognition and mood after the traumatic event.
 1. Negative beliefs about oneself, about the world;
 2. Loss of interest in important activities;
 3. Negative emotional state;
 4. The inability to feel positive emotions.

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5. Feelings of detachment or alienation;
6. Inability to remember an important aspect of the event;
7. Distorted interpretations.

IV. Persistent avoidance of stimuli associated with the traumatic event (after the traumatic event has occurred).

V. The duration of the event is longer than one month.

VI. The disturbance causes a significant deficit in professional or social life.

VII. Significant effects of reactivity and excitability associated with the traumatic event.

1. Exaggerated startle response.
2. Nighttime rhythm disorders;
3. Hypervigilance;
4. Concentration difficulties;
5. Irritable and angry behavior;
6. Reckless and self-destructive behavior.

The symptomatology associated with the psycho-stressful event can be with :

- Derealisation -> persistent or recurrent experiences of unreality of the environment (the individual perceives the surrounding world as unreal, as in a dream, distant, distorted);
- Depersonalization -> persistent or recurring experiences in which the individual feels detached (perceives as if he is an outside observer of his own mental processes or his own body; feels a sense of unreality of self or body or the feeling that time passes slowly).

In order to make the diagnosis, it is necessary, along with the highlighting of the traumatic event (abuse, domestic violence, rape), the highlighting of natural disasters (the events of September 11, Hurricane Katrina, military conflicts, occupations with a high risk of developing such a syndrome - firemen, paramedics, the police, the military).

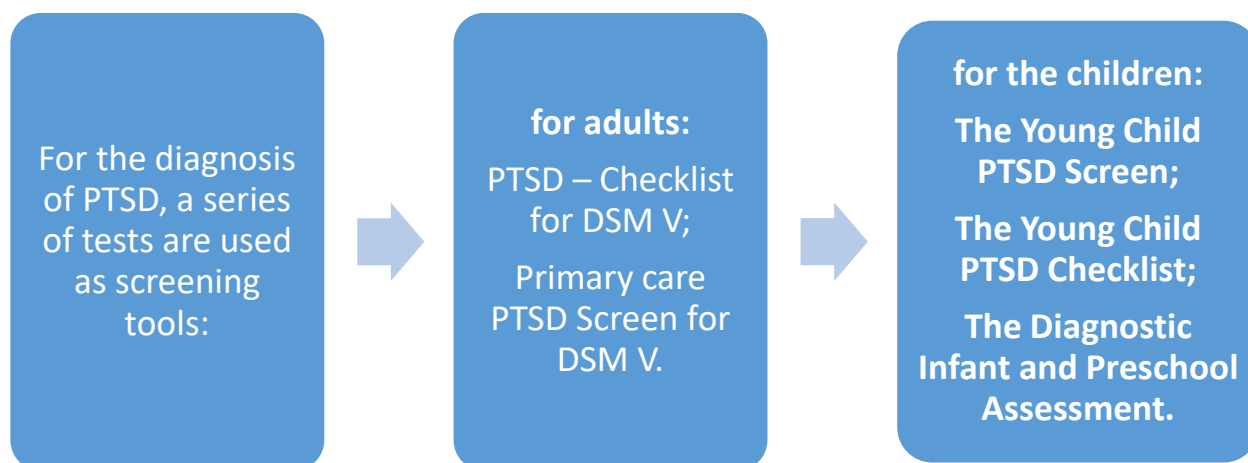
To these risk factors we must add the 4 clusters of basic symptoms included in DSM V:

- re-experiencing the trauma;
- avoiding trauma;
- cognitive dysfunctions;
- changes in reactivity (sensitive hyperreactivity).

The 3 criteria of ICD 11 are:

- re-experiencing the trauma;
- avoiding trauma;
- hypersensitivity.

The differential diagnosis is made with Acute Stress Disorder; Obsessive-compulsive disorder, Generalized Anxiety Disorder, Depressive Disorder.



COMPLICATIONS OF PTSD

Suicide - Repeated childhood abuse is associated with an increased risk of suicide. People with PTSD can present autolytic ideas, passive and active, suicide attempts, even suicide planning.

PTSD is associated with important social, professional and physical disabilities - These patients are high users of medical services with considerable economic costs. Dysfunctions are present in several fields: interpersonal, evolutionary, social, educational, occupational, public health.

In the study samples among the veterans, it was observed that they have reduced family and social relations, with absenteeism at work, with low salary level, low professional and educational achievements.

As well as complications, we remember the stigma of PTSD patients due to increased emotionality and decreased opportunities.

PTSD is especially complicated with the abuse of psychoactive substances and alcohol. Thus, PTSD patients have a higher risk of developing alcohol and drug addictions.

Also, the condition can be associated more frequently with depressive disorders, with obsessive-compulsive disorders and with generalized anxiety.

The individual always makes efforts to avoid memories, thoughts, feelings about the traumatic event.

The patient avoids people, activities, places that cause recall of the event.

Patients with PTSD have an increased sensitivity to potential threats, including those related to the traumatic experience.

After traumatic events, evolutionary regression can occur, there can be hallucinations, as well as paranoid ideas. The individual may present dissociative symptoms, difficulties in controlling emotions and difficult interpersonal relationships. Other comorbidities are added to these symptoms.

Thus, in survivors of traumatic events, depressive and anxious elements are present more frequently, as well as the harmful use of alcohol and psychoactive substances.

PTSD also has a strong association with tinnitus, and it is possible that PTSD is the cause of tinnitus.

Children and adolescents who are subjected to traumatic events remain with important emotional difficulties and imbalances of emotional reactions.

TREATMENT

The treatment consists of psychological treatment and psychopharmacological treatment. In the treatment of PTSD, the basic treatment is the psychological one, followed by the psycho-pharmacological one.

For the prevention of the occurrence of PTSD, we consider an important role to be quick access to cognitive-behavioral psychotherapy and psycho-education.

Psychological treatment is decisive in the evolution of PTSD symptoms. Thus, benefits were observed through the early start of cognitive-behavioral therapy.

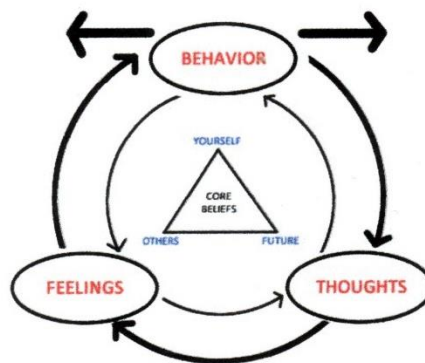
Another psychological method used is "Psychological Debriefing", which involves counseling several individuals who participated in the event and helping them to remember the event. Psychological Debriefing was not very useful in therapy and included several stages of treatment.

Another very useful psychological tool is Cognitive-Behavioral Therapy (CBT), which tries to remove pathological adaptive coping mechanisms and use defensive means of adaptation to remove negative emotions.

CBT has proven to be an effective treatment for PTSD, reducing the symptoms of the disorder until it disappears.

"The United States Department of Defense" showed that in CBT individuals learn to identify their thoughts, to feel their fears and to reframe them into less stressful thoughts.

Cognitive behavioral therapy



PSIHO-PHARMACOLOGICAL TREATMENT

The aim of the treatment is to minimise the disabilities, to reduce the key symptoms of PTSD and associated comorbidities and prevent recurrences and improve the life quality.

The most important psycho-pharmacological therapies are:

- Antidepressives, inhibitors of serotonin reuptake (ISRS):

Antidepressives	Dosis
Escitalopram	10-20 mg
Citalopram	20-60 mg
Fluvoxamina	100-300 mg
Paroxetina	20-40 mg
Sertralina	100-150 mg

- Antidepressives with dual mechanism:

Antidepressive	Dosis
Venlafaxina	150-225 mg
Mirtazapina	15-45 mg

- The use of anticonvulsants (Lamotrigine, Sodium Valproate, Carbamazepine, Gabapentin).
- MAOI (Phenelzine 45-75 mg, for intensive symptom relief).
- $\alpha 1$ adrenergic blockers – Prazosin administered in the evening in a dose of 1-4 mg to relieve nightmares and intrusive symptoms.
- Benzodiazepines - in improving sleep disorders.
- Neuroleptics - administered to agitated patients (Olanzapine, Quetiapine).
- The psycho-pharmacological guide recommends the use of medication in stages:
- SSRIs are recommended in the first-choice therapy of PTSD due to their effectiveness.
- If it does not respond to SSRIs, another compound can be tried: Nafazodone, Amitriptyline, Imipramine, Lamotrigine.
- In cases where a partial response is obtained to the second treatment, an attempt is made to obtain a response to the third treatment, which involves the use of Lithium or an anticonvulsant, and in patients with fits of anger, an atypical neuroleptic (Olanzapine or Quetiapine) .
- If PTSD has a chronic evolution, it is indicated to continue the treatment for at least 1 year after obtaining the response to the treatment, and the decrease will be done progressively.
- The prevention, recognition and early treatment of PTSD must be a priority for psychiatrists, who must take into account the disabilities that this disorder produces and try to improve the quality of life for patients through appropriate treatment.

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Common melanocytic nevi. Histological range of atypia and its biological significance

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Abstract

Common melanocytic nevi, classified as junctional, intradermal and compound, either variable pigmented or non-pigmented, are the most common skin lesions submitted to pathological examination.

Based on certain morphological diagnostic criteria and depending on junctional and/or dermal localization of nevocellular proliferation, both the character and the biological behavior of these lesions can be evaluated as benign and the incipient or associated malignant lesion is excluded. Hence, at junctional level we found small, rounded and uniform nests of nevus cells on tips of rete ridges associated with some melanocytic hyperplasia whereas dermal component consisted in symmetrical growth of dermal nevus cells with deep maturation and lack of both atypia and significant mitotic activity. Associated changes as dermal fibrosis, pseudovascular lacunae or neurotization may be present, without any significance. Histological atypia classifies melanocytic nevi as dysplastic (atypical). Characteristic morphological changes involve junctional component and consist in architectural changes with irregular nesting, bridging and shouldering and cytological atypia of variable degree associated with lentiginous melanocytic hyperplasia and dermic lamellar fibroplasia.

Histological atypia can be diagnosed even in common melanocytic nevi without dermoscopic changes. Complete surgical excision with 2mm of clinically clear margins significantly reduces the risk of recurrence. However, there are reported cases of recurrence including repeated recurrence with subsequent malignant melanoma at incisional site. Although there has been observed an increase in survival rate due to targeted therapy and immunotherapy, mortality still remains significantly increased in malignant melanoma. Reducing exposure to risk factors and dermatological screening are recommended as effective methods of prevention.

Key words: melanocytic nevi, atypia, biological behavior

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Introduction

Common melanocytic nevi, variable pigmented or non-pigmented, are benign skin lesions routinely encountered in daily practice and frequently submitted to pathological examination due to their assimilation with malignant melanoma.

This paperwork represents a brief description of the histological aspects encountered in our current practice regarding the histopathological diagnosis of common benign melanocytic nevi, including atypical or dysplastic lesions, highlighting the significance of atypical findings regarding the risk of further transformation into or association with malignant melanoma.

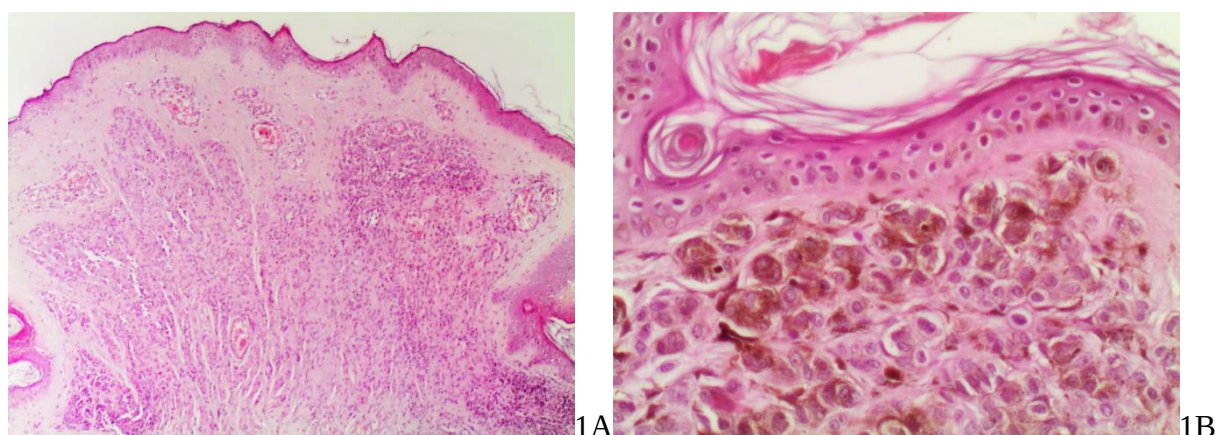
Results and discussion.

Common melanocytic nevi result from melanocyte proliferation in the epidermis and are classified as junctional, intradermal and compound.

On histologic examination, the most important features for us to evaluate in junctional nevi were i) the architecture of nevus cell proliferation namely size, shape, localization and orientation of nevus nest, ii) the presence and grade of cytological atypia and mitotic activity iii) associated melanocytic hyperplasia and upward migration of nevus cells (pagetoid spread) and iv) excisional margins status. These were among the most frequently used criteria in the evaluation of melanocytic lesions (Elder, 2018).

Therefore, the junctional lesions were characterized by small, rounded and uniform nests of proliferative nevus cells on tips of rete ridges associated with some melanocytic hyperplasia. Cytologic atypia and mitoses were absent as was the upward migration of nevus cells.

In diagnosis of intradermal melanocytic nevus, the specific morphological features were the symmetry of proliferative cell growth and nevus cell maturation with depth associated with lack of cytologic atypia and mitoses. Characteristically, the superficial part of the nevus lesion was compound of type A epithelioid pigmented or non-pigmented cells with eosinophilic to amphophilic cytoplasm containing coarse melanin granules, uniform round/ oval nuclei slightly smaller than that of adjacent keratinocytes with finely dispersed chromatin and no / small distinct eosinophilic nucleoli, placed in superficial dermis, while in intermediate dermis we found a lymphocyte-like population of B cells with scanty cytoplasm with no melanin and smaller and slightly hyperchromatic nuclei; the deep region of lesion consisted in fibroblast-like C cells as single cell infiltration of superficial reticular collagen (Figure 1. A, B, C, D).



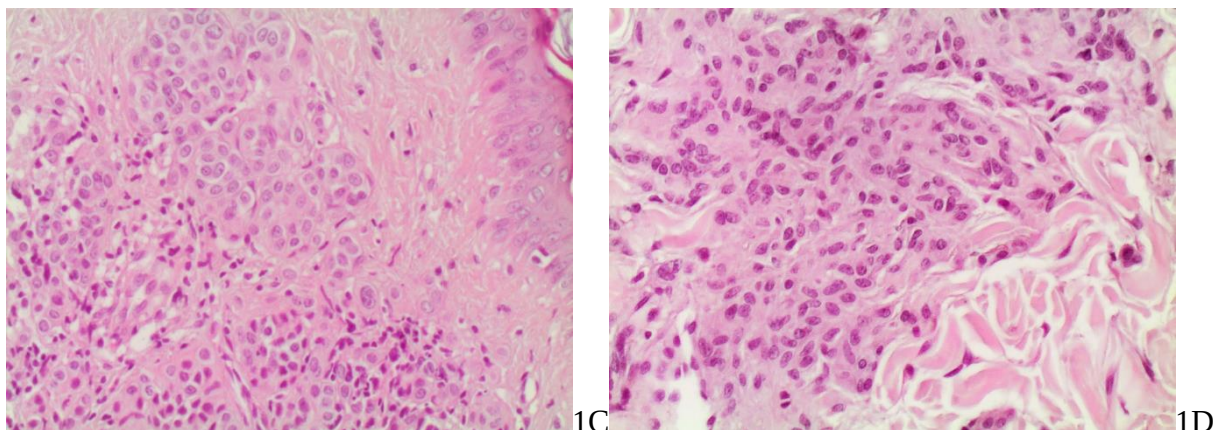


Figure 1. Intradermal nevus (H&E Stain) – symmetric growth, maturation, regression (1A, 40x); cell A morphology, epithelioid, pigmented (1B, 200x); cell B morphology, lymphocyte-like (1C, 100x); cell C morphology, spindle fibroblast-like (1D, 200x)

As it is very well known, in benign lesions the morphology of nevus cells changes sequentially as they mature from epithelioid A type cells placed in superficial dermis to lymphocyte-like B cells and finally to fibroblast-like C cells found in deep dermis; as maturation occurs deeper portion of lesion has smaller cells with less pigment and less atypia that tend to grow in smaller nests or single cells; also, the cells are less mitotic with depth (Hale, 2014) (Waqar, 2022).

Relatively frequent, we also described some non-specific but relatively characteristic changes, such as superficial intralesional fibrosis, pseudovascular lacunae and neurotization (Figure2. A, B, C) while worrisome findings such as perineural growth were rare.

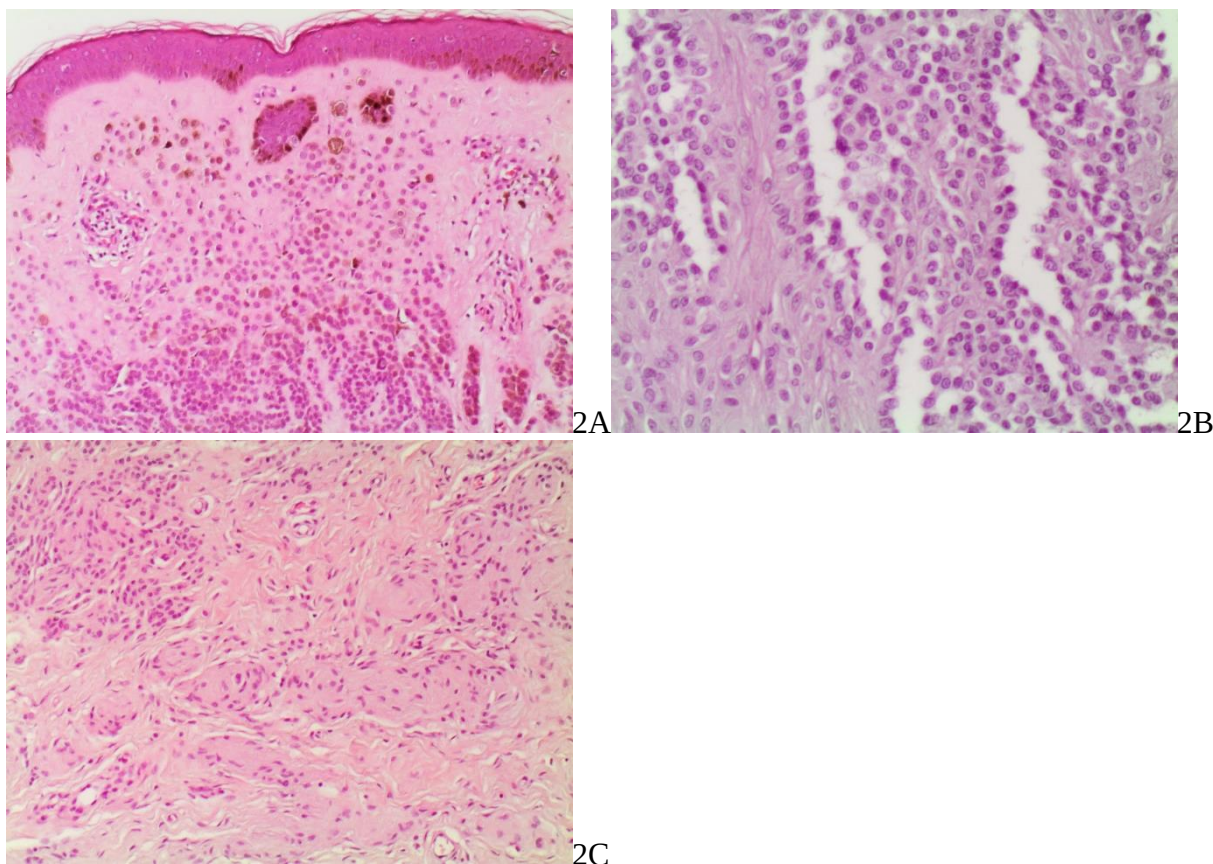


Figure 2. Dermal nevus, secondary changes (H&E Stain) – superficial fibrosis (2A, 100x); pseudovascular lacunae (2B, 200x); neurotization (2C, 100x)

These are among other similar very well described benign findings of common melanocytic nevi including sebaceous metaplasia, fat cells infiltration, osseous metaplasia and calcifications that are variably considered regressive or adaptive changes (Cândido, 2019).

In compound nevus the junctional and dermal nevus cell proliferative components are associated in a variable extent.

Both the intradermal and compound melanocytic nevi were assessed concerning the architecture of cellular growth (symmetry and maturation), cytological atypia, mitotic activity and excisional margins status as histologic parameters of biological behavior.

When it was present, the histological atypia was more commonly encountered at junctional level in junctional or compound nevi and was consisted in its defining features namely cytological atypia with irregular nesting, lentiginous hyperplasia, bridging and shouldering, occasionally and limited upward pagetoid migration of the nevus cells but not at the edge of lesion and low mitotic activity in absence of atypical mitoses (Figure 3, A, B, C). These lesions were reported as dysplastic junctional or compound nevi, as appropriate.

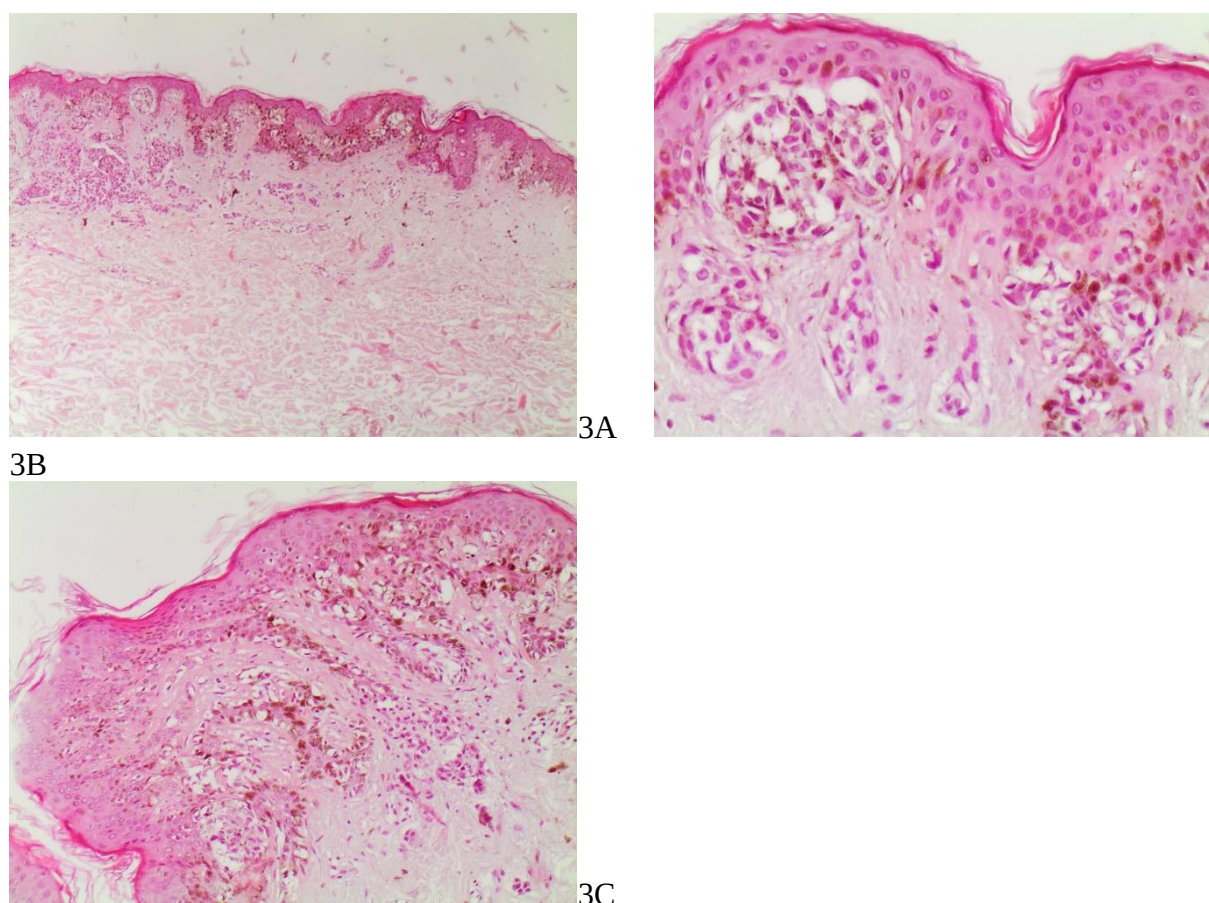


Figure 3. Dysplastic compound thin nevus (H&E Stain) – bridging, shouldering (3A, 40x); irregular nesting (3B, 200x); dysplasia and melanocytic hyperplasia (3C, 200x)

Nevus dysplasia is characterized by a higher proliferative activity of neoplastic melanocytes at the junctional level causing architectural disorder with irregular nesting and bridging, increased and confluent melanocyte hyperplasia or lentiginous hyperplasia with only limited upward pagetoid migration associated with variable degree of cytologic atypia but with

low mitotic activity and lack of atypical mitoses. Irregular nesting of nevus cells is defined by the presence of nests of irregular forms and shapes extending beyond the tips of the rete ridges often increased sized and horizontally placed bridging the adjacent elongated rete ridges; shouldering is described as the extension of the atypical junctional component to at least 3 rete ridges beyond the lateral margin of the dermal component in compound nevi. There also may be associated lamellar fibroplasia in subjacent dermis (Asadbeigi, 2023).

The cytological atypia may be graded as mild, moderate and severe or simplified as high and low grade (Arumi-Uria, 2003) (Weinstock, 1997). At junctional level, mild cytological atypia is defined at high magnification and consist in irregular shape and size nest of atypical melanocytes with hyperchromatic, indented and considerably pleomorphic nuclei with occasionally visible small nucleoli and often collapsed cytoplasm to form a clear halo in periphery of cell; if any, pagetoid upward is minimal and mitoses are very rare and typical. Instead, severe atypia is characterized by cytoplasm often abundant and enlarged vesicular nuclei, usually 2x or larger than of adjacent keratinocytes with more accentuated nuclear pleomorphism including large bizarre nuclei and often prominent nucleoli; typical mitoses are rather easily to find; but even so, these atypical features are not confluent and extensive as in malignant melanoma which must also be suspected in presence of multiple mitotic figures (Asadbeigi, 2023).

By far less often were the atypical features in dermal component and we reported these lesions as atypical melanocytic nevi. In the case further illustrated the striking finding was the lack of the cell uniformity in growth and morphology at the same level of lesion consisting in some rounded and irregular sized nests of nevus cell with some degree of atypia, namely more abundant cytoplasm and mild hyperchromatic and pleomorphic nuclei with small visible nucleoli, based on which we decided to report it as atypical dermal nevus (Figure 4. A, B)

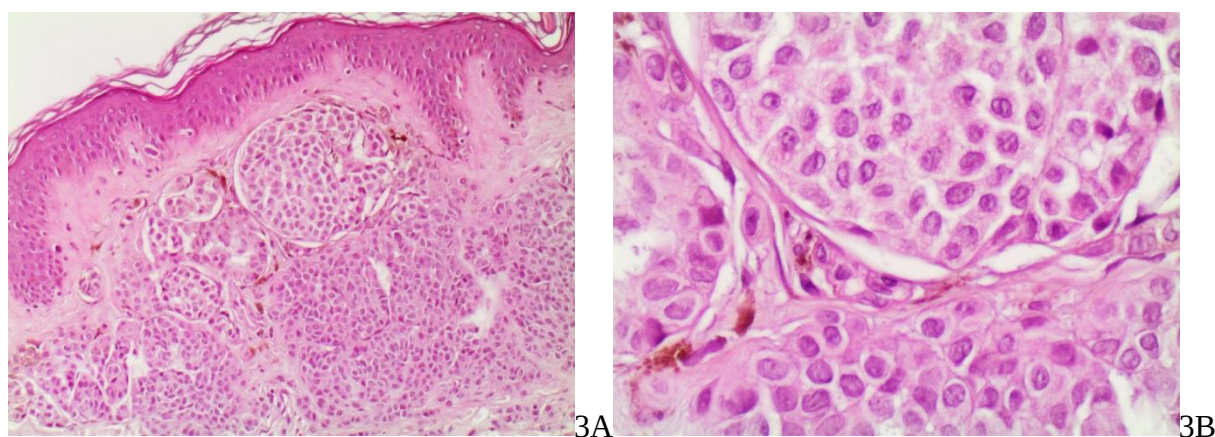


Figure 4. Intradermal nevus with atypia (H&E Stain) – superficial nests with mild atypia (4A, 40x); details (4B, 400x)

The cytological atypia in dermal component may also be graded as mild, moderate or severe or low and high grade and it is associated with some alteration in pattern of maturation but still in the absence mitotic activity in deep region of the nevus lesion; are mitotic figures may be seen in superficial areas even in non-atypical nevi (Arumi-Uria, 2003).

Recently, in order to standardize the histopathological reporting of atypical melanocytic lesions, the WHO Working Group proposed and supported the use of a descriptive categories: i) “intraepidermal atypical melanocytic proliferation of uncertain significance” that need to be differentiated from in situ melanoma, ii) superficial atypical melanocytic proliferation of uncertain significance” whose differential diagnosis is with early invasive, radial growth phase

melanoma and iii) “melanocytic tumor of uncertain malignant potential” that includes in differential diagnosis the melanoma in vertical growth phase, based on the fact that several such atypical lesion may be in fact precursors to melanoma (Ferrara, 2021).

Considering the biological spectrum of progression from melanocytic nevi to dysplastic nevi and finally to malignant melanoma, dysplastic nevi can be view as markers for increased melanoma risk (Hussein, 2002), although the progression to melanoma is thought to be very unpredictable (Tucker, 2009). Based on these considerations, complete surgical excision with 2mm of clinically clear margins significantly reduces the risk of recurrence of dysplastic or atypical nevi, even there are reported cases of recurrence including repeated recurrence with subsequent malignant melanoma at incisional site (Jeong, 2019), while in non-atypical benign common melanocytic nevi the surgical excision is only an aesthetic matter.

Conclusion

Given the fact that histological atypia can also be found in melanocytic nevi without significant dermoscopic changes its reporting helps the dermatologist to correlate the pathological features with the clinical appearance in order to appreciate both the evolution and opportunity on further clinical surveillance or excision of other similar lesions. Dermatological screening and reducing the exposure to the well-known risk factors for melanomas are recommended as effective prevention methods in the clinical management of melanocytic skin lesion.

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Medical malpractice and civil liability

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Abstract

The professional relationship between the patient and healthcare professionals covers four fundamental health aspects: diagnosis, therapy, healing and medical ethics. Professional error that occurs in medical practice causing patient's injury or prejudices and attracts the civil liability of health professionals is known as medical malpractice. Medical civil liability arises from a professional error (medical culpa) that is considered a form of guilt (such as negligence or imprudence and insufficient professional training or medical knowledge) in which during the diagnostic, treatment or prevention procedures, medical professionals did not foresee the outcome of their actions although they could and should have foreseen it, or foreseen the result of their actions but considered that it would not occur.

Medical malpractice may also be the result of either failure to fulfill medical duty, exceeding professional competence or lack of data confidentiality and patient's informed consent. Factors that limit the medical civil liability include both the patient's negative attitude and lack of its compliance with the medical act, as well as certain particularities of patient's state of health prior to the occurrence of the prejudice, which negatively influenced the medical act (concurrent patient's guilt).

Given the multitude of factors that can favor medical errors (mainly related to team-working and accessibility to modern diagnostic and treatment techniques), health professionals must take sustained efforts to align medical practice with actual requirements of civil society and to complete continuing professional training with knowledge of medical law regarding the prevention and management of medical malpractice.

Key words: medical errors, malpractice, civil liability

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Introduction

The significant increase in the number of medical malpractice cases influence both the medical profession and civil society and the excessive media coverage of accusations against healthcare professionals amplifies the fear for legal liability for malpractice resulting in a defensive approach in medical activities with possible negative consequences on medical decisions.

Data debate

In this paperwork, we discuss and highlight several aspects of medical activity related to malpractice and civil liability regulated by Law no. 95/2006 regarding health reform in Title XVI, the civil liability of the medical staff and the supplier of medical, sanitary and pharmaceutical products and services, as further amended and including the application norms, which transposes the acquis of European Union (EU) regarding the EU health policy and with reference to Law no. 46/2003 concerning the patient's rights, the Code of Medical Deontology of the Romanian College of Physicians and the norms of Romanian civil and criminal law. At the same time, we refer to some aspects found in the specialized literature related to medical law.

The professional relationship between the patient and healthcare professionals covers four fundamental health aspects, namely diagnosis, therapy, healing and medical ethics. Medical decisions and acts will be taken according to the patient's interest and rights and will be based on generally accepted medical principles, non-discrimination between patients, respect for human dignity, principles of medical ethics and deontology and care for the patient's and public health.

In providing of medical assistance and health care, the healthcare professionals have the obligation to apply the current diagnostic and therapeutic standards and protocols according to medical practice guidelines approved at national level or well-known standards recognized by the medical community.

Any medical intervention for prevention, diagnosis or treatment must be preceded by obtaining the patient's written informed consent. In that, the healthcare professionals must provide the patient with information at a reasonable and understandable scientific level regarding the diagnosis, the type and purpose of the treatment, the risks and consequences of the proposed treatment, the viable treatment alternatives with its risks and consequences and the prognosis of disease without applying any treatment.

Professional error that occurs in medical practice causing patient's injury or prejudices and attracts the civil liability of health professionals is known as medical malpractice. Attracting of medical civil liability is a summing effect of all of (i) general conditions that are the professional misconduct of healthcare professionals, the patient's prejudice (harm), the causality between professional misconduct and prejudice and the culpability of healthcare professionals and (ii) special conditions such as the existence of a medical qualification and a professional duty of the healthcare defendants, the existence of well-recognized standards of care and the breach of professional duty, along with (iii) ruling out the circumstances that limits or excludes the liability. In other words, the medical civil liability is based on proving both of the existence of medical malpractice and patient's prejudice aiming a properly compensation.

The healthcare professionals are civilly liable for prejudices caused by the errors that occur during prevention, diagnosis or treatment procedures when they fail to fulfill their medical duty or did not foresee the outcome of their actions although they could and should have foreseen it, or foreseen the result of their actions but considered that it would not occur. Medical civil liability also arises from exceeding the professional competence except for emergency cases in which medical practitioners with necessary competence are not available.

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Moreover, patient`s prejudices may result from non-compliance with legal regulations regarding data confidentiality, informed consent of patients and obligation to provide medical assistance.

Medical professional error (medical malpractice, culpa, guilt or fault) can be invoked in different circumstances taking various forms (Simion, 2010).

Firstly, depending on the attitude of the healthcare professionals and the culpable conduct one may see errors through (i) lack of skills (incompetence, lack of training, nescience) that generate errors in diagnostic and treatment procedures, (ii) unhandiness (lack of dexterity or ability), (iii) imprudence and lack of foresight (inability to foresee), (iv) negligence (or oversight) as for example failure to seek for interdisciplinary consult, deprivation of choice or chance, superficiality and haste, which may result in serious negligence, (v) easiness or carelessness, such as the lack of adequate and competent clinical examination of the patient, the ignorance of risks to which the patient is exposed during the diagnostic and therapeutic maneuvers, the mistakes in performing of some medical procedures, the wrong treatment recommendations and so on, all of these generated by the healthcare professionals' lack of interest in performing of the medical act.

Secondly, related to professional misconduct of healthcare professionals, medical culpa may be a result of (i) refusal of providing emergency medical assistance to a patient, (ii) refusal to continue treating the patient, (iii) not granting the right to a second opinion, (iv) refusal to respond to the request for medical care, (v) refusal of medical intervention (not taking the appropriate risk to treat the patient due to unjustified fear, limited competence or even convenience, (vi) deprivation of chance or choice, namely not referring the patient to another practitioner with increased knowledge or treatment opportunities, (vii) violation of moral code of conduct and ethical standards or unprofessional behavior and (viii) breach of confidentiality.

Thirdly, depending on the occurrence of culpable action there can be: (i) commissive culpa, through inappropriate actions including breach of a professional obligation, lack of skills, unhandiness, imprudence, carelessness, inappropriate use of working conditions and insufficient professional knowledge and so on; (ii) omissive culpa, through inaction including refusal of intervention or non-assumption of risks, deliberate indifference, deprivation of chance and not granting the right to a second opinion; (iii) culpa through inappropriate choice meaning faults in selecting the best alternative in diagnose or treatment or delegation of one's own obligations to other incompetent persons; (iv) culpa in supervising, namely the failure to supervise properly or to exercise due diligence, as for example incorrect and inadequate surveillance of patients or subordinates involved in the medical act, not requesting for professional support and lack of providing information about the patient's health.

The patient`s prejudices resulting from medical malpractice fall into the several categories as (i) patrimonial damages that result from the violation of economic rights and interests and have an economic value; they include medical and healthcare expenditures for treatment and rehabilitation and current or future earnings losses; (ii) physical (or corporal) injuries that are painful and harmful consequences caused by the violation of non-patrimonial personal rights such as the right to life and the right to bodily integrity and health that define the individual human personality; (iii) moral damages through affecting the emotional or social personality such as the private or intimate life, reputation, prestige, honor and dignity (Rotilă, 2013) (Vintilă, 2002).

The healthcare professionals are not responsible for the prejudices caused in profession (i) in emergency situations when they act in good faith and respecting the competence granted, (ii) when they have obtained the patient's informed consent for medical act and do not act contrary, and (iii) when are incriminated other adverse factors or conditions as inadequate working conditions, insufficient provision with medical equipment for diagnosis and treatment,

nosocomial infections, adverse drug reactions, generally accepted complications and risks of investigation and treatment methods, hidden defects of medical equipment and devices, and so on. These are well established and regulated circumstances and conditions that expel the medical civil liability.

It is important to mention that in current practice there are several determinants that compete in causing of prejudices through medical malpractice, including the acts of many and different medical practitioners providing medical services and care to the patient (nurses, physicians, pharmacists, technicians, etc.), individually or as a team, as well as the existence of many and different suppliers of medical equipment and devices, medicines and utility. Therefore, the medical civil liability can be (i) liability for one's own acts, involving healthcare professionals, sanitary institutes, manufacturers of medical equipment and devices, medicinal substances and sanitary materials and suppliers of utilities, as the case and (ii) liability for the acts of others, involving sanitary institutions as providers of medical services, being proportional to the individual degree of guilt.

It should also be taken into account that the medical act can be adversely influenced by the patient's negative attitude or the lack of its compliance with the medical and by certain particularities of patient's state of health prior to the occurrence of the prejudice. These circumstances, known as concurrent patient's culpa, are taken into account in establishing the malpractice case being considered conditions that limit the medical civil liability.

Conclusion

As a conclusion, we can say that the vast majority of medical errors occurring in patient management are mainly related to the multidisciplinary approach, teamworking and accessibility to modern diagnostic and treatment techniques. In order to handle it, health professionals must make sustained efforts to align medical practice with the current requirements of civil society through continuous professional training and the permanent updating of medical law knowledge regarding the prevention and management of medical malpractice.

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Malignant melanoma, a rare primary cervical tumor. Case report

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Abstract

The rarest primary cervical tumors include malignant melanomas. In female genital tract, these neoplasms involve primarily the vulva or vagina, occur in post-menopausal age and have poor prognosis.

We report the case of an 83-year-old female presented with prolonged untreated vaginal bleeding that shown partial indurated cervix with an ulcerated rather black-bluish and easily hemorrhaging lesion at clinical examination.

A biopsy was performed and histological examination of bioptic fragments revealed an extensive and solid proliferation of mitotically active both epithelioid and fusiform tumoral cells with areas of intense pigmentation and hemorrhagic necrosis which raises the suspicion of malignant melanoma, primary or metastatic; we were unable to evaluate the presence of an associated nevus lesion. On immunohistochemical study S100, SOX10 and Melan A were positive in tumor proliferation whereas CKAE1/AE3 was found negative; the tumor proliferation index Ki-67 was positive in 30-35% hot-spot. Additionally, a carefully dermatological examination and imaging tests excluded both primary and secondary melanotic tumor in other anatomic sites and the diagnostic of primary malignant melanoma of uterine cervix was established.

Key words: malignant melanoma, vaginal bleeding, histology, multidisciplinary diagnosis

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Introduction

Primary mucosal malignant melanoma is one of the rarest cervical tumors (Patrick, 2007)³⁴⁸. In female genital tract, this neoplasm involves primarily the vulva or vagina rare cases being detected in the ovary, uterus and cervix (Kedzia, 1997)³⁴⁹. It occurs predominantly in post-menopausal and have a poor prognosis due to advanced stage at presentation, aggressive behavior and resistance to radiotherapy (Lauren, 2020)³⁵⁰.

Whereas the histopathological and immunohistochemistry features of melanomas are quite characteristic, except for its rare variants, the diagnosis of primary cervical melanoma must exclude melanomas originated in other anatomic sites. Finding a benign nevus lesion, either junctional or compound, adjacent to tumor also supports the diagnosis, though melanoma can occur de novo or may develop on a pre-existent nevus. Plasmacytoid melanoma, as diagnosed in our case, is one of the rarest morphological variants that must to be differentiated from other malignities with plasmacytoid morphology including carcinomas, sarcomas and plasma cell tumors (Linda, 2015)³⁵¹.

Secondary cervical melanomas can originate from a primary cutaneous tumor, although they most commonly metastasize to the skin, lungs, liver, bones and brain.

Case report

We report a case of malignant melanoma, plasmacytoid variant, in an 83-year-old woman presented with prolonged untreated vaginal bleeding without any pathological history. Gynecological examination revealed a partially indurated cervix with a rather black-bluish ulcerated and hemorrhaging lesion. A biopsy was performed.

The bioptic material was entirely represented by tumoral fragments without any normal structures and the histopathological examination revealed an ulcerated predominantly amelanotic neoplastic proliferation of both epithelioid (Figure 1) and spindle tumor cells with intense mitotic activity, including atypical figures and solid focally sarcomatous growth pattern (Figure 2). Tumoral intervening stroma was scanty with edematous and hemorrhagic areas.

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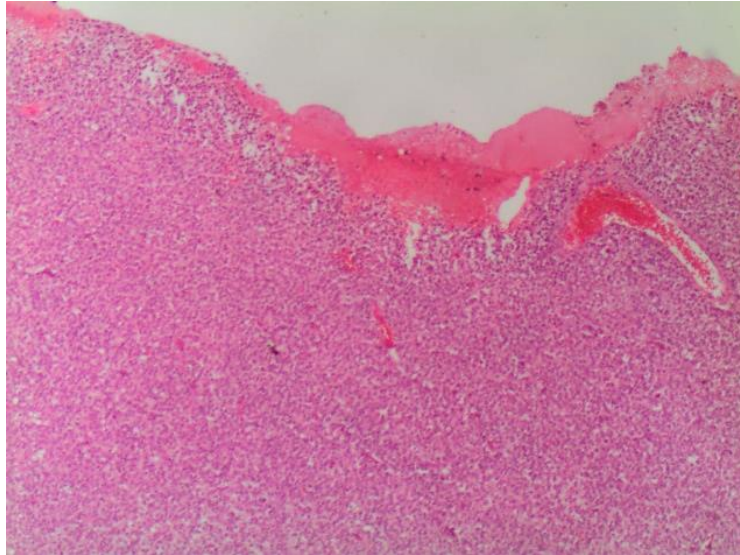


Figure 1. Malignant melanoma – ulcerated and hemorrhagic; large amelanotic epithelioid sheets with little intervening stroma H&E stain x40

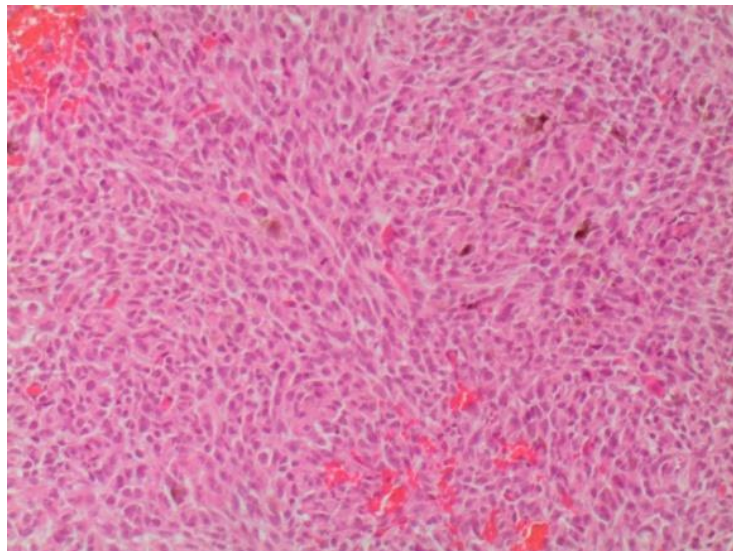


Figure 2. Malignant melanoma – vaguely sarcomatous pattern with hemorrhagic areas and occasionally pigmented tumoral cells; H&E stain x100

Even though the cytological atypia was not marked, consisting in moderate nuclear polymorphism and hyperchromasia with rarely prominent nucleoli, finding of intense mitotic activity and the presence of some intense pigmented areas (Figure 3) raised the suspicion of malignant melanoma, primary or metastatic. Moreover, we were unable to evaluate the presence of any associated nevus lesion.

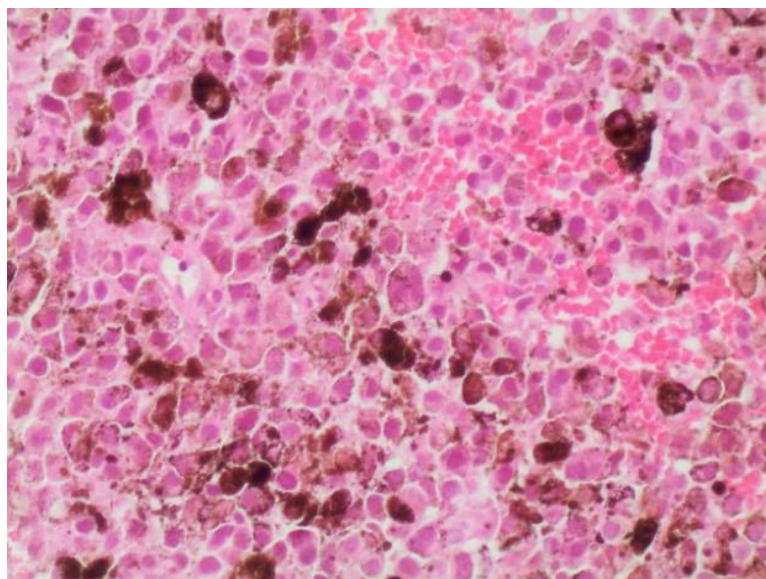


Figure 3. Malignant melanoma – pigmented and hemorrhagic areas; H&E stain x200

At close examination, in both epithelioid and sarcomatous appearing areas, the plasmacytoid features of malignant cells were striking (eosinophilic cytoplasm, eccentric nucleus, indistinct nucleoli, occasional bi/multinucleation) (Figure 4, Figure 5) and represented the particularity of the case contrasting with conventional features of malignant melanoma (epithelioid morphology with vesicular nuclei, prominent nucleoli and cytoplasmic fine dusty melanin pigment). The neoplastic plasmacytoid cells shown focal pigmentation and intense mitotic activity (Figure 6, Figure 7).

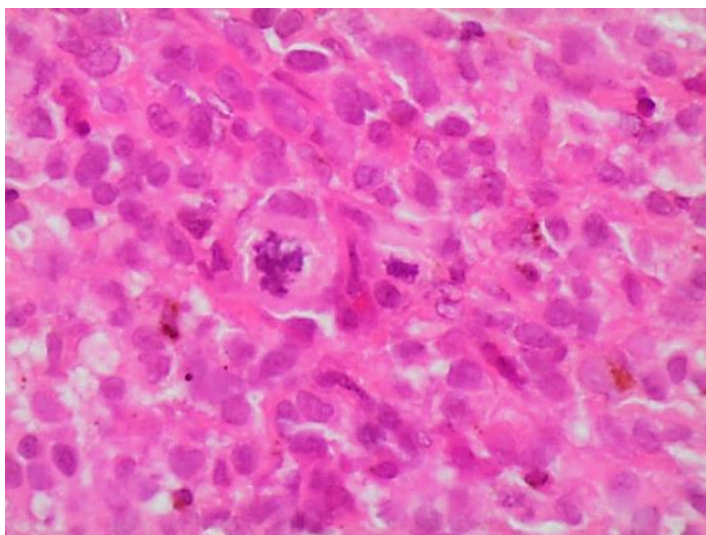


Figure 4. Malignant melanoma – predominantly unpigmented epithelioid tumoral cells, only rare prominent nucleoli, frequent mitoses including atypical figures; evident plasmacytoid features; H&E stain x400

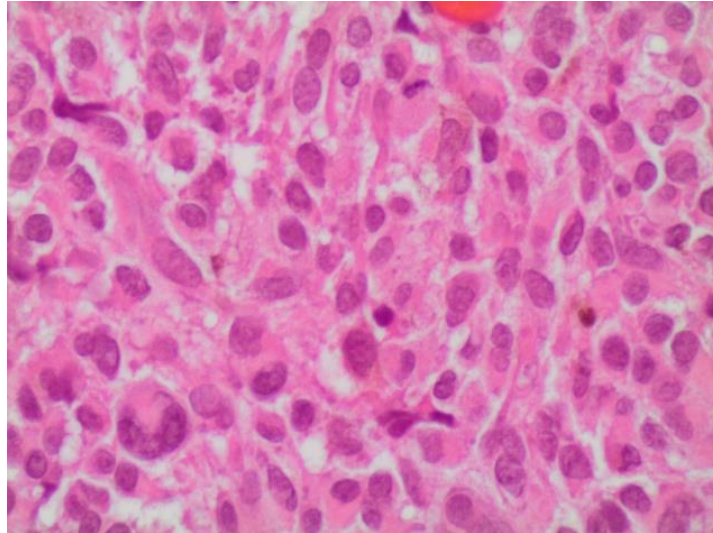


Figure 5. Malignant melanoma – spindle tumoral cell with indistinct borders, variable eosinophilic cytoplasm, oval nuclei with finely distributed chromatin, small or invisible nucleoli; evident plasmacytoid features, including binucleated cells; H&E stain x400

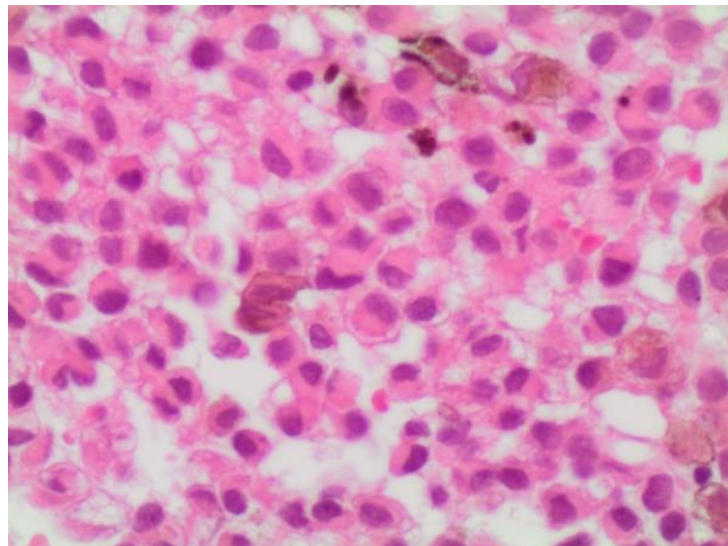


Figure 6. Malignant melanoma – striking plasmacytoid cytology, pigmented and non-pigmented tumor cells; markedly inter/intracellular edema; H&E stain x400

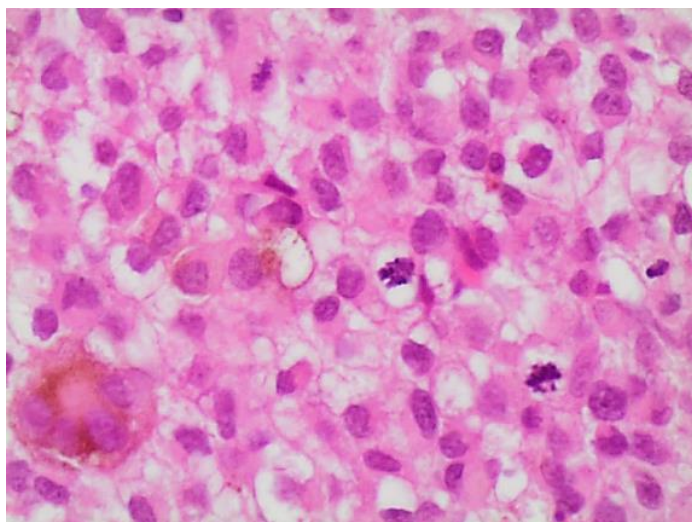


Figure 7. Malignant melanoma – plasmacytoid features, rare pigment, multinucleation, frequent mitoses; H&E stain x400

Diagnosis of malignant melanoma was confirmed through immunohistochemical study which reveal tumor cell positivity for S100, SOX10 and Melan A whereas CKAE1/AE3 was found negative; the tumor proliferation index Ki-67 was 30-35% hot-spot areas.

Conclusion

The histopathological features and the immunohistochemical profile were compatible with the diagnosis of Malignant Melanoma, plasmacytoid variant, but without being able to specify the primary or metastatic origin. Following the imaging, dermatological and pathological correlations it was established that the tumor was primary.

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Neuroendocrine skin tumors. Primary versus metastatic. Case report

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Abstract

Neuroendocrine tumors originate in cells of neural and hormonal lineage, most frequently been found in respiratory and gastrointestinal mucosa, but also in skin and other organs. Cutaneous neuroendocrine tumors, primary or metastatic, are rare. Primary tumors affect mainly elderly individuals with history of ultraviolet radiation exposure, being mostly frequent found in head and neck region followed by upper extremities. These tumors tend to develop as high-grade carcinomas, classified as Merkel cell carcinoma, with aggressive behavior and high mortality rate.

We report a case of a 69-year-old man presented with a history of about six month of a buttock painless fast-growing nodule, in absence of any known tumoral pathology. On histologic examination we described a rather nodular neoplastic proliferation subcutaneous and deep dermal located consisting in sheets, islets and occasional trabeculae of tumoral blue cells with high mitotic activity and areas of marked apoptosis. Those morphological features were highly suggestive of skin Merkel cell carcinoma and the diagnose were sustained on tumor immunopositivity for Chromogranin A, Synaptophysin and CK-7 whereas TTF1 and CDX2 were negative, excluding a bronchogenic neuroendocrine carcinoma; the proliferation index ki-67 was 35-40%, hot-spot.

Given its cellular origin and morphology, Merkel cell carcinoma needs to be differentiated both from metastases from neuroendocrine tumors more common found in other anatomic sites (as lung and digestive tract) and other primary cutaneous blue cells tumors. The diagnostic needs to be completed with physical examination of entire skin surface and imaging tests.

Key words: neuroendocrine tumors, Merkel cell carcinoma, immunohistochemistry, imaging

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Introduction

Neuroendocrine tumors are yet tumors of uncertain histogenesis but thought to originate in cells of neural and hormonal lineage most frequently seen in respiratory and gastrointestinal mucosa, but also in skin and other organs.(Patel, 2018)³⁵⁶ (Nghiem, 2014)³⁵⁷

Cutaneous neuroendocrine tumors primary or metastatic are rare. Primary tumors affect mainly elderly individuals, over 60 years of age, with a slight male predominance, most affected anatomic region being head and neck followed by upper extremities (Voog, 1999)³⁵⁸. The most known risk factor is the prolonged or therapeutical ultraviolet exposure, including sun light and psoralen plus ultraviolet A (PUVA) therapy (Lunder, 1998)³⁵⁹.

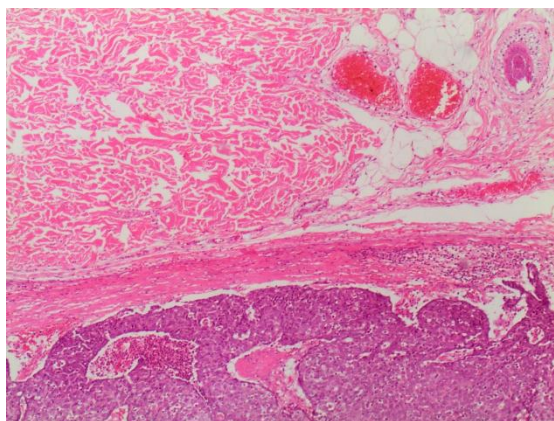
Clinically, these tumors are usually developing on sun-exposed skin as a firm papule or nodule under skin surface or may have a nonspecific ulcerated appearance presumable of epithelial or non-epithelial cutaneous tumors.(Ratner, 1993)³⁶⁰ Histologically, skin tumors tend to develop as high-grade carcinomas, classified as Merkel cell carcinoma, with aggressive behavior and high mortality rate being known as the most lethal skin cancer (Allen, 1999)³⁶¹.

Case presentation.

We report a case of cutaneous Merkel cell carcinoma in a rare location, diagnosed in a 69-year-old man who presented with an history about six months of a buttock painless and fast-growing nodule, in absence of any known tumoral pathology.

On gross examination the tumor involved deep dermis and subcutis and consisted in a solid nodule of 3.5/4.5/3cm diameter, with rather well-defined margins and mixed fleshy, tan-brown and yellowish appearance that included some edematous central areas.

The histologic features were rather characteristic and diagnostic for a neuroendocrine carcinoma, including Merkel cell carcinoma, whereas the relatively nodular and mostly pseudo-encapsulated appearance of tumor (Figure 1) required the exclusion of a metastasis from remote anatomic sites as lung or gastrointestinal tract.



³⁵⁶Parthik Patel and Karina Galoian (2018 Mar; 15). Molecular challenges of neuroendocrine tumors. *Oncol Lett.* (3): 2715–2725, PMC5778836

³⁵⁷ Paul Nghiem, Phillip H. Mckee, Harley A. Haynes. (2014). Merkel Cell (Cutaneous Neuroendocrine) Carcinoma. *Skin cancer.* www.researchgate.net

³⁵⁸ Voog E, Biron P, Martin JP, Blay JY. (1999). Chemotherapy for patients with locally advanced or metastatic Merkel cell carcinoma. *Cancer*; 85:2589–95

³⁵⁹ Lunder EJ, Stern RS. (1998). Merkel-cell carcinomas in patients treated with methoxsalen and ultraviolet A radiation. *N Engl J Med*; 339:1247–8

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³⁶¹ Allen PJ, Zhang ZF, Coit DG. (1999). Surgical management of Merkel cell carcinoma. *Ann Surg*; 229:97–105

Figure 1. Merkel cell carcinoma – subcutaneous tumor nodule, superficial border, predominantly pseudo-encapsulated; H&E Stain x40

The tumoral mass consisted predominantly in a dense population of blue undifferentiated tumor cells with high N/C ratio and scanty cytoplasm resulting in nuclear molding, variable nuclear pleomorphism with salt-pepper chromatin pattern, brisk mitotic activity and apoptosis (Figure 2), growing in large solid sheets and islets with some propensity at palisading or rosette formation resulting in cribriform areas (Figure 3); tumoral stroma was relatively scanty and fibrous or markedly edematous. Both these architectural and cytologic features suggested the neuroendocrine origin as did the frequently encountered zones of geographic necrosis (Figure 4) and focal crushing artifact (Figure 5).

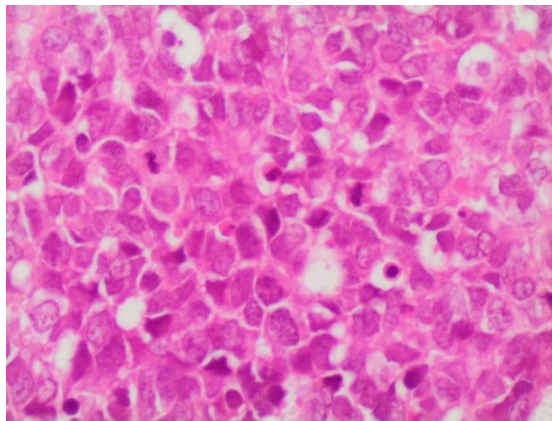


Figure 2. Merkel cell carcinoma - high grade blue tumor cells, nuclear molding, frequent mitoses, apoptosis; H&E Stain x400

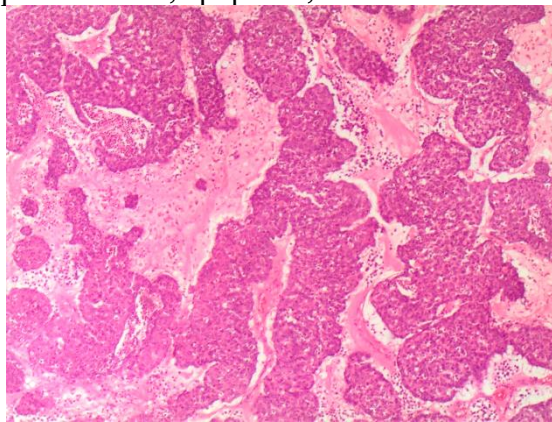


Figure 3. Merkel cell carcinoma – predominantly high grade solid and cribriform areas; H&E Stain x40

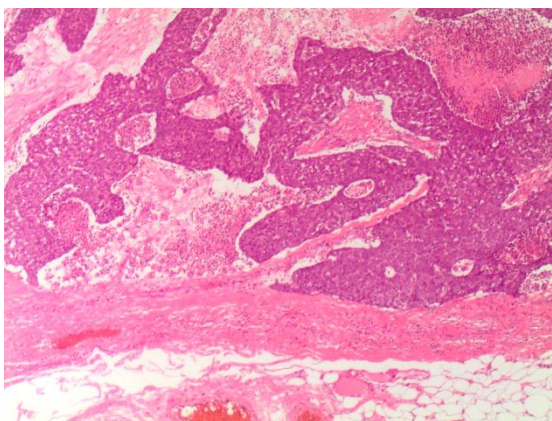


Figure 4. Merkel cell carcinoma – profound border, geographic necrosis; H&E Stain x40

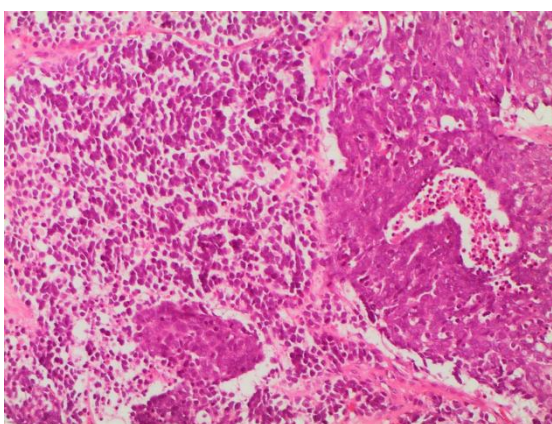


Figure 5. Merkel cell carcinoma – high grade, crushing artifact; H&E Stain x100

These areas of high-grade tumor were variably admixed with intermediate and low-grade areas (Figure 6, 7). The former was characterized by tumor cells with more abundant eosinophilic or pale cytoplasm, moderately pleomorphic nuclei and rare mitoses (Figure 8) and the latter by minimal cytologic atypia with abundant pale cytoplasm and uniformly rounded nuclei and sparse mitoses (Figure 9).

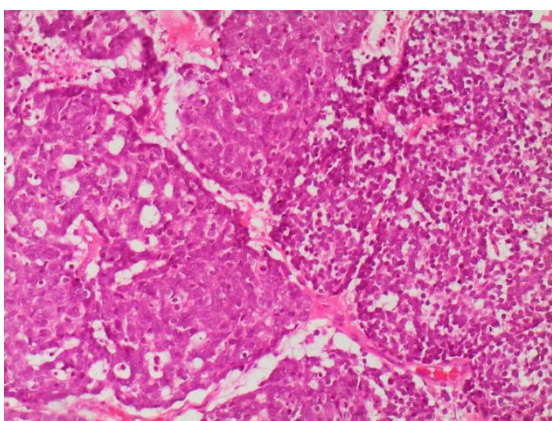


Figure 6. Merkel cell carcinoma - admixed high and intermediate grade areas; H&E Stain x100

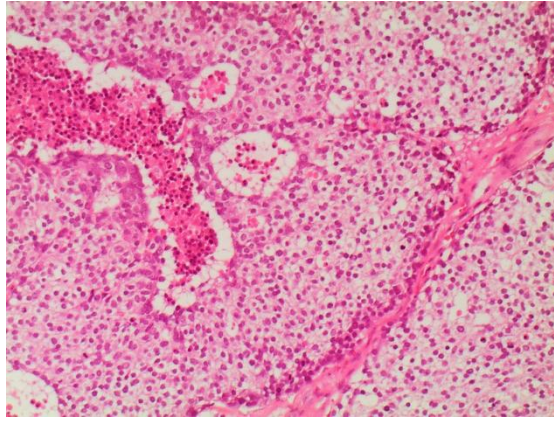


Figure 7. Merkel cell carcinoma - low-grade areas; H&E Stain x100

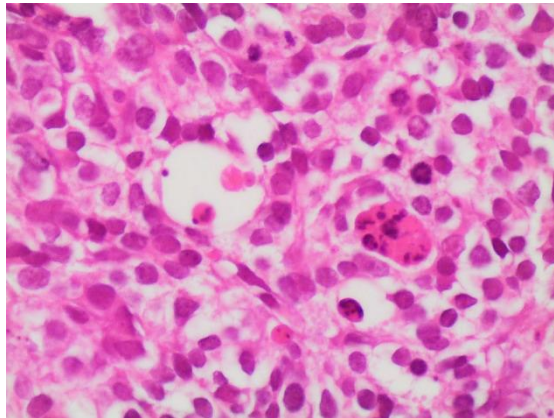


Figure 8. Merkel cell carcinoma - intermediate grade tumor cells, moderate pleomorphism, apoptosis; H&E Stain x400

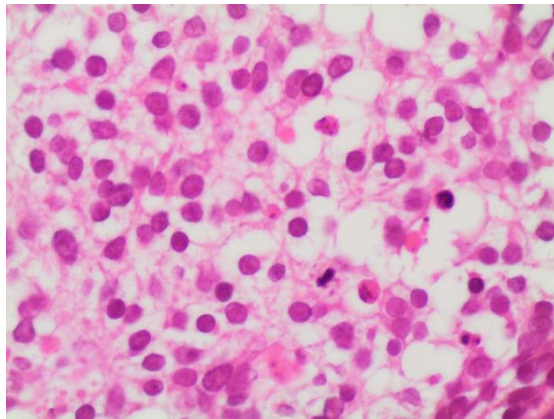


Figure 9. Merkel cell carcinoma - low grade tumor cell, minimal atypia, mitosis; H&E Stain x400

Regarding the histologic prognostic parameters, lymphovascular invasion (Figure 10) found adjacent to the more infiltrative areas at the deep tumoral margins needed immunohistochemistry confirmation whereas perineural invasion and surgical margins were negative.

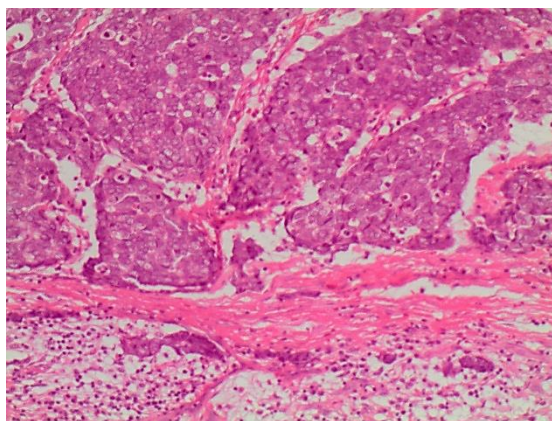


Figure 10. Merkel cell carcinoma – less circumscribed and more infiltrative tumoral front at profound border, suggestive lymphovascular invasion; H&E Stain x200

The diagnose of Merkel cell carcinoma was based on tumor cell immunopositivity for Chromogranin A, Synaptophysin and CK-7 and negative reaction for TTF1 and CDX2 markers, excluding a bronchogenic neuroendocrine carcinoma; the proliferation index ki-67 was 35-40%, hot-spot, in high grade tumoral areas. Moreover, the MRI examination excluded any neoplastic lesion in other anatomic regions and further confirmed the diagnosis.

Conclusion

Whereas the anatomic location of tumor on gluteal region was among the rarest cutaneous skin region involved by a neuroendocrine primary tumor and the deep involvement with nodular appearance of the tumor was more suggestive for a secondary neoplasm the diagnostic of Merkel cell carcinoma a was based on its morphology, immunohistochemistry and imaging studies.

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Computed Tomography Assessment Of Haematuria

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Angheloiu Daiana³⁶⁴, Stanculescu Diana³⁶⁵, Folcuti Roxana-Mihaela³⁶⁶

Introduction

The purpose of this paper is to evaluate the role played by the unenhanced or enhanced computed tomography in the imaging evaluation of asymptomatic or macroscopic haematuria taking into account the risks and benefits of this method.

In emergency and non-emergency care of the the important roles a physician holds is to carefully evaluate the need for imaging studies, striking a balance between promptly diagnosing serious conditions such as malignancy and avoiding unnecessary investigations that could potentially expose patients to additional risks.

Haematuria, the presence of blood in urine, represents one of the most frequent symptoms of urological patients, but also one of the most serious. In many cases, haematuria is the sole manifestation of underlying urological pathology.

The main causes of haematuria include urinary or prostatic infections, urolithiasis, renal or urinary bladder malignancy, trauma, coagulopathies, benign prostatic hyperplasia or anticoagulant medication.

There is currently no consensus on the recommended imaging approach for evaluating hematuria. Aspects that are linked to the patient as are cause of presentation, age, renal function, a history of calculus disease and pregnancy, the presence of risk factors for malignancy, but also of the institution in which the investigations and treatment are undergoing such as local resources, practice and cost-effectiveness are taken into consideration when deciding what investigation the patient must undergo.

Renal cell carcinoma comprises approximately 92% of all renal neoplasms, while urothelial carcinoma accounts for about 7% of malignancies in the upper urinary tract. Although most urothelial lesions occur in the bladder, synchronous lesions are observed in 2% of renal urothelial lesions and 9% of ureteric lesions.

Consensus on the ideal imaging approach for investigating hematuria is lacking, as multiple protocols have been developed with significant variations. The absence of strong data from randomized control trials makes it challenging to establish evidence-based guidelines for hematuria evaluation.

Initial diagnostic procedures commonly involve conventional radiography, renal ultrasound, and/or intravenous urography (IVU) along with cystoscopy. Subsequent investigations such as multidetector computed tomography urography (MDCTU) and magnetic resonance urography (MRU) are typically conducted when abnormalities are detected during the initial tests.

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Computer Tomography

Computed tomography (CT) imaging is considered to be the method of choice in investigating not only the anatomy of the urinary tract, but also its functionality.

The clinician must request an enhanced computed tomography scan as soon as possible, taking into account the particularities of each patient in order to confirm or infirm malignant causes of haematuria.

Although computed tomography has the disadvantage of patient's exposure to ionizing radiation, it is more sensitive and has a higher specificity in comparison with ultrasound and provides valuable pieces of information regarding not only eventual urothelial masses, but also the imaging of retroperitoneum and the local and regional spread of the malignancy.

The primal disadvantages of CT is a significantly higher radiation dose incurred by the patient. This makes it limited in use for pediatric and pregnant patients.

Dispite its disadvantages, CT has a higher sensitivity in detecting renal malignancies compared to intravenous urography (IVU). Non-contrast and contrast CT has a potential to non-invasively diagnose bladder malignancies.

Administring contrast in CT scans in a patient with a hemturia of the urinary tract may sometimes show a non-conclusive lesion, or multiple ones detected in the bladder.

In haematuria a fast and correct diagnosis is invaluable, any delay may cause serious repercussions such as ureterohydronephrosis. In patients with non-malignant pathologies that present with haematuria, non-contrast CT is a valuable tool in showing the cause in a timely manner, while at the same time invalidating other potential diagnosis that may delay efficient treatment.

In addition, CT imaging offers excellent characterization of lesions and the ability to visualize the surrounding retroperitoneum. It provides valuable information about the local extent of malignancies as well as any potential spread to distant sites.



A. Non-contrast axial CT pelvis: multiple isodense structures tangent to the bladder wall



B. Contrast axial CT pelvis, arterial: multiple enhancing structures tangent to the bladder wall



C. Non-contrast axial CT pelvis: multiple isodense structures tangent to the bladder wall

Non-contrast CT imaging enables specialists to evaluate the location and size of calculi using multiplanar scans. It can detect calculi different sizes, regardless of their location within the urinary tract. Valuable information provided by non-contrast CT includes calculi densities, which directly influences treatment options. Additionally, CT can indicate the presence or absence of obstruction by revealing ureterohydronephrosis, hydronephrosis, or varying degrees of ureteral dilations. Due to its comprehensive capabilities, non-contrast CT scanning is widely regarded as the gold standard for diagnosing kidney stones.



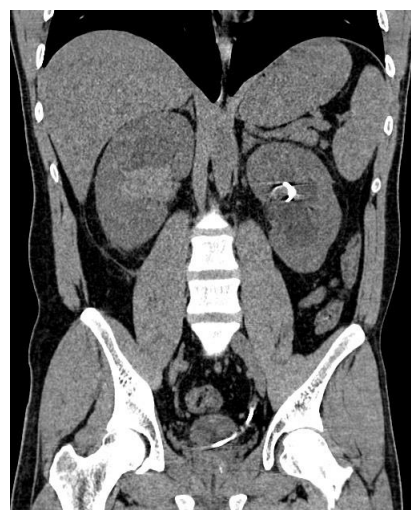
Non-contrast axial CT abdomen: staghorn calculus in left kidney



Non-contrast coronal CT abdomen - pelvis: staghorn calculus in left kidney; 5 mm calculus in inferior calice of the left kidney



Non-contrast sagittal CT abdomen and pelvis: double urether with JJ stents, microcalculus adjacent to one of the stents



Non-contrast coronal CT abdomen - pelvis: left uretherohydronephrosys, JJ stent in place

Case courtesy of Mostafa El-Feky, Radiopaedia.org, rID: 96992

While imaging techniques such as radiography, computed tomography (CT), and fluoroscopy are valuable for diagnosing urinary tract pathologies, they come with the

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disadvantage of radiation exposure. These modalities may pose challenges when used in pediatric patients and are not recommended for pregnant individuals. In light of this, there is a unanimous consensus on the principle of limiting radiation exposure to "as low as reasonably achievable" (ALARA) to minimize potential risks.

Recent advancements in CT imaging have led to the development of low-dose and ultralow-dose CT protocols, which significantly decrease radiation exposure by around 50% and 95%, respectively, compared to standard-dose CT, while maintaining a comparable detection rate in renal calculi.

Using contrast-enhanced CT as well as CT cystography. Defining the signs of bladder trauma can be challenging since bladder injuries typically accompany multiple injuries. Although a triad of symptoms including hematuria, abdominal pain, and difficulty passing urine has been described, bladder trauma is often diagnosed through radiological examination rather than clinical evaluation. Imaging of urinary bladder trauma is recommended in cases of external trauma associated with pelvic fracture, along with gross or microscopic hematuria, or when there is a widening of the pubic symphysis or obturator ring greater than 1 cm. In many small breaches in the bladder wall it is crucial for rapid surgical treatment. Kidney trauma is

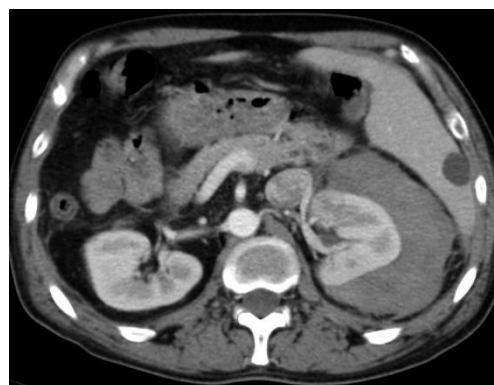


also best seen in contrast CT.

Case courtesy of Michael P Hartung, Radiopaedia.org, rID: 66879



Case courtesy of Roberto Schubert, Radiopaedia.org, rID: 14158



Case courtesy of Barbara Turi, Radiopaedia.org, rID: 24664

Conclusions

In both emergency and non-emergency healthcare settings, physicians play a crucial role in assessing the necessity of imaging studies. They must carefully balance the objective of promptly diagnosing serious conditions, including malignancy, with the imperative to minimize unnecessary investigations that may pose additional risks to patients.

Computed tomography imaging is widely recognized as the preferred method for investigating the anatomy and functionality of the urinary tract.

CT imaging has notable drawbacks, particularly the higher radiation dose it exposes patients to. As a result, its use is limited in pediatric and pregnant patients. However, CT exhibits greater sensitivity in detecting renal malignancies compared to intravenous urography (IVU). It also has the potential to non-invasively diagnose bladder malignancies through both non-contrast and contrast-enhanced CT scans.

Although imaging modalities like radiography, computed tomography (CT), and fluoroscopy are beneficial for diagnosing urinary tract conditions, they carry the drawback of radiation exposure. As a result, there is a unanimous agreement among healthcare professionals to adhere to the principle of minimizing radiation exposure to the lowest reasonably achievable level (ALARA) to ensure patient safety.

Key words: haematuria, computed tomography.

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Imaging diagnosis of urolithiasis

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Introduction

Urinary tract lithiasis represents a pathological condition with an increased incidence and prevalence in the last decades.

Rarely asymptomatic patients are diagnosed with uro/nephrolithiasis incidentally. Most of the time, the reason for presentation is acute renal colic. The distant nephron is the most frequent location of calculi development. Patients may describe a diffuse, excruciating, colicky lumbar pain radiating to the groin or thigh, not relieved by posture or non-narcotic medication. In some cases the pain can be associated with nausea, vomiting, dysuria and pollakiuria. These episodes tend to be intermittent and last for as long as an hour. Whether the patients are symptomatic or asymptomatic depends on the location, dimensions and composition of the renal calculi. These in turn are linked to lifestyle and comorbidities.

The main causes for formation of renal, urethral or urinary bladder calculi are sedentariness, poor dietary intake and comorbidities like dyslipidemia, diabetes or a wide range of infections.

Urinary tract calculi

Urinary tract calculi are made of particles of calcium, struvite or uric acid. Their composition and dimensions are highly important in the diagnosis, but also in the therapeutic process.

Calcium oxalate stones are the most common type, typically formed when there is an excess of calcium and oxalate in the urine. These stones can be either calcium oxalate monohydrate or calcium oxalate dihydrate. Calcium phosphate stones form when there is an imbalance in the urinary pH, leading to the deposition of calcium phosphate salts. Uric acid stones develop in individuals with high levels of uric acid in the urine. They are more likely to form in acidic urine environments and are commonly associated with conditions like gout or certain metabolic disorders.

Struvite stones, also known as infection stones, result from urinary tract infections caused by certain bacteria. These stones tend to grow rapidly and can become quite large, causing significant complications.

Cystine stones are rare and occur in individuals with cystinuria, a genetic disorder that leads to the excessive excretion of cystine in the urine. Cystine stones can be challenging to treat and may require specialized interventions.

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Imaging in urolithiasis plays a big role in diagnosis and treatment and it is based on ultrasound, kidney-ureters-bladder radiograph, intravenous urography, computed tomography and magnetic resonance imaging.

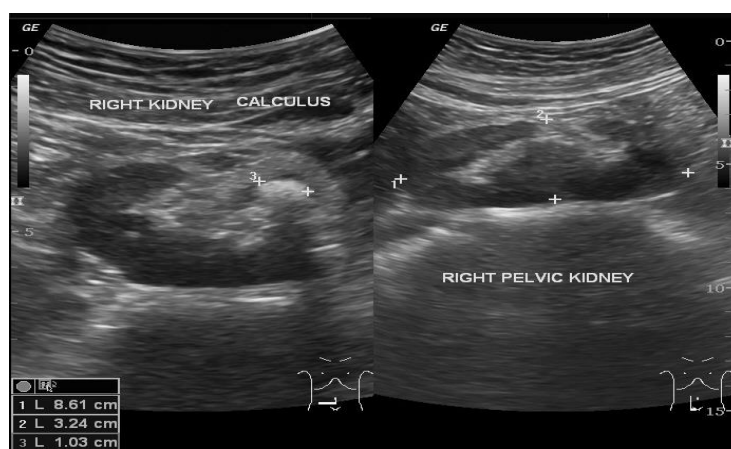
Small stones may often pass naturally through increased fluid intake and prescribed pain medications. In the case of larger stones there may be the need for additional interventions such as: extracorporeal shock wave lithotripsy (ESWL) and laser lithotripsy which are non-invasive procedures that can break down the stones into smaller fragments for easier passage. Alternatively, surgical options like ureteroscopy or percutaneous nephrolithotomy (PCNL) may be necessary to remove or break up larger stones.

Imaging modalities

The choice of initial imaging modality for suspected nephrolithiasis patients lacks consensus among prominent organizations such as the European Association of Urology, American College of Radiology, and American Urological Association.

Regardless, out of the modalities that can evaluate this pathology, computer tomography is considered as the gold standard for the diagnosis of nephrolithiasis.

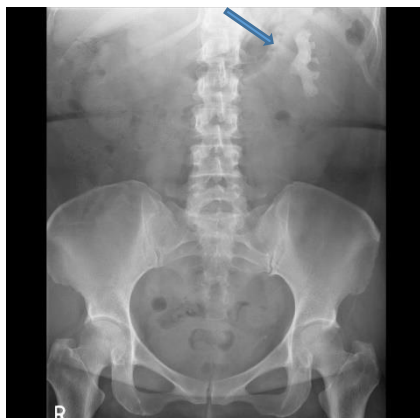
Ultrasound provides valuable pieces of information of the kidneys and urinary bladder, but the ureters are difficult to assess, even in the eventuality of ureterohydronephrosis. It has gained renewed attention due to its advantages of being radiation-free and its established efficacy as a diagnostic and therapeutic imaging technique, leading to a resurgence of interest in its utilization. In the latest years there have been new advances in ultrasound technology and technique that have facilitated its use in diagnosis and treatment.



Case courtesy of Maulik S Patel, Radiopaedia.org, rID: 10079

Kidney-ureters-bladder radiograph is no longer considered to be the first line method in urolithiasis imaging diagnosis due to its limitations in detecting radiolucent calculi. Calcium-containing stones are radiopaque, such as calcium oxalate, calcium phosphate, struvite, pure calcium phosphate and cystine stones.

Intravenous urography has lost its title of “gold standard” in the assessment of imaging renal function due to progress in medicine.

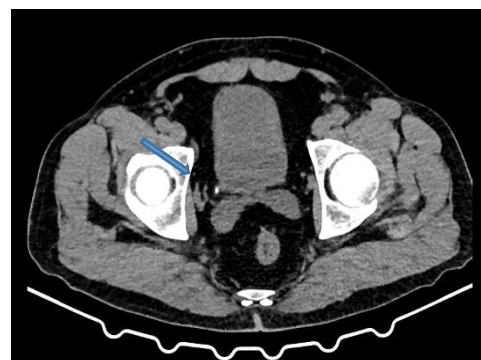
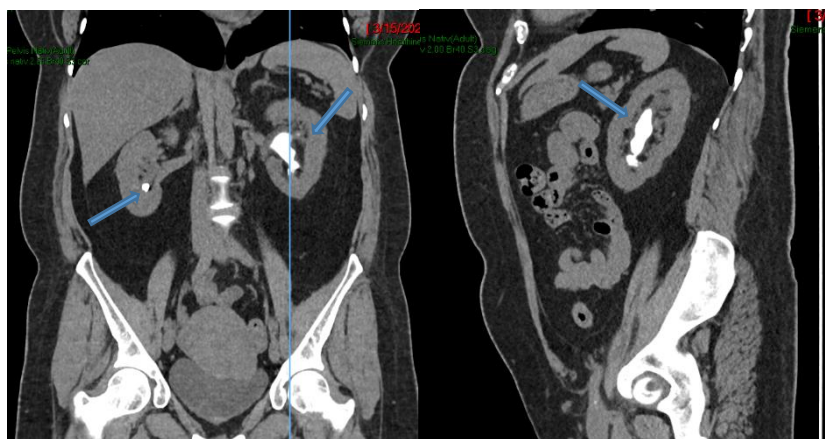


Case courtesy of Natalie Yang, Radiopaedia.org, rID: 9733



Case courtesy of Frank Gaillard, Radiopaedia.org, rID: 12555

Computed tomography has the highest sensitivity and specificity of all radioimagic methods of diagnosis. Non-contrast CT allows specialists to assess calculi location and dimensions via multiplanary scans. Calculi as small as 1-2 mm in diameter are detectable, present anywhere in the urinary tract. One of the most valuable informations offered is calculi composition, measured in Hounsfield Units (UH), that directly influence future treatment options. Another important information is the presence or absence of obstruction. CT may show ureterohidronephrosis, hydronephrosis, or dilations in different degrees of the ureters. As such non-contrast CT scan has widely been accepted as gold standard for diagnosing kidney stones.



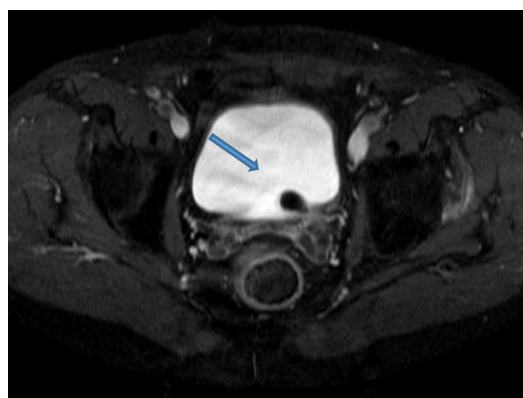
Although it is a valuable tool for urinary tract pathology diagnosis, there is the disadvantage of radiation, difficult to apply to pediatric and not recommended in pregnant patients. For this there is a unanimous agreement on limiting radiation exposure to “as low as reasonably achievable” (ALARA). In pregnant and pediatric patients this is not standard initial diagnosis imaging modality, US and MRI being preferred in these cases.

Magnetic resonance imaging is very useful in the diagnosis of urolithiasis during pregnancy. It is a non-radiation based tool, offers good multiplanary images and the possibility to calculate stone dimensions and indicate locations as well as local and regional effects such as hydronephrosis, ureterohidronephrosis.

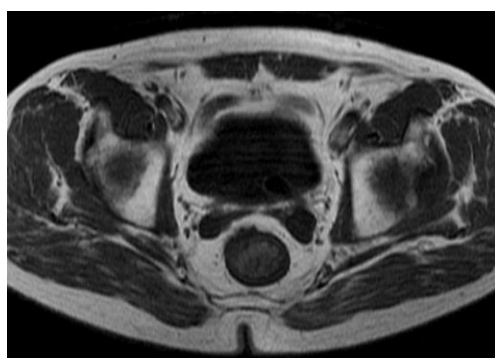
Unlike the other methods of diagnosis, MRI is an expensive investigation, not as widely available and requires special conditions to generate good quality images. Patients have to maintain a still position on the table for a longer period of time in a more restrictive and noise-prone environment. Thus is not applicable to claustrophobic or uncooperative patients. Also patients with metal implants are not allowed to undertake this type of examination. Non-metal implants may generate artifacts that make diagnosis difficult or impossible. As such, MRI is a good method of investigation and diagnosis, but is not used as an initial imaging modality except for pregnant patients. In the latter US is prefer although due to the physiological changes that occur during pregnancy, distinguishing between normal ureteral dilation and obstruction caused by a ureteral stone becomes challenging. Consequently, ultrasound exhibits a reduced sensitivity of approximately 34% in pregnant patients.



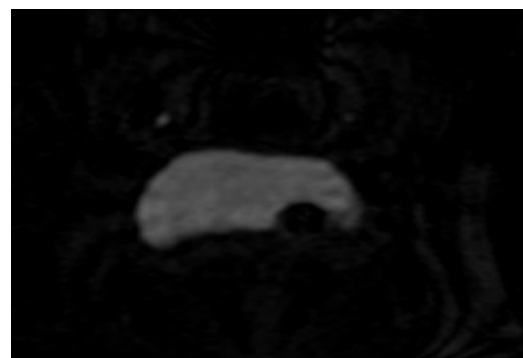
*B. MRI pelvis scan T2 sequence:
calculi adjacent to the left ostium*



*A. MRI pelvis scan T2 FS sequence:
calculi adjacent to the left ostium*



*D. MRI pelvis scan T1 sequence:
calculi adjacent to the left ostium*



*C. MRI urography: calculi adjacent to
the left ostium*

Case courtesy of Roberto Schubert, Radiopaedia.org, rID: 15911

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Conclusions

Urinalysis serves as a straightforward and dependable marker for detecting the presence of renal stones. However, it does not offer insights into the size, location, density and resonance in adjacent structures of the stone. Additionally, the accuracy of urinalysis can be influenced by factors such as dietary habits, hydration status, environmental conditions, various kidney diseases, and systemic metabolic disorders.

Taking into account the advantages and disadvantages of each modality for an initial diagnosis in acute patients US remains a reliable method of imaging, fast, cost-effective and non-irradiant especially in pediatric and/or pregnant patients.

If there are no contraindications CT is a good tool to assess the presence and characterize renal calculi. Moreover it has been As such it has widely been accepted as gold standard for diagnosing kidney stones.

Key words: urolithiasis, ultrasound, kidney-ureters-bladder radiograph, computed tomography, magnetic resonance imaging, intravenous urography

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THREE INNOVATIVE MODELS OF INTRAMEDULLARY ORTHOPEDIC NAILS

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Abstract: The study presented in the paper started from the idea of designing and modeling several innovative models of intramedullary nails that would eliminate the use of orthopedic screws, imposed by the analysis of surgical studies for the classic nail. Classic intramedullary nails used in tibial fractures have important disadvantages, such as complicated orientation, manipulation and positioning in the bone and, at the same time, difficult positioning of distal screws using the classic nail guide. Also, all these operations can lead to errors or additional holes in the tibia, leading to a decrease in the strength of the bone. At the same time, all these additional operations can lead to an increase in the duration of the surgical intervention with unpredictable effects for bone recovery. Increasing the duration of the orthopedic intervention can also lead to additional X-ray exposure of the medical staff and the patient. All three innovative models have one simple basic principle: the nail is fixed in the tibial medullary canal using different mechanisms and metal components. These models eliminate the use of orthopedic screws, and implicitly, their implantation operations, and these virtual models of intramedullary nails present a sufficient rigidity, but include relatively complicated mechanical subsystems, with small metal components, difficult to obtain technologically. The physical obtaining of these models, presented in this paper, would require the use of special technologies, complex equipment, specific to fine mechanics or innovative technologies, such as Rapid Prototyping, adapted to the process of controlled melting of metals.

Keywords: intramedullary nails, virtual system, fatigue, classic nail, innovative models.

1. Introduction

Diaphyseal fractures of the calf are fractures involving one or both bones at the diaphyseal level. The tibia is most commonly involved, with tibial fractures accounting for approximately 20% of all fractures; the superficial situation of the calf bones (the antero-medial surface and the anterior crest of the tibia being covered only by integuments and fatty tissue) makes them more vulnerable to direct impact trauma. They can occur in isolation or as part of polytraumas and are still an important public health problem with important socio-economic implications due to the disabling nature of the disease determined on the one hand by the severe pain syndrome and on the other hand by immobilization or prolonged recovery time, as well as the characteristic sequelae: joint swelling, muscle atrophy, persistent edema, spotted osteoporosis of the metatarsals (Sudek-Leriche syndrome), algo-neuro-dystrophic syndrome, which in turn require sustained, sometimes long treatment [1-5].

The treatment of diaphyseal fractures of the calf is complex, orthopedic (cast immobilization) and/or surgical (osteosynthesis with blocked, unblocked or elastic centromedullary nails; plates with screws; external fixator); in the choice of therapeutic

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methods, the morphopathological characteristics of the fracture (number, site, type of fracture, etc.), age, general condition of the traumatized person, the presence of shock must be taken into account, especially if the fracture is part of a polytraumatism and last but not least by the logistics of the service and the expertise of the surgical team, which directly influence the results. Classic intramedullary nails used in tibial fractures have important disadvantages, such as complicated orientation, manipulation and positioning in the bone and, at the same time, difficult positioning of distal screws using the classic nail guide.

Also, all these maneuvers can lead to errors or additional holes in the tibia, causing a decrease in the strength of the bone and at the same time increasing the duration of the surgical intervention with unpredictable effects for bone recovery. Prolonging the duration of the orthopedic intervention can also lead to an additional irradiation of the medical staff and the patient [6-12].

In order to achieve this last objective, we carried out virtual-experimental studies and analyzes starting from the idea of designing several innovative models of intramedullary nails that eliminate the disadvantage of using orthopedic screws. All three innovative models made had a single basic principle: fixing the nail in the tibial medullary canal using different mechanisms and metal components [13-17].

2. Virtual models of innovative orthopedic intramedullary nails

2.1. Intramedullary nail for the tibia using the rack and pinion mechanism

2.1.1. Description and operation

The main movement, which leads to the fixation of the nail in the medullary canal, is given by the operator by means of a special key. This model, as well as its main components, are presented in Figure 1.



Fig.1. The model of the nail with gear-rack mechanism: 1- the body of the nail with the mechanisms; 2-actuation key.

The external model of the nail is composed of two "shell" type casings having different internal gaps for the arrangement of the actuation mechanisms. The main movement given by the actuation of the special key is transmitted beyond the "bend" of the nail through a universal coupling type mechanism or cardan coupling. This type of coupling consists of three elements. A first element, the one that is provided at one end with the channels for the special key and, at the other end, with the cardan fork. The second element of the universal coupling has a gimbal fork at one end, and at the other end groove-type elements for transmitting the movement to the other end of the nail. The connecting element between the two components of the universal

coupling is the so-called "cardanic cross" which is provided with a hole for the centro-medullary guide pin. The main movement is transmitted to two rack and pinion type mechanisms by means of a main shaft that takes the place of the rack and also of the movement nut. Thus, the rotation movement given by the movement received from the universal coupling is transformed into longitudinal translation and rotation movement. An important component of the actuation mechanism is the fixed bushing for the arms that will penetrate the bone in the medullary canal. The bushing is provided with mounting holes for the three arms. The components of this innovative model are presented in Figure 2 [1,5].

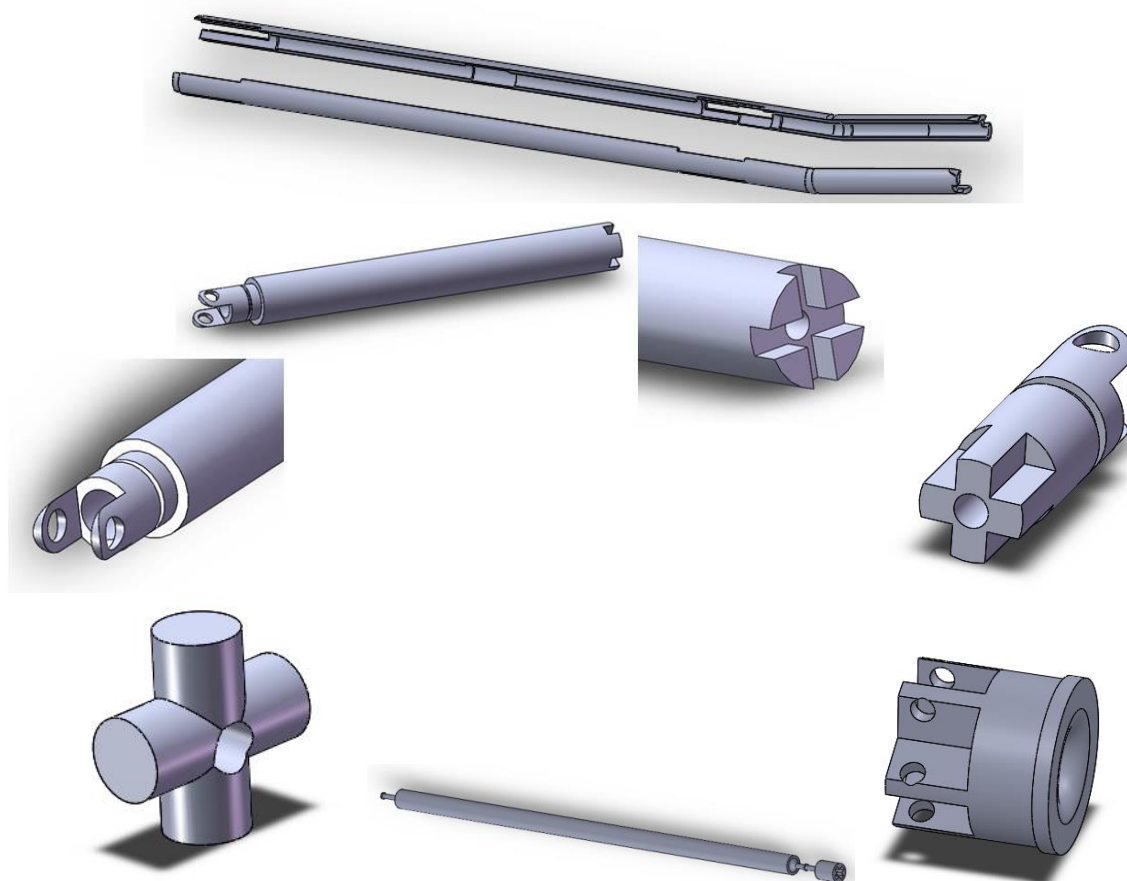


Fig.2. Models of the main components of the innovative nail.

The active elements of the device are the fixation arms that open into the medullary canal. Their movement is given by the main axis (rack with one tooth) which drives the gear wheel of the fixing arm producing a rotation around the fixing hole on the fixed bushing. The axis of rotation is materialized by a rivet, and the assembly of the three arms is shown in Figure 3.

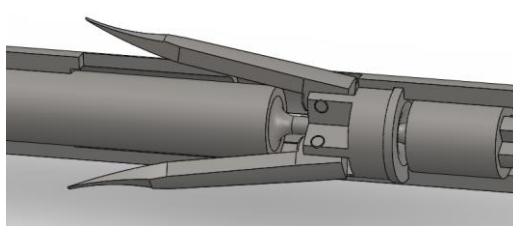


Fig.3. The arms of the fixing mechanism and their mounting.

The same mechanism, with similar components, are also arranged at the end of the nail (Figure 4).

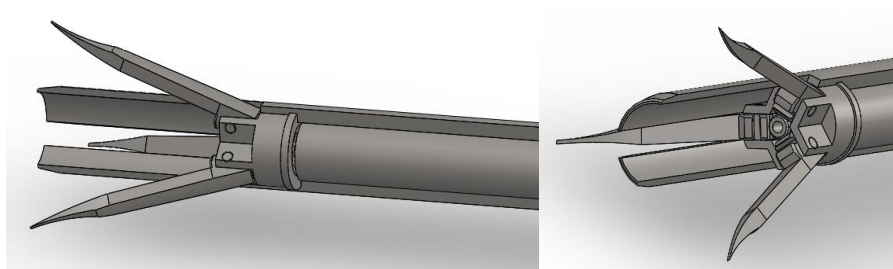


Fig.4. Nail end arms opening mechanism.

The main axis is constructed in such a way as to create a gap in the opening of the fixing arms. First, open the arms at the end of the nail, then those in the middle. Thus, Figure 5 shows the nail when the arms at the end of the nail are fully open. After this moment, the tooth of the rack on the main shaft escapes from the gear at the end of the nail, and the other tooth enters the gear at the middle of the nail, opening the other arms [1,7].

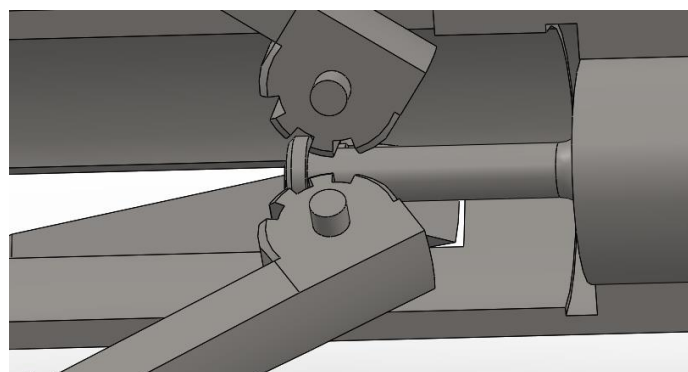


Fig.5. Disengagement of the first tooth of the rack located on the main shaft (arm fixing bushing is removed).

2.1.2. Testing the device at the load given by simulating human walking

For the virtual experimental testing of the nail with fixing arms actuated by the gear-rack mechanism, the load obtained during the simulation of human walking was used. As a simplifying hypothesis, it was considered that the entire force was transferred to the nail, so a more unfavorable situation than in reality was analyzed. The simulation was carried out in the CosmosWorks module of the SolidWorks assisted design program [1,9,11].

Figure 6 shows the system subjected to virtual testing, characterized by:

- the constraints system are of the "fixed" type (green color);
- the force system has a total value of 2300 N (the maximum value from the simulation of human walking) and acts in the direction of the reaction (red color);
- the contact between the components is of the "bonded" type.



Fig.6. The system subjected to virtual testing.

Figure 7 shows the system and its components divided into finite elements.

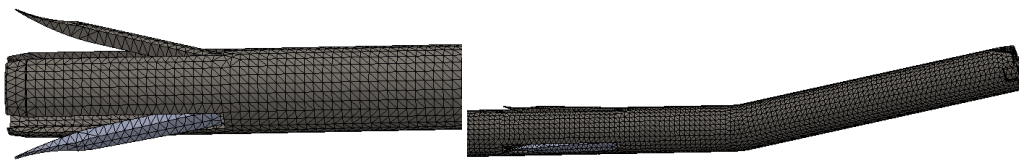


Fig.7. The finite element structure of the elements that make up the system subjected to experimental-virtual testing.

The characteristics of the finite element structure are: the size of the finite element 1.3197 mm, the number of elements 142255, and the number of nodes 225835. The mechanical assembly was analyzed in a static system, the initial values of the mechanical parameters being constant. The stress, displacement and strain maps are presented in Figures 8 - 10.

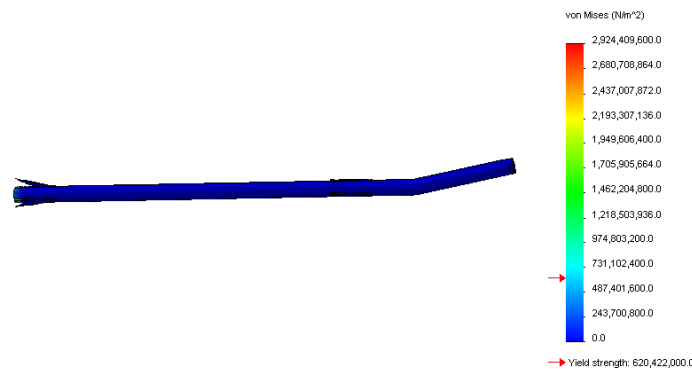


Fig.8. The stress map obtained for the studied assembly.

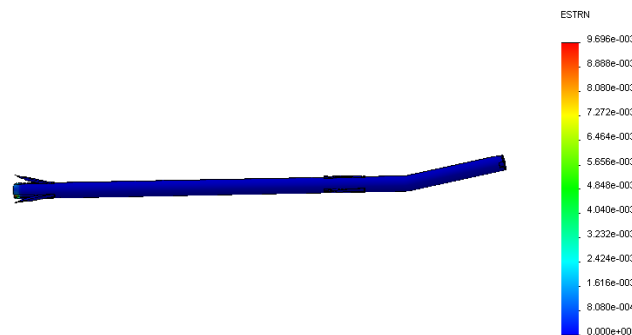


Fig.9. The strain map obtained for the studied assembly.

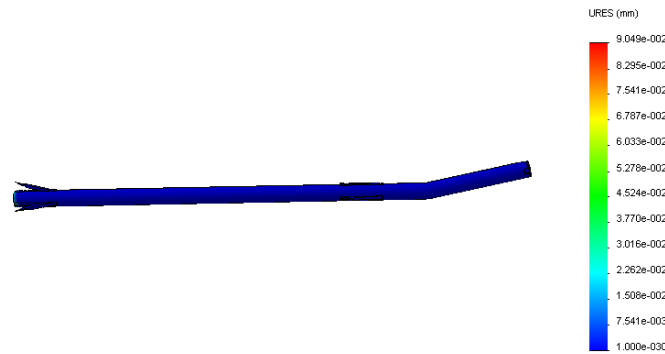


Fig.10. The displacement map obtained for the studied assembly.

From the analysis of the obtained results, it is found that, although the maximum displacements are approximately 0.00904 mm which is due to the elasticity of the component elements, the stresses are kept at a maximum value of 2.984×10^9 Pa, and the maximum strain are below the value of 9.696×10^{-3} , so below 0.5%, which leads to the conclusion that the virtual testing of the system led to positive results.

2.1.3. Virtual-experimental fatigue testing of the nail with fixing arms and actuation by gear-rack mechanism.

The simulation results are based on the material characteristics, but also on the diagrams, called S-N curves, which establish a functional link between the alternating stress that appears in the studied object due to the stresses to which it is subjected and the number of operating cycles [1,12,16].

Taking into account that, in the fatigue simulations, an important input element is given by the number of analyzed cycles, for the innovative systems presented in this paper, the following recovery scheme presented in the following table was proposed.

Table 1 – Recovery scheme

Month	No. steps/day	Total steps/period
1	500	1,500
2	1,000	30,000
3	1,500	45,000
4	2,000	60,000
5-12	3,000	720,000
Total steps (cycles) during the recovery period - 12 months		856,500

The demands obtained in static mode, as well as the material characteristics (including the S-N type curves, but also the definition of a fully reversible event based on 856,500 cycles, are the main data required for the fatigue stress study. The simulation results are presented in Figures 11 - 14.

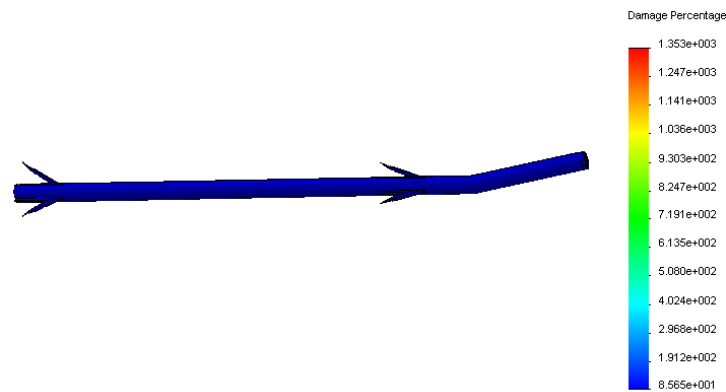


Fig.11. Damage diagram for the analyzed system of the nail with clamping arms actuated by a rack-and-pinion mechanism.

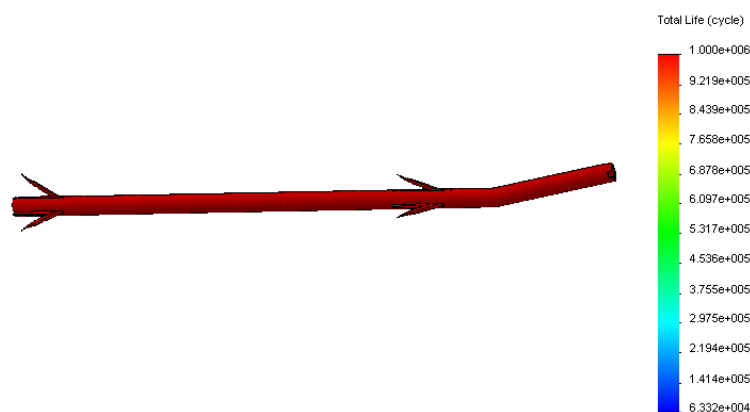


Fig.12. Total Life diagram for the analyzed nail system with pinion arms actuated by a rack-and-pinion mechanism.

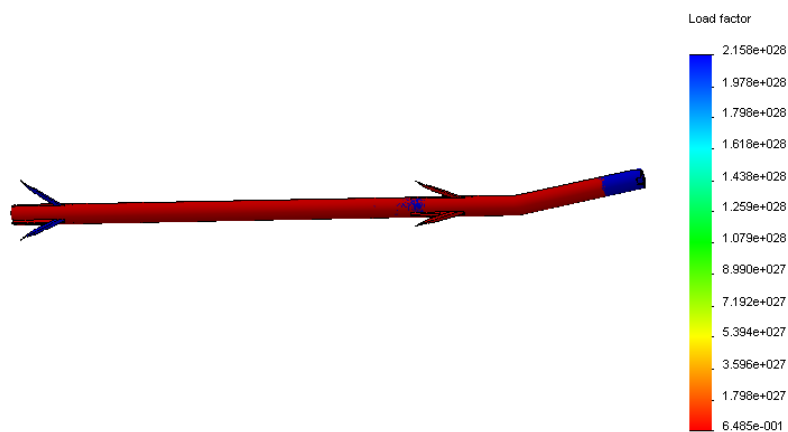


Fig.13. Diagram of the load factor for the analyzed system of the nail with fixing arms actuated by a rack-and-pinion mechanism.



Fig.14. Diagram of the biaxiality indicator for the analyzed system of the nail with fixing arms actuated by a rack and pinion mechanism.

Analyzing the obtained results, the following conclusions can be drawn:

- the analyzed structure has a low degree of wear after 856,500 work cycles;
- the durability diagram indicates an unsafe operation of the system at 1,000,000 work cycles;
- the safety factor has an average value of $1,079 \cdot 10^{28}$, much higher than the value of 1, which indicates material failure;
- the biaxiality indicator has an average value close to zero, which indicates a good arrangement of the biaxial stresses.

Analyzing the arrangement of the maximum stresses, but also the resulting diagrams, it can be concluded that the proposed system has a good operation, there are minor problems at the level of the fixing arms [1,8,17].

2.2. Intramedullary tibial nail using plane bar mechanism

2.2.1. Description and operation

The main movement, which leads to the fixation of the nail in the medullary canal, is given by the operator by means of a special key (Figure 15, pos. 3). The second key (Figure 15, pos.2) activates a coupling operated by a system based on a movement nut and three cables. This coupling allows the alternative actuation of the two mechanisms with fixing arms. The two movements, the main movement and the actuation movement of the coupling, are made by cylindrical, concentric elements. This model, as well as its main components, are presented in Figures 15-19 [1,9,15].

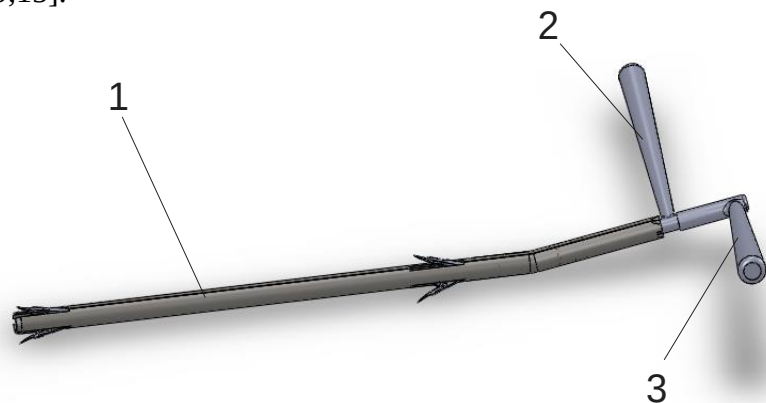


Fig.15. The model of the nail with gear-rack mechanism: 1- the body of the nail with the mechanisms; 2-main movement actuation key; 3-key coupling actuation.

The external model of the nail is composed of two "shell" type casings having different internal gaps for the arrangement of the actuation mechanisms (Figure 16).



Fig.16. The models of the two half-cases.

Alternatively, the main movement is transmitted, sometimes to the mechanism with fixing arms in the middle of the nail, sometimes to the mechanism at the end of the nail. This alternation of movement is achieved by a coupling (Figure 17, pos.1) operated by three cables (Figure 17, pos.2) that take the movement from the nut 3 and from the cable actuation screw 4 [1,6,14].

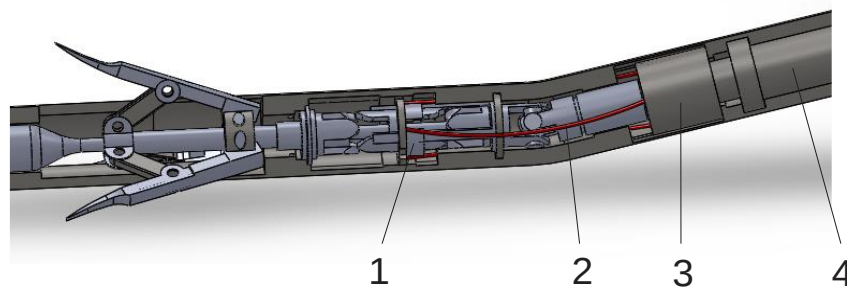


Fig.17. The coupling actuation mechanism: 1- coupling; 2- cables; 3- movement nut; 4- actuation screw.

The main movement given by the actuation of the special key is transmitted beyond the "bend" of the nail through a universal coupling type mechanism or cardan coupling. This type of coupling consists of three elements. A first element, the one that is provided at one end with the channels for the special key and at the other end with the cardan fork. The second element of the universal coupling has a gimbal fork at one end, and three elements at the other end for transmitting the rotational movement to the coupling. The connecting element between the two components of the universal coupling is the so-called "cardanic cross" which is provided with a hole for the centro-medullary guide pin. The coupling element that transmits the movement to the first mechanism with fixing arms has three arms that perform the coupling or decoupling to the main movement and, at the same time, has the role of the movement nut, transforming the rotation movement into a longitudinal translation movement. The axis that actuates the three fixing arms and has only translational movement is shown. The second axis that transmits the movement to the second mechanism has at one end three arms that take the rotational movement

from the coupling, and at the other end an internal thread that transforms the rotational movement into longitudinal translational movement for the second mechanism. All elements have a longitudinal hole for guiding the centromedullary pin. The shaft that transforms the rotation movement into a translational movement for the second mechanism has three groups of "ears" at one end, and at the other end a cylindrical portion with an external thread that connects with the shaft that receives the movement from the coupling (Figure 18) [1,6,12].

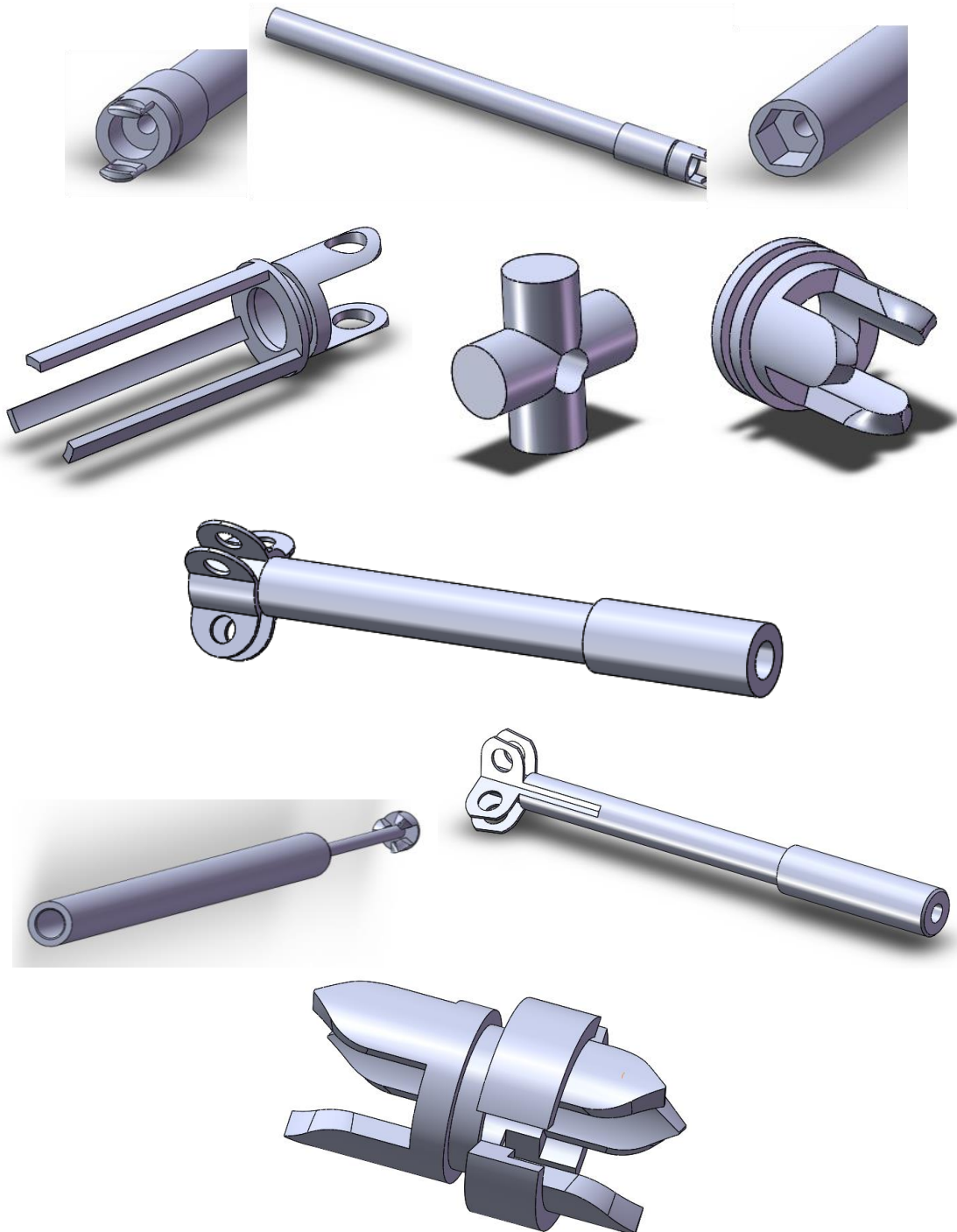


Fig. 18. The main elements of the innovative nail.

The mechanism for actuating the fixing arms is shown in Figure 19 and acts like the mechanism of an umbrella.

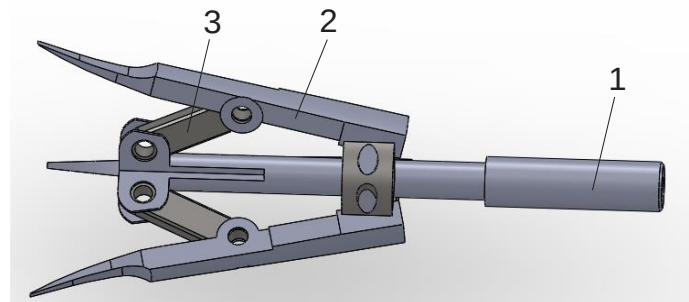


Fig.19. The actuation mechanism of the fixing arms: 1-actuation axis; 2-fixing arm; 3-link element.

2.2.2. Testing the device at the load given by simulating human walking

For the virtual experimental testing of the nail with fixing arms actuated by a planar mechanism with bars, the loading obtained during the simulation of human walking was used. As a simplifying hypothesis, it was considered that the entire force was transferred to the nail, so a more unfavorable situation than in reality was analyzed. The simulation was carried out in the Simulation of SolidWorks module of the SolidWorks assisted design program. Figure 20 shows the system subjected to virtual testing [1,5,10].

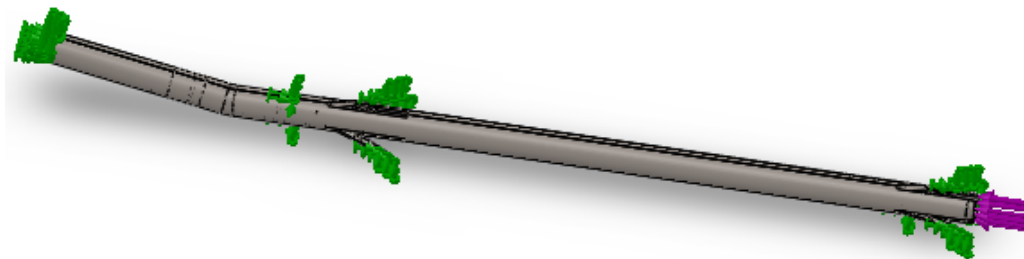


Fig.20. The system subjected to virtual testing.

Figure 21 shows the system and its components divided into finite elements.

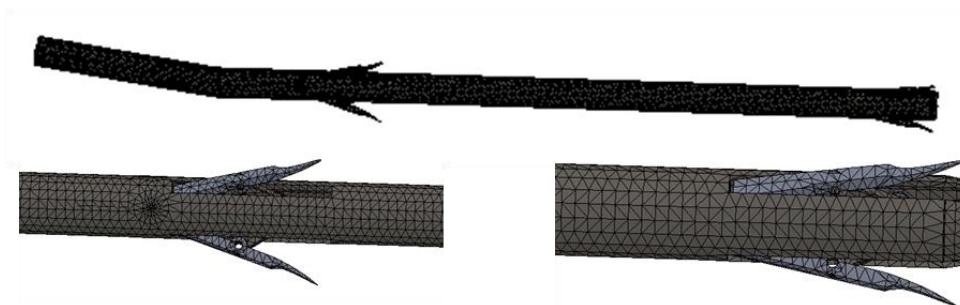


Fig.21. The finite element structure of the elements that make up the system subjected to experimental-virtual testing.

The characteristics of the finite element structure are: the size of the finite element 1.74102 mm, the number of elements 72,705, and the number of nodes 20,889. The mechanical

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assembly was analyzed in a static system, the initial values of the mechanical parameters being constant. The stress, displacement and deformation maps are presented in Figure 22 [1,4,11].

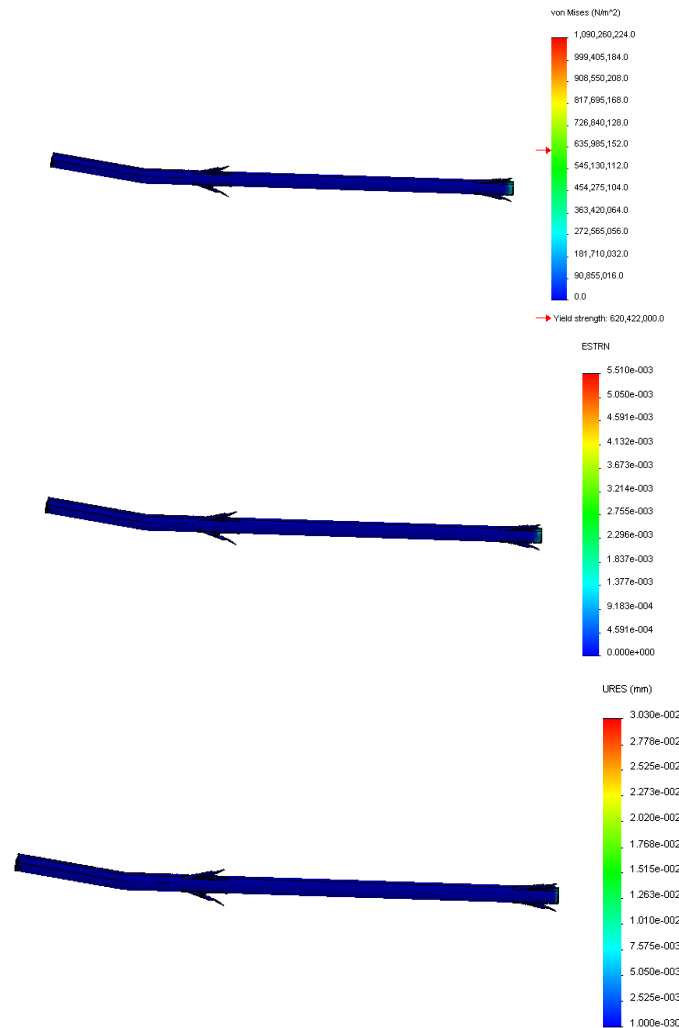


Fig.22. Stress, strain and displacement maps obtained for the studied assembly.

From the analysis of the obtained results, it can be seen that, although the maximum displacements are approximately 0.0303 mm which is due to the elasticity of the component elements, the stresses are kept at a maximum value of $1,090 \times 10^9$ Pa, and the maximum strain are below the value of 5.51×10^{-3} , so below 0.5%, which leads to the conclusion that the virtual testing of the system led to positive results.

2.2.3. Virtual-experimental fatigue testing of the nail with fixing arms and actuation by a planar mechanism with bars

The results obtained in static mode, as well as the material characteristics (including the S-N type curves, but also the definition of a fully reversible event based on 856,500 cycles, are the main data required for the fatigue stress study. The simulation results are presented in Figures 23- 26.

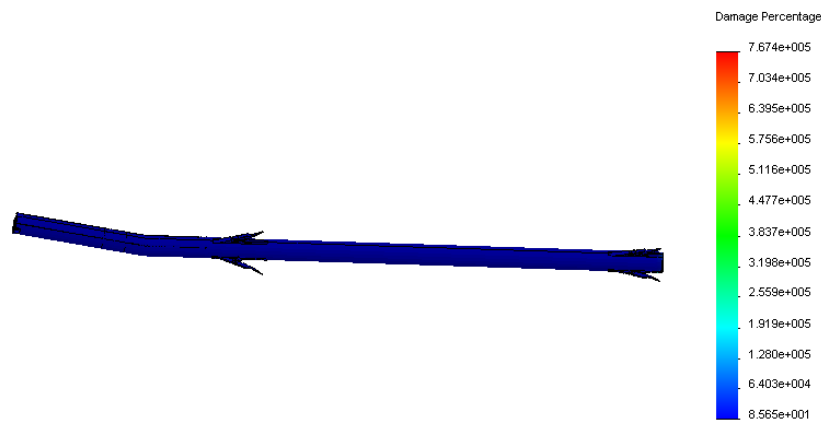


Fig.23. Damage diagram for the analyzed system of the nail with fixing arms actuated by a planar mechanism with bars.



Fig.24. Total life diagram for the analyzed system of the nail with fixing arms actuated by a planar mechanism with bars.

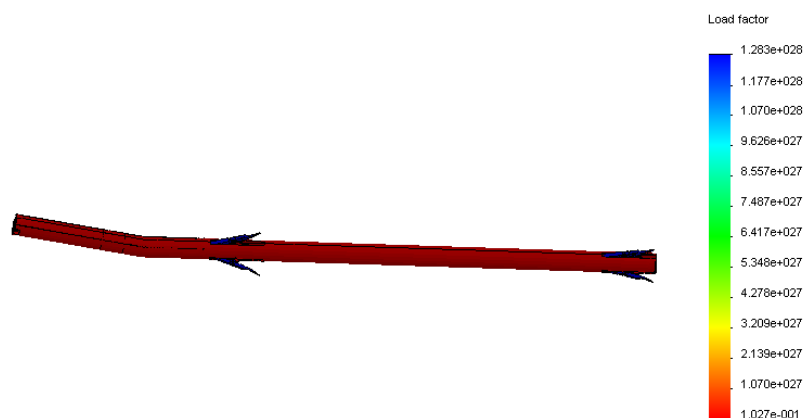


Fig.25. Load factor diagram for the analyzed system of the nail with clamping arms actuated by a planar mechanism with bars.

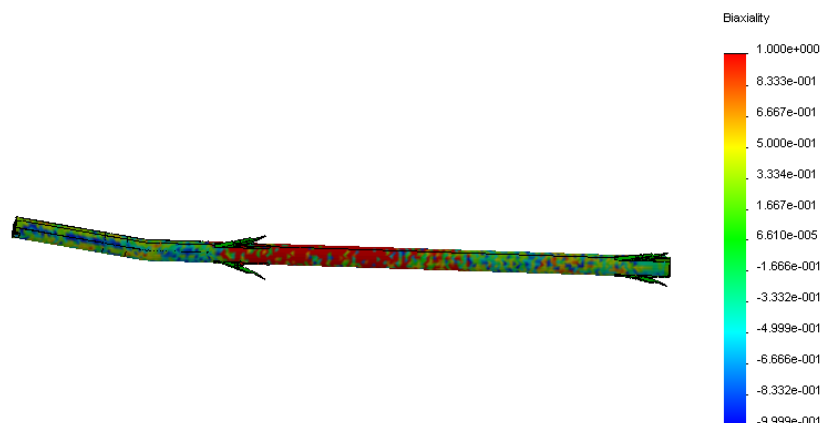


Fig.26. Diagram of the biaxiality indicator for the analyzed system of the nail with fixing arms actuated by a planar mechanism with bars.

Analyzing the obtained results, the following conclusions can be drawn:

- the analyzed structure has a low degree of wear after 856,500 work cycles;
- the durability diagram indicates an unsafe operation of the system at 1,000,000 work cycles;
- the load factor has an average value of $6,417 \cdot 10^{27}$, much higher than the value of 1, which not indicates material failure;
- the biaxiality indicator has an average value close to zero, which indicates a good arrangement of the biaxial stresses.

Analyzing the arrangement of the maximum stress, but also the resulting diagrams, it can be concluded that the proposed system has a good operation, there are minimal problems at the level of the fixing arms.

2.3. Intramedullary tibial nail with penetrating screws using bevel gear mechanisms

2.3.1. Description and operation

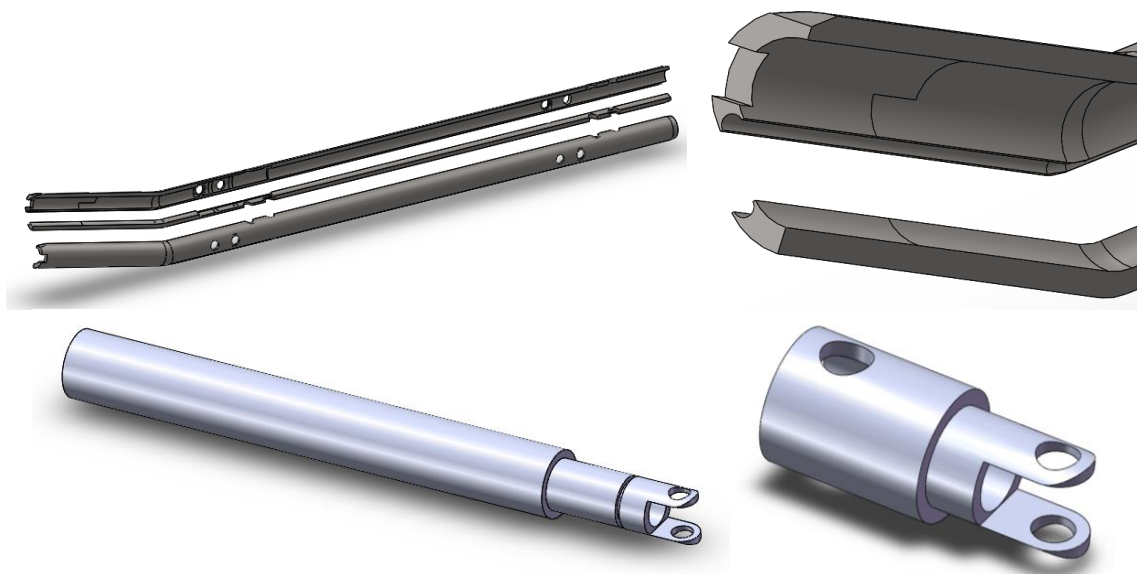
The main movement, which leads to the fixation of the nail in the medullary canal, is given by the operator by means of a special key (Figure 27, item 2). This model, as well as its main components, are shown in Figures 27-32 [1,3,8].



Fig.27. The model of the nail with gear-rack mechanism: 1- the body of the nail with the mechanisms; 2-actuation key.

The external model of the nail is composed of three "shell" type casings having different internal gaps for the arrangement of the actuation mechanisms. Two of the three cases have a longitudinal hole with a diameter of 1.6 mm for the centering and guiding pin. The main

movement given by the actuation of the special key is transmitted beyond the "bend" of the nail through a universal coupling type mechanism or cardan coupling. This type of coupling consists of three elements. A first element, the one that is provided at one end with the channels for the special key and at the other end with the cardan fork. The second element of the universal coupling is provided at one end with a gimbal fork, and at the other end with three elements for transmitting the rotational movement to the coupling. The connecting element between the two components of the universal coupling is the so-called "cardanic cross". The rotational movement is transmitted from the universal coupling to the main pinion. It is provided with a transverse hole that allows the insertion of a pin. The main pinion meshes with a carrier pinion equipped with four arms on which a screw guides. The rotational movement is transmitted further by means of a double pinion. This double wheel is fixed to the two casings by two stiffening half-bushes (Figure 28) [1,11,15].



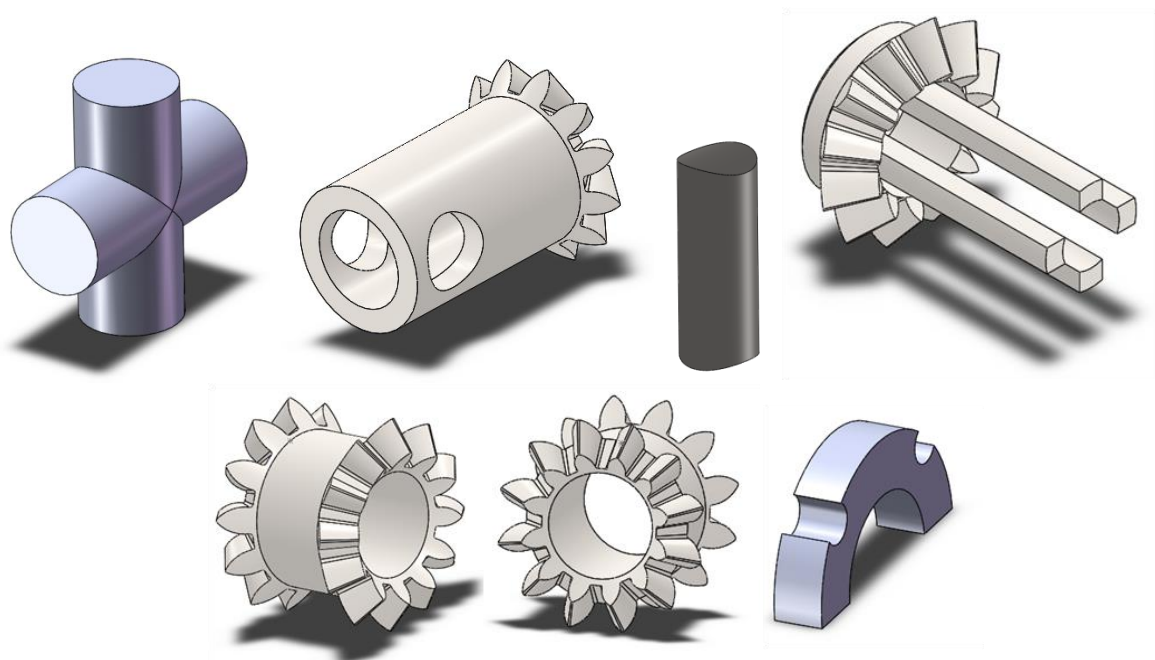


Fig.28. Models of the main components of the innovative nail.

The bone penetrating screw is actually a modified orthopedic screw. It features four channels that guide the carrier pinion. This screw is threaded into an internally threaded hole located on the housing. The screw receives the rotation movement from the carrier pinion and is forced to acquire a helical movement due to the threaded hole (Figure 29).

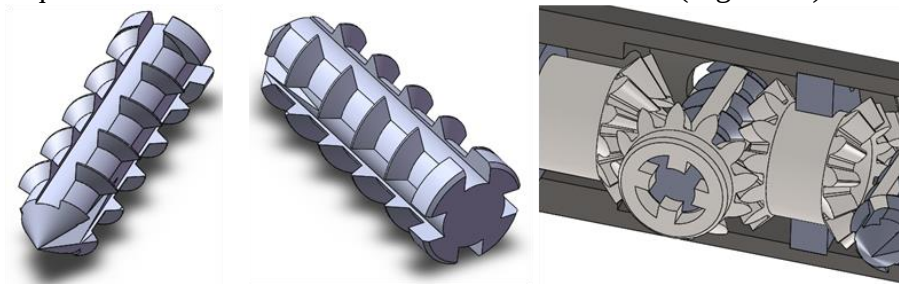


Fig.29. The penetrating orthopedic screw and its actuation mechanism.

The previously described mechanism for a single penetrating screw was multiplied for three more screws. Since the teeth of the pinions are identical, the mechanical ratio of transmission of motion is 1. Figure 30 shows the drive mechanism for the first group of four screws that act according to the curvature of the nail [1,11,17].

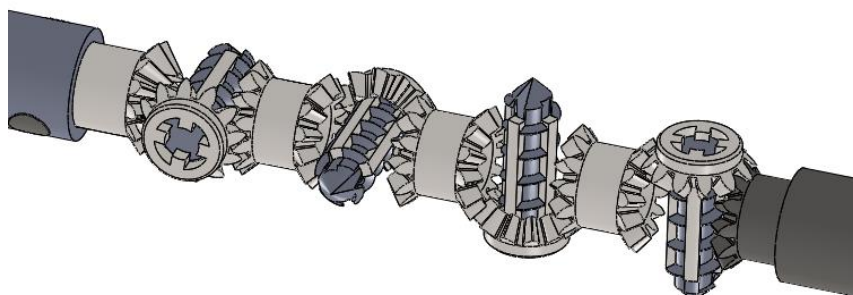


Fig.30. The drive mechanism of the first group for four penetration screws.

The element that makes the mechanical connection between the two groups of four penetrating screws is a double connection pinion (Figure 31).



Fig.31. The mechanical element that distributes the movement between the two groups of penetrating screws (double pinion).

The second mechanism with penetrating screws is practically identical to the first mechanism and is shown in Figure 32.

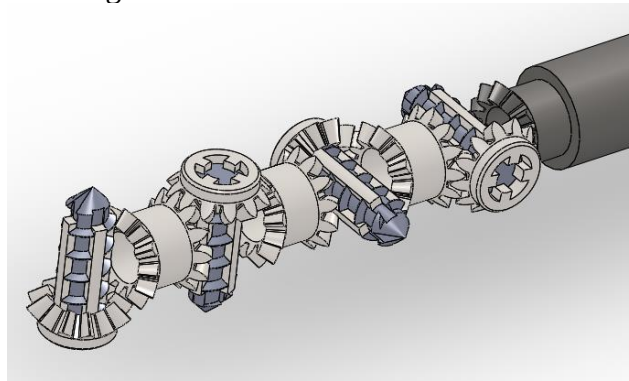


Fig.32. The second mechanism with penetrating screws.

2.3.2. Testing the device at the load given by simulating human walking

For the virtual experimental testing of the nail with penetrating screws actuated by a mechanism with conical pinions, the loading obtained during the simulation of human walking was used. As a simplifying hypothesis, it was considered that the entire force was transferred to the nail, so a more unfavorable situation than in reality was analyzed. The simulation was carried out in the Simulation module of the SolidWorks assisted design program.

Figure 33 shows the system subjected to virtual testing.

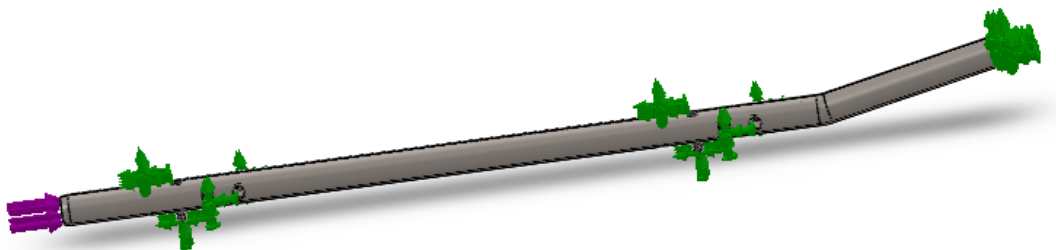


Fig.33. The system subjected to virtual testing.

Figure 34 shows the system and its components divided into finite elements.



Fig.34. The finite element structure of the elements that make up the system subjected to experimental-virtual testing.

The characteristics of the finite element structure are: the size of the finite element between 0.796 mm and 3.98 mm, the number of elements 99,211 and the number of nodes 28,355.

The mechanical assembly was analyzed in a static system, the initial values of the mechanical parameters being constant. The stress, displacement and strain maps are presented in Figure 35.

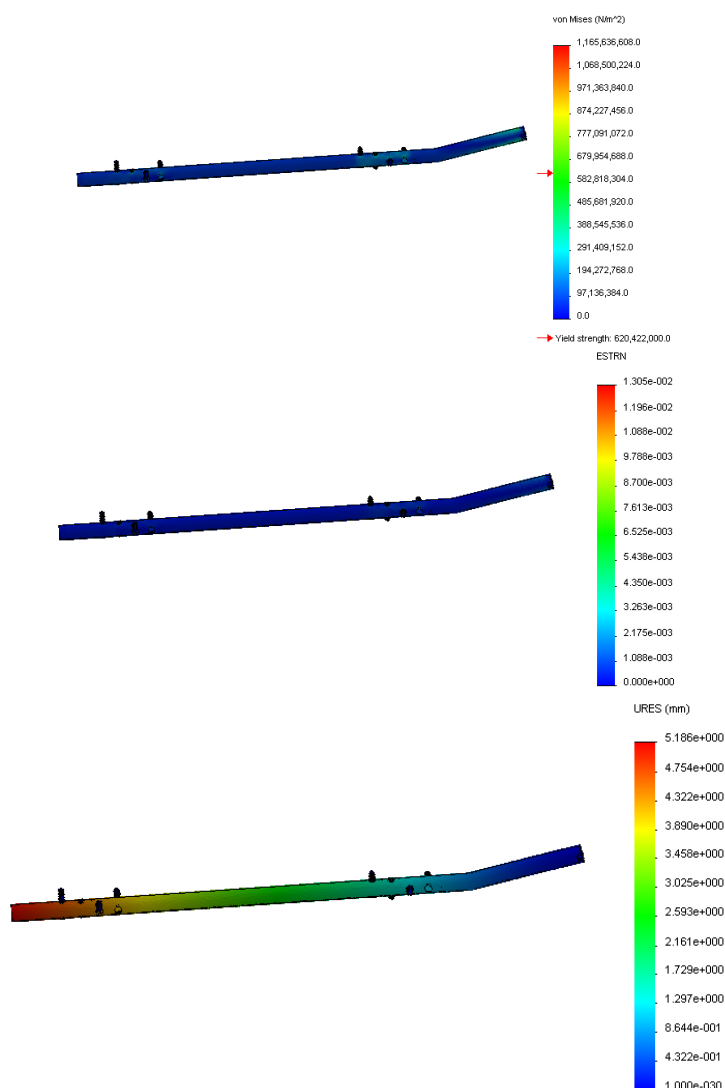


Fig.35. Stress, strain and displacement maps for the studied assembly.

From the analysis of the obtained results, it is found that, although the maximum displacements are approximately 0.51 mm, which is due to the elasticity of the component elements, the stresses are kept at a maximum value of 1.165×10^9 Pa, and the maximum strain are below the value of 1.305×10^{-2} , so below 1%, which leads to the conclusion that the virtual testing of the system led to positive results.

2.3.3. Virtual-experimental fatigue testing of the nail with fixing arms and actuation by plane mechanism with bars

The demands obtained in static mode, as well as the material characteristics (including the S-N type curves, but also the definition of a fully reversible event based on 856,500 cycles, are the main data required for the fatigue stress study. The simulation results are presented in Figures 36-39.

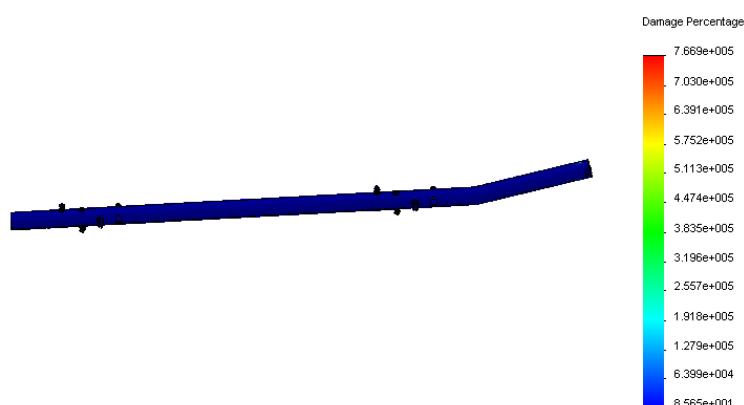


Fig.36. Damage diagram for the analyzed system of the penetrating screw nail driven by a mechanism with bevel gears.

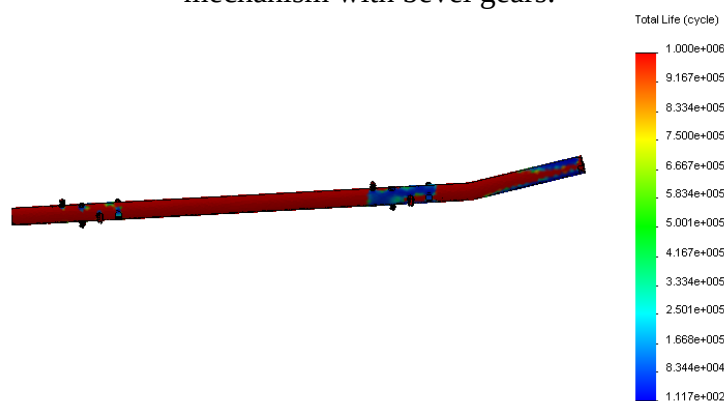


Fig.37. Total life diagram for the analyzed system of the nail with penetrating screws driven by a mechanism with bevel gears.

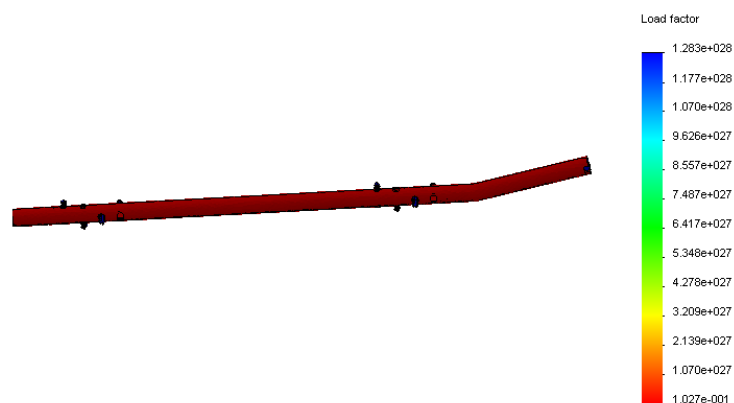


Fig.38. Load factor diagram for the analyzed system of the penetrating screw nail driven by a bevel pinion mechanism.

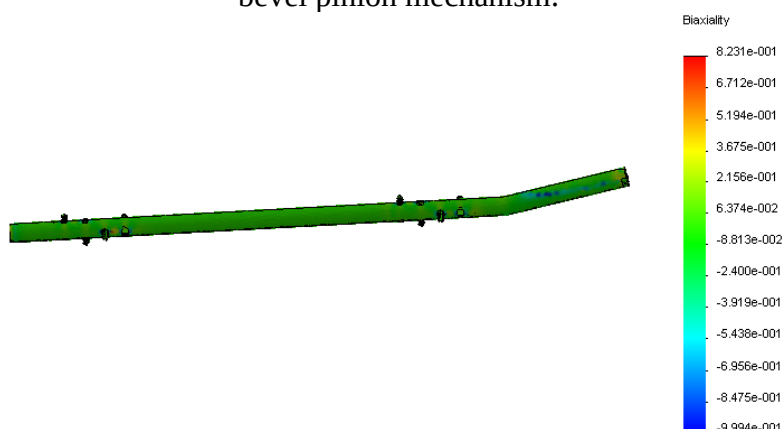


Fig.39. Diagram of the biaxiality indicator for the analyzed system of the nail with penetrating screws driven by a mechanism with bevel gears.

Analyzing the obtained results, the following conclusions can be drawn:

- the analyzed structure has a low degree of wear after 856,500 work cycles;
- the total life diagram indicates an unsafe operation of the system at 1,000,000 work cycles;
- the load factor has an average value of $6,417 \times 10^{27}$, much higher than the value of 1, which not indicates material failure;
- the biaxiality indicator has an average value close to zero, which indicates a good arrangement of the biaxial stresses.

Analyzing the arrangement of the maximum stresses, but also the resulting diagrams, it can be concluded that the proposed system has a good operation, with minimal problems at the level of the penetrating screws [1,2,14].

3. Discussions and conclusions

The proposed models, the results of the analyzes in the form of stress values, strain and displacements, diagrams, graphs, but also the conclusions obtained from the analyzes have demonstrated that the idea of designing and modeling several innovative models of intramedullary nails that eliminate the use of orthopedic screws is viable and perfectly achievable.

The proposed innovative models eliminated the important disadvantages of the classic nails, such as the complicated orientation, manipulation and positioning in the bone and, at the same time, the difficult positioning of the distal screws using the classic nail guide.

Also, through the proposals of the three models, operations are eliminated that can lead to errors or additional holes in the tibia, leading to a decrease in bone strength. At the same time, by using any of the three innovative nails, additional operations are reduced, which can lead to an increase in the duration of the surgical intervention with unpredictable effects for bone restoration.

All three proposed models reduce the duration of the orthopedic intervention and, implicitly, reduce the additional exposure to X-rays of the medical staff and the patient.

All three innovative models have one simple basic principle: the nail is fixed in the tibial medullary canal using different mechanisms and metal components.

Analyzing the three innovative models of intramedullary nails for tibia fractures, the following conclusions and observations are drawn:

- the three models with intramedullary fixation mechanisms have a low degree of wear after the fatigue simulations proposed for the analysis;
- the load factor calculated for the three structures of intramedullary nails has values much higher than the value of 1, which indicates the failure of the materials used;
- for the three proposed models, the biaxiality indicator has values close to the zero value, which indicates a relatively well-distributed disposition of the efforts in the analyzed components;
- although the analysis of the fatigue simulations indicates good values of the main indicators, there are additional required components, but without causing particular problems;
- all three models eliminate the use of orthopedic screws, and implicitly, their implantation operations;
- the previously described innovative variants are based on the action of relatively simple mechanisms known in engineering;
- the use of CAD programs and the latest generation software tools, FEM or Fatigue analysis allowed the development of complex studies that validated the three models proposed by this work;
- the previously presented studies analyzed and concluded that these virtual models of intramedullary nails show sufficient rigidity, but include relatively complicated subsystems, with small metal components, relatively difficult to obtain technologically;
- the physical obtaining of these models, presented in this paper, would require the use of special technologies, complex equipment, specific to fine mechanics or technologies in full development, such as rapid prototyping adapted to the process of controlled melting of metals.

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Cervical Cancer Prevention –An Ongoing Challenge

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Cervical cancer remains a real health problem for a large part of the female population, being the 4th most common type of cancer and also the 4th cause of cancer death in the female population, worldwide, with a number of 604,000 new cases and 342,000 deaths in 2020. This is primarily due to the etiopathogenesis of this tumor, which is based on HPV infection as a sexually transmitted disease.

Currently, the global trend of the incidence of this type of cancer is decreasing as a result of the implementation of the 2 major prevention strategies, namely vaccination against human papilloma virus (HPV) and detection in early stages through screening based on Babes Papanicolaou testing (PAP test). and HPV testing, it being known that cervical cytological screening (PAP test) performed under well-established conditions, at intervals of 3-5 years, reduces cancer morbidity and mortality by over 80% by detecting and treating pre-invasive lesions

The clinical approach is complex, involving cytology (PAP test), colposcopy (REID Index), histopathology and genetic and molecular techniques (PCR test) to identify HPV infection

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(HPV test) in conjunction with the intensification of the activity of informing the female population regarding the risk of acquiring of infection and methods of prevention.

Key words: cervical cancer, HPV infection, Pap test, colposcopy

Introducere.

Cancerul de col uterin este al 4-lea cel mai frecvent tip de cancer si de asemenea a 4-a cauza de deces prin cancer la populatia feminina, la nivel mondial, cu un numar de 604000 noi cazuri si 342000 decese, in anul 2020 [Hyuna Sung, Jacques Ferlay et al, 2021; IARC, 2005]

In Europa, rata de supravietuire la 5 ani la pacientele cu cancer de col uterin variaza intre 51% si 71%, fiind cunoscut faptul că screening-ul citologic cervical realizat în condiții bine stabilite, la intervale de 3-5 ani, reduce morbiditatea și mortalitatea prin cancer cu peste 80% [De Angelis R, Sant M, et al, 2014].

Etiopatogeneza cancerului de col uterin implica ca si factor etiologic necesar infectia cu virusul papilomatozei uman (HPV) [Walboomers JMM, Jacobs MV et al., 1999], cu 12 tipuri oncogenice clasificate ca si carginogene de grup 1 de catre Agentia Internationala de Cercetare a Cancerului [IARC, 2007], ca si cofactori importanti fiind citati anumite infectii cu transmitere sexuala (HIV, Chlamydia Trachomatis), fumatul, numarul mare de nasteri si utilizarea indelungata a contraceptivelor orale [Herrero R, Murillo R, 2018].

Actual, tendinta globala a incidentei prin acest tip de cancer este in scadere ca rezultat al implementarii celor 2 strategii majore de preventie si anume vaccinarea anti papilloma virus uman (HPV) si depistarea in stadii precoce prin screening pe baza testarii Babes Papanicolau (test PAP) si testarii HPV [Bray F, Ferlay J, et al, 2018].

Cancerul de col uterin este considerat in marea majoritate a cazurilor prevenibil, astfel incat, in anul 2018 directorul general al Organizatiei Mondiale a Sanatatii a lansat o chemare la actiune globala de a elimina cancerul de col uterin, avand ca obiectiv reducerea incidentei la ≤ 4 / 100.000 de femei in toata lumea printr-o strategie triplu interventionala constand in 1) vaccinarea a 90% dintre fetele sub 15ani, 2) screeningul dublu a 70% dintre femei in intervalul de varsta 35-45ani si 3) tratarea a cel putin 90% dintreleziunile precanceroase depistate in cursul acestui screening [WHO, 2018].

În acest context, ghidul Societății Americane de Cancer actualizat în 2020 recomandă inițierea screeningului cancerului de col uterin la vârsta de 25 ani și începerea testării HPV la fiecare 5 ani, până la vârsta de 65 ani [Fontham ETH, Wolf AMD, et al, 2020] sau la fiecare 5 ani pentru femeile între 30 și 65 ani, în funcție de status-ul vaccinării HPV [European Health Union, 2022].

Materiale și Metode

Studiul realizat analizează retrospectiv rezultatele testelor PAP efectuate ca metoda de screening pentru depistarea precoce a cancerului de col uterin, la un număr de 134 femei cu vârsta cuprinsă în intervalul 25-64 ani, în decursul a 6 luni (aprilie-septembrie, 2022), interpretarea bazându-se pe sistemul Bethesda de raportare a citologiei cervicale (TBS) cu încadrarea leziunilor în clase specifice de diagnostic. Examinarea clinică inițială a fost completată cu **colposcopia în cazul leziunilor vizibile**, cu sau fără biopsie și examen histopatologic, efectuate de asemenea ca metoda de confirmare diagnostică sau stabilire a gradului lezional.

Rezultate

Testul PAP a fost efectuat la un număr de total de 134 femei cu vârste cuprinse între 25 și 64 de ani, fiind excluse cazurile neeligibile (femei în afara acestui interval de vârstă, paciente cu histerectomie, paciente deja diagnosticate cu cancer de col uterin).

În urma interpretării citologice, bazate pe sistemul TBS, modificările morfologice citologice identificate au fost încadrate în următoarele categorii diagnostice: NILM (negativ pentru leziuni intraepiteliale și malignitate), ASCUS (atipii scuamocelulare de semnificație necunoscută), ASCH (atipii scuamocelulare ce necesită excluderea unei leziuni intraepiteliale de grad înalt), LSIL (leziune scuamocelulară intraepitelială de grad scăzut), HSIL (leziune scuamocelulară intraepitelială de grad înalt), Carcinom Scuamos invaziv, alte leziuni (incluzând modificările epiteliale glandulare) (Tabel nr. 1; Fig. 1, Fig. 2, Fig. 3, Fig. 4, Fig. 5)

Tabel nr. 1. Distributia modificarilor morfologice citologice in clase de diagnostic

Categorii citodiagnostice (TBS)							Total cazuri %
NILM	Leziuni scuamocelulare					Alte leziuni	
	ASCUS	ASCH	LSIL	HSIL	Carcinom scuamos		
72	37	2	16	3	1	3	134
53.73%	27.61%	1.49%	11.94%	2.23%	0.74%	2.23%	100%

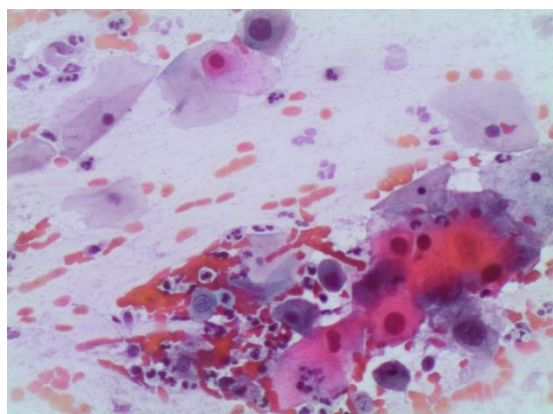


Fig. 1
ASCUS, Col. PAP x20

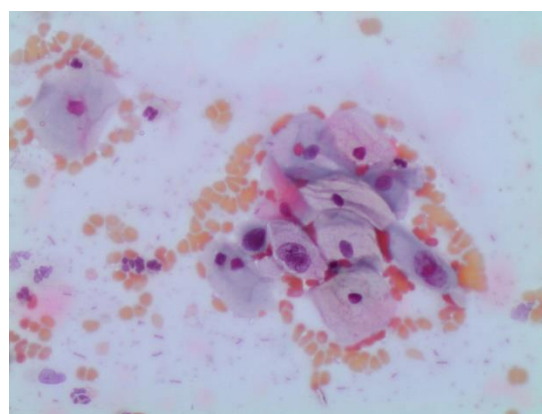


Fig. 2
LSIL (CIN1, Koilocitoza), Col. PAP x20

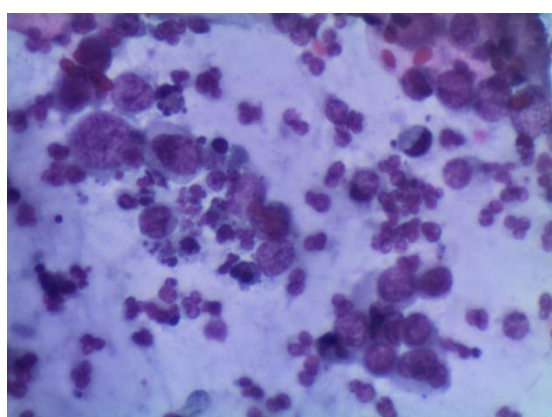


Fig. 3
ASCH, Col. PAP x20

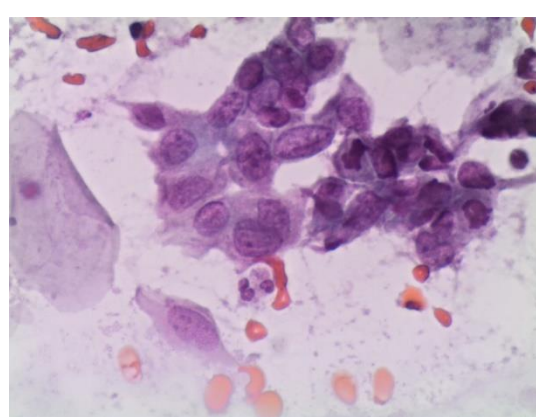


Fig. 4
HSIL (CIN3), Col. PAP x20

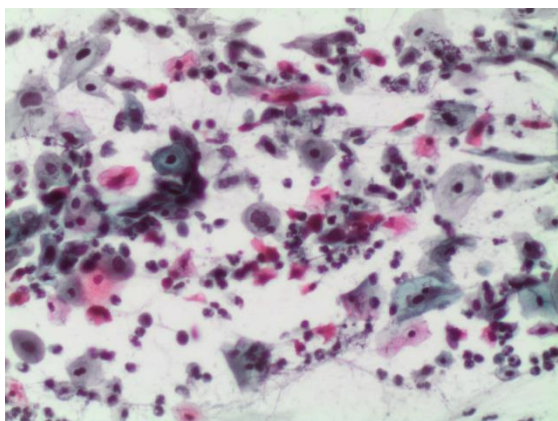


Fig. 5
Carcinom scuamos, Col. PAP x10

Exceptand leziunile NILM, celelalte clase au fost incadrate generic in categoria rezultatelor pozitive. Pacientele cu rezultat citologic negativ pentru leziuni intraepiteliale si malignitate (NILM) au fost indrumate catre testare PAP screening, cu sau fara tratamentul infectiilor asociate, dupa caz. La pacientele cu rezultate pozitive, recomandarile au fost individualizate, constand in repetare dupa tratament antiinfecios, testare HPV si/ sau colposcopie cu /fara biopsie; marea majoritate a cazurilor cu atipie de semnificatie necunoscuta (ASCUS) au beneficiat in primul rand de tratament antiinfecios specific.

Testarea HPV a fost recomandata intr-un numar de 32cazuri, incluzand pacientele cu morfologie sugestiva pentru infectia HPV - clasele ASCUS (pseudokoilocitoza vs. koilocitoza) (11 cazuri) si ASCH, cele 2 cazuri, pentru identificarea cazurilor de infectie HPV, cat si la cele cu leziuni induse de infectia HPV (clasele LSIL si HSIL)(total 19 cazuri) pentru indentificarea tulpinilor virale cu risc oncogenic inalt in vederea stabilirii conduitei terapeutice si anume supraveghere clinica in evolutie cu testare PAP periodica la 6 luni si, respectiv, excizie lezionala sau conizatie, in asociere cu tratament etiologic, dupa caz

Colposcopia (index REID) a fost efectuata atat la femeile cu leziuni vizibile la examinarea clinica initiala, inainte de obtinerea frotiurilor cervicale, cat si dupa stabilirea diagnosticului citologic, ca metoda suplimentara de stabilire a gradului lezional sau de ghidare a biopsiei.

.....bagat ceva de colposcopie..si
poze.....

Biopsia urmată de *examen histopatologic* a fost realizată în cazurile care au necesitat excluderea / confirmarea diagnosticului leziunilor de grad înalt (ASC-H, respectiv HSIL) cât și pentru excluderea eventualei invazii carcinomatoase în aceleași cazuri.

Bagat ceva despre biopsie, erad, conizatie

Leziunile scuamocelulare preinvazive au fost încadrate în leziuni neoplazice intraepiteliale (CIN) cu grade variabile de severitate (usoare - CIN1, moderate - CIN2, respectiv severe - CIN3/Carcinom in situ - CIS) având ca și corespondent clasele de citodiagnostic (LSIL – Koilocitoza cu /fara CIN1; HSIL – CIN2 și CIN3) (Fig.6, Fig.7, Fig.8, Fig.9).

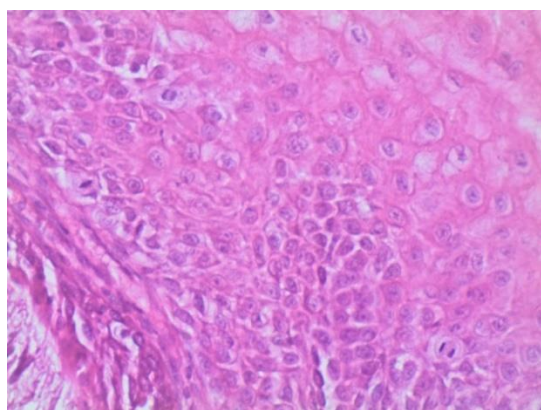


Fig. 6
Atipie scuamoasa reactiva, Col. HE x40
Citodiagnostic asociat: ASCUS – Metaplazia scuamoasa atipica (Koilocitoza vs. Pseudokoilocitoza) – vezi Fig.1

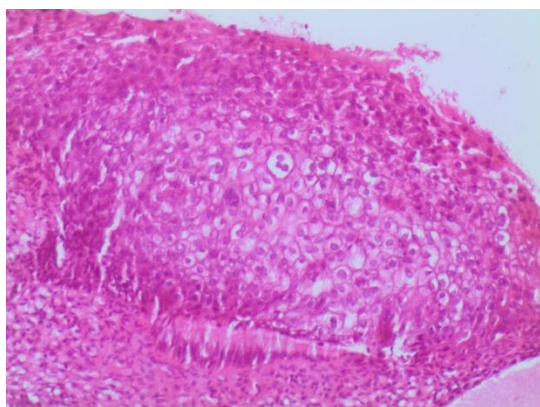


Fig. 7
CIN 1, Koilocitoza, Col. HE x10
Citodiagnostic asociat: LSIL – vezi Fig. 2

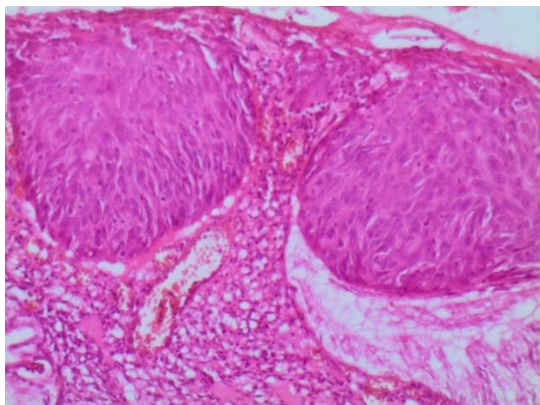


Fig. 8
CIN2, CIN3 criptic, Col. HE x20
Citodiagnostic asociat: HSIL – vezi Fig.4

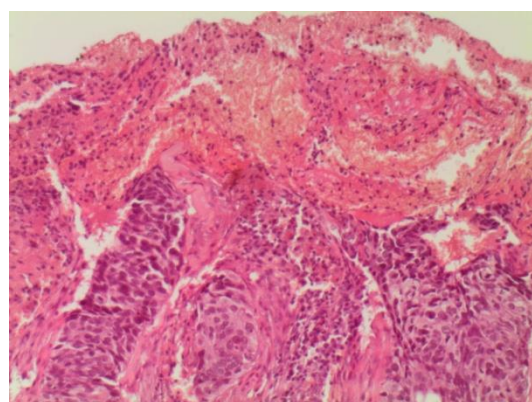


Fig. 9
Carcinom scuamos invaziv, Col. HE x20
Citodiagnostic asociat: Carcinom scuamos – vezi Fig.5

Din punct de vedere al distributiei leziunilor scuamoase, in ceea ce priveste tipul si gradul de severitate, pe grupe de varsta, am constatat relativa uniformitate a distributiei leziunilor ASCUS in intervalul de varsta 25-54 ani, fapt datorat asocierii infectiilor genitale ce face dificila interpretarea modificarilor morfologice celulare. In ceea ce priveste leziunile intraepiteliale de grad-scazut, marea lor majoritate, 10 cazuri, au afectat pacientele in intervalul de varsta 25-34ani, constatand in acelasi timp un o crestere accentuata a numarului de cazuri in grupa 40-44ani (Tabelul nr. 2).

Tabel nr. 2. Distributia categoriilor lezionale TBS pe grupe de varsta

Clasa TBS	Grupe de vârstă							Total cazuri
	25-29	30-34	35-39	40-44	45-49	50-54	>55	
ASCUS	7	5	6	7	4	6	2	37
ASCH	-	-	-	1	1	-	-	2
LSIL	4	6	1	5	1	-		16
HSIL	1	-	1	1	-	-	-	3
Carcinom scuamos	-	-	-	-	1	-	-	1

Leziunile intraepiteliale de grad-inalt, diagnosticate in numai 3 cazuri, au afectat femeii cu varste variabile, respectiv 27, 36 si 41ani, in timp ce carcinomul scuamos a fost diagnosticat la o pacienta in varsta de 45ani (Tabelul nr. 2)

Concluzii

Cancerul de col uterin ramane o reală problemă de sănătate pentru o mare parte a populației feminine, datorită, în primul rând, etiopatogeniei acestei tumori ce are la bază infecția HPV ca boală cu transmitere sexuală, subliniind faptul ca tratamentul și vindecarea la un moment dat a infecției HPV și a leziunilor HPV- induse nu exclud posibilitatea reinfecției HPV, în condițiile persistenței factorilor de risc.

Screening-ul citologic cervicovaginal (testul PAP) poate avea o contribuție importantă în reducerea mortalității prin cancer de col uterin precum și în prevenirea apariției acestui tip de cancer, prin depistarea și tratarea leziunilor preinvazive.

În acest sens, pe baza rezultatelor obtinute, putem mentiona faptul că identificarea infectiei HPV si diagnosticarea leziunilor epiteliale preinvazive si invazive induse necesită o abordare clinica complexă, implicând citologia (testul PAP), colposcopia (Index REID), histopatologia și tehnici genetice și moleculare (test PCR) de identificare a infectiei HPV (test HPV) coroborata cu intensificarea activitatii de informare a populatiei feminine privind riscul de

dobandire a infectiei si modalitatile de preventie, data fiind constatata unei adresabilitati mult reduse post-pandemie COVID-19 la programul de screening.

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IMPLEMENTAREA SOLUTIILOR DE PREVENTIE SI DIAGNOSTICARE A STARILOR DE STRES IN SISTEMUL PUBLIC DE SANATATE

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Rezumat:

Articolul se concentreaza pe importanta implementarii solutiilor de preventie si diagnosticare a starilor de stres in sistemul public de sanatate. Stresul poate afecta negativ sanatatea mentala si fizica a unei persoane si poate fi declansat de o varietate de factori. Prin educarea pacientilor cu privire la tehnicile de gestionare a stresului si prin diagnosticarea precoce a starilor de stres, se poate preveni aparitia unor afectiuni mai grave, cum ar fi tulburarile anxioase, depresia, bolile de inima si accidentul vascular cerebral. Implementarea acestor solutii poate ajuta la imbunatatirea calitatii vietii pacientilor si la reducerea costurilor de asistenta medicala.

Cuvinte cheie: stres, preventie, diagnosticare, sistem public de sanatate, gestionarea stresului, tehnicile de relaxare, evaluarea simptomelor de stres, tulburari anxioase, depresie, boli de inima, accident vascular cerebral, educatie pacienti, coaching, consiliere.

Stresul este o problema de sanatate mentala si fizica care afecteaza din ce in ce mai multe persoane in zilele noastre. In cadrul sistemului public de sanatate, este important sa existe solutii de preventie si diagnosticare a starilor de stres, pentru a reduce riscul aparitiei unor afectiuni mai grave si pentru a imbunatati calitatea vietii pacientilor.

Desi stresul poate fi o parte normala a vietii, el poate avea un impact negativ asupra sanatatii mentale si fizice a unei persoane daca este persistent sau intens. Stresul poate fi declansat de o varietate de factori, cum ar fi locul de munca, problemele financiare, problemele personale sau evenimente traumatice.

In sistemul public de sanatate, este important ca solutiile de preventie si diagnosticare a starilor de stres sa fie implementate pentru a ajuta pacientii sa-si gestioneze mai bine stresul si sa previna aparitia unor afectiuni fizice si mentale asociate cu stresul.

In primul rand, solutiile de prevenire a stresului ar trebui sa se concentreze pe educarea populatiei cu privire la cauzele si efectele stresului asupra organismului. Aceasta poate fi realizata prin intermediul campaniilor de informare si a activitatilor de consiliere si suport psihologic. Mai mult, este important ca autoritatile sa ofere programe de educatie si instruire pentru personalul medical, astfel incat acesta sa fie pregatit sa recunoasca simptomele stresului si sa ofere sfaturi adecvate pacientilor.

Una dintre solutiile de prevenire a stresului este de a educa pacientii cu privire la tehnicile de gestionare a stresului. Aceste tehnici includ exercitiile de relaxare, meditatie, yoga, terapia prin arta si alte terapii complementare. De asemenea, exista si programe de coaching si consiliere pentru a ajuta pacientii sa faca fata stresului in mod eficient.

In ceea ce priveste diagnosticarea starilor de stres, aceasta poate fi realizata prin intermediul unor instrumente si tehnologii specializate, cum ar fi chestionarele si teste de evaluare a stresului, precum si analize medicale. Este important ca sistemul public de sanatate sa fie dotat cu astfel de instrumente si sa ofere acces facil pacientilor la acestea. De asemenea, ar fi util sa se dezvolte si sa se promoveze solutii digitale de monitorizare a stresului, cum ar fi aplicatiile mobile sau platformele online de consiliere psihologica.

In ceea ce priveste diagnosticarea starilor de stres, specialistii din domeniul sanatatii pot utiliza diferite instrumente pentru a evalua nivelul de stres al unei persoane. Aceste instrumente includ chestionare si evaluari care masoara simptomele de stres, cum ar fi anxietatea, iritabilitatea si insomnia. Aceste instrumente pot fi utilizate pentru a evalua eficacitatea tratamentelor pentru stres si pentru a monitoriza progresul pacientului.

Pe langa solutiile de prevenire si diagnosticare, sistemul public de sanatate ar trebui sa ofere si solutii de tratament si management al stresului. Acestea pot include terapii individuale sau de grup, precum si programe de activitate fizica si relaxare, cum ar fi yoga sau meditatie. Este important ca aceste solutii sa fie accesibile pentru toate categoriile de pacienti si sa fie adaptate nevoilor si preferintelor individuale.

Este important ca solutiile de prevenire si diagnosticare a stresului sa fie integrate in sistemul de sanatate publica pentru a ajuta la reducerea costurilor de asistenta medicala, a absenteismului si a altor probleme asociate cu stresul. Prin educarea pacientilor cu privire la tehnicile de gestionare a stresului si prin diagnosticarea precoce a starilor de stres, se poate preveni aparitia unor afectiuni mai grave, cum ar fi tulburarile anxioase, depresia, bolile de inima si accidentul vascular cerebral.

In concluzie, implementarea solutiilor de prevenire si diagnosticare a starilor de stres in sistemul public de sanatate poate contribui la imbunatatirea starii de sanatate si a calitatii vietii pacientilor. Este important ca autoritatile si institutiile de sanatate sa colaboreze pentru a dezvolta si promova astfel de solutii si pentru a asigura accesul facil la acestea.

In concluzie, implementarea solutiilor de prevenire si diagnosticare a starilor de stres in sistemul public de sanatate poate ajuta la imbunatatirea calitatii vietii pacientilor si la reducerea costurilor de asistenta medicala. Educatia pacientilor cu privire la tehnicile de gestionare a stresului si diagnosticarea precoce a starilor de stres sunt esentiale pentru prevenirea aparitiei unor afectiuni fizice si mentale asociate cu stresul.

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Marta Trancu-Rainer, a providential personality of Romanian surgery

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In a period in which she had to fight against the explicit prejudices related to the practice of the medical profession as a woman, Marta Trancu-Rainer proved to be a providential figure of Romanian surgery. Starting her work in Iasi, as a doctor, with a low salary, she decides to change her destiny and goes to Bucharest in 1889 to study pathological anatomy with the famous Victor Babeş.

In 1904, she becomes the first female surgeon in Romania. Through hard work, Marta Trancu-Rainer managed three war hospitals, including the Royal Hospital of Surgery whose surgeon she was. A complex personality, Marta Trancu-Rainer becomes a corresponding member of the Academy of Medicine, writes "Pages of a Diary", a remarkable work in which she describes her childhood, university studies (faculty classmate with the famous Elena Densușianu-Prisecariu), medical professors and years of practice and "Compte rendu des opérations de chirurgie de guerre", a synthesis in French of her activity as a surgeon during the war. Fighting all her life for the recognition of the merits of female doctors and saving the lives of her patients, Marta Trancu-Rainer fits the words of Mother Teresa - "A life not lived for others is not a life."

Key words: war surgery, female surgeon, diary, social fresco, medical publishing

Providential personality of Romanian medicine, Marta Trancu Rainer, fought for the recognition of women's status in medicine, earning the respect of the royal family and becoming the attending physician of the Romanian queens. She became the first female surgeon in Romania, although she faced many obstacles from the surgeons of the time who did not accept the idea of a woman practicing in the field.

A complex personality, Marta Trancu Rainer also had literary inclinations. *Pages of a Diary*, the book in which she presented her memoirs, was a true literary masterpiece in which artistic talent shone brightly. As the author testified, she was born in the year 1875 on September 25, according to the Old Calendar, in the small town of Târgu-Frumos, being the daughter of Lazăr Trancu who "came from a family of Armenian merchants"³⁷², an enterprising man with shops, a brickyard, elected assistant mayor and of Ana, born Ciomac from Botoșani. The author mentioned³⁷³ that one of her maternal grandmother's sisters, Maria Zaharia, was the godmother of the critic Garabet Ibrăileanu..

Marta Trancu Rainer was born into a large family with eight children, three boys and five girls, but four of them apparently died in a diphtheria epidemic³⁷⁴.

From Marta Trancu Rainer's childhood years, we glean some significant data regarding the future of the first female surgeon. She did her primary classes in Iași in a pension, showing an aversion towards calligraphy and handwork.

³⁷² Trancu Rainer, M. (2021). Paul Editions: File de Jurnal.Mărturii. București, p 7

³⁷³ idem p9

³⁷⁴ ibidem p10

She attended the first 5 secondary classes at the secondary boarding school for girls in Iasi, on a flexible schedule, the manager of the boarding school being Maria Botez, A.D. Xenopol's sister, the historian and the author of the first large-scale work on the history of the Romanian people. At 15, she recited the poem *La Icoană* (*By the icon*) in front of A.D. Xenopol, and Xenopol proposed to the family to send her to Paris³⁷⁵.

She attended *Humpel* High School, being accepted as an external scholar and had to take the 5th grade a second time because she had not taken Latin at the external boarding school. At *Humpel* high school, she enjoyed the special appreciation of Professor Alexandru Phillipide, not for her knowledge of the Latin language, but for her good behavior. Marta Trancu Rainer recalled A. Phillipide's words addressed to her in her *Pages of a Diary*: „Do you see that big-eyed girl sitting down? She's going to get far”³⁷⁶.

For Marta Trancu Rainer, the student years are both difficult and beautiful. There were 16 students, of which 4 were female students - Maria Anastasescu Piaseschy, Elena Densușanu Pușcaru, Lucretia Moțoc who died in the 3rd year of college. Regarding the 1st year of studies, Marta Trancu Rainer mentioned in her famous work, *Pages of a Diary*: "However, I studied with all my heart and, with all the rudimentary conditions I was going through, I even prepared the chorda tympany nerve”³⁷⁷. At the end of the first year of studies, she was awarded a scholarship from the Romanian Academy.

During her studies, she studied diligently and participated in courses and practical works of elite teachers, „first-hand people”³⁷⁸ as they were called by: Emanoil Rigler, Gabriel Socor, T. Botez, Paul Botezat, and Ludovic Russ-junior. Surgical clinic professor, Leon Scully, a renowned professor at the Faculty of Medicine in Iași, pioneer of medical radiology in Romania, was described by Marta Trancu Rainer as “a brilliant operator and a man of heart as you can rarely see”³⁷⁹.

In 1898, Marta Trancu Rainer arrived in Bucharest with the desire to study in Professor Victor Babeș's clinic. She first went to Professor Gheorghe Stoicescu's clinic, a doctor and university professor in Bucharest, the head of the medical clinic from Colțea, where she met her future husband, Francisc Iosif Rainer, in October 1898. In March, 1899, she returned to Iasi and presented her thesis with the title “Pelvic subperitoneal hematoma” under the supervision of Professor C. Botez, the experimental part being carried out under the supervision of Professor Paul Botezat.

She acquired the permit of free practice in April 1899. She was appointed head of the obstetric clinic at the doctor V. Bejan in Iași where she remained until 1903 when she married and returned to Bucharest.

The Iasi clinic was a rudimentary one, where there were around 150 births per year. During that period she published several works, made a macroscopic and microscopic examination of the placenta. The first placenta extraction and intrauterine washing with alcohol were performed for a fee of 5 lei in Tătărași. Since 1899, she led a very active life divided between the clinic, the laboratory and the sick, she held surgical conferences under the coordination of Professor Paul Botezat.

In November 1904, 6 months after the birth of her daughter Sofia, Marta Trancu Rainer took the secondary surgery exam. Members of the commission did not take Marta's candidacy seriously because it was the first time in Romania that a woman appeared for the

³⁷⁵ Op. cit. p 14

³⁷⁶ Op. cit. p 15

³⁷⁷ Op.cit p 17

³⁷⁸ Op. cit p 19

³⁷⁹ Op. cit p 20

Fellowship surgery exam. The subject of the presented thesis was "Mitra (womb) and calf fractures".

She passed the Fellowship surgery exam with flying colors, ranking third and on February 1, 1905, she was hired as a secondary surgeon at the Colentina Hospital. She is received with hostility by the head of the service Dr. N. Racoviceanu-Pitesti who did not conceive of having a woman as an co-surgeon.

"He was very apprehensive about having a woman as his co-surgeon and received me coldly. I told him that it is my place conquered through work and I am not giving it up. Little by little, he gained a lot of trust in me and then entrusted me with taking care of people from his family. Until the end of his life, I remained on excellent terms with Dr. Racoviceanu-Pitesti"³⁸⁰ Marta Trancu Rainer testifies in "Pages of a Diary".

Between 1905 and 1909, while she was an co-surgeon at Colentina, Marta Trancu Rainer was also an honorary teacher at the Nursing School of the *Sprijinul* Charity Society where she taught minor surgery. She also gave lectures on anatomy, gynaecology and embryology to interns and externs at the Colentina Hospital.

In "Pages of a Diary"³⁸¹ she testified that in 1915 at the beginning of July she went to Sinaia to take care of the queen.

Since the outbreak of the First World War in 1914, Marta Trancu Rainer had a secret agreement with Prof. Dr. Cristea Buicliu and Dr. Costache Cantacuzino that in the event that Romania enters the war, she will take over the management of the Coltea hospital. She was mobilized with the rank of major in 1916 when Romania entered the war. Marta Trancu Rainer pledges allegiance to the country and swears that she will put herself at the service of the sick without obtaining material benefits: "I knelt down and swore that as long as the war lasted I would put all my strength in the service of the country and that during all that time I had no material use."³⁸²

Queen Maria also asked her to run the royal surgery hospital, installed in the Royal Palace in Victoria Avenue. Marieta Balş and Gabriela Duca asked her to run the hospital from the School of Bridges and Roads, a hospital organized by the Society for Tuberculosis Prophylaxis. Although she explained that she could not accept, she is mobilized ex officio, so in the first three months of the war she ran 3 hospitals. As long as she ran these hospitals, she set out clear regulations: each salon and reserve would have special facilities and would be disinfected every morning, there would be permanently sterilized artificial serum, all nurses would have their nails cut off, the head nurse in the operating room would hand the tools and bandages to the staff, the people in charge of handling the bandages used would not be allowed to touch the aseptic bandages, in the bandages room each would have a predetermined role, and during the operations it was required perfect silence. These rules were intended to ensure discipline in the hospital as well as to ensure a sterile environment.

She worked day and night until exhaustion to help as many wounded as possible. Their recovery was the true reward, memorable being the reply of a wounded man after the operation: "God would live you long, you must become a mistress, because you give us the strength inside you"³⁸³. At the discharge of some of them, Marta Trancu Rainer was accompanied by the Queen who specifically asked to accompany her: "The Queen wanted to

³⁸⁰ Op. cit p 43

³⁸¹ Op. cit p 52

³⁸² Op. cit p 67

³⁸³ Op. cit pp 88-89

come with us. She took me by the arm, crossed the garden with me, and placed me on the chair in front of her, saying: „Ma pièce de résistance doit être à côté de moi”³⁸⁴

One of the episodes remembered by Marta Trancu Rainer in *Pages of a Diary* is the care of General Dragalina at the Royal Hospital on October 15, 1916, the decision regarding the amputation of his arm and then the general's death on October 25, 1916.

The French military doctors who were part of the group that experimented with ambrine, Loubat, Vaudescal and Le Lorier in their discussion with the queen had nothing but words of admiration for Marta Trancu Rainer. Marta Trancu Rainer also received words of gratitude and admiration from the wounded officers in the Colțea Hospital in 1917, accompanied by a small symbolic gift, a small bronze that represented the triumph: “We respectfully ask you to take this opportunity to receive the small bronze that symbolizes the "Triumph" you have borne over death and suffering”³⁸⁵. Marta Trancu Rainer answered the officers: "Was there a need for external manifestations when all I did was faithfully serve my country and my brothers?" In these times which annihilate all the energy of a human being, the deep satisfaction I have in seeing my dear officers and soldiers on the road to recovery gives me inexhaustible powers to fight without hesitation. Everything around us is so depressing that only when I cross the threshold of the hospital do I understand the purpose of my existence.”³⁸⁶

Between 1916 and 1918, Marta Trancu Rainer had a lot of difficulties related to the heating and feeding of the wounded at Colțea Hospital. In 1918 she published the book "Compte rendu des opérations de chirurgie de guerre" in French and summarized her war surgery activity. Also, in 1918 she appealed to women that had the capacity to work, will and contempt for death just like men. Doctors, pharmacists, medical and pharmacy students, Red Cross volunteers, postwomen and telegraph women, factory workers and workshops were mentioned on the appeal. She was campaigning for women's civil and political rights.

In 1921, Marta Trancu Rainer left abroad along with her husband and daughter, stayed in Vienna and then continued on her way to Berlin, while Dr. Rainer and Sofia went to London. Marta Trancu Rainer visited Bumm clinics, Bier and Robert Meyer's lab in order to keep up to date with the news in gynecology and general surgery after having only practiced war surgery in past years. At Dr. Bumm's clinic she met elite Greek, Turkish, Bulgarian doctors. At Charité Hospital she visited the clinic of the Bavarian doctor Karl Frantz where she found out the news in the field of obstetrics, she followed Zondeck's, the famous German endocrinologist, demonstrations of cystoscopy and chromocystoscopy in the clinic. She took an endocrinology course, being interested in thyroid disorders in relation to the ovary.

At the beginning of October 1923, Queen Maria returns seriously ill from Belgrade. Ionel Brătianu and Gheorghe Duca proposed to bring Dr. Schamta from Vienna, but the king and queen wanted the surgery to be performed by Marta Trancu Rainer. Doctor Mamulea performed the anesthesia with ether, and Marta Trancu Rainer, assisted by the doctor of the Serbian royal court and his assistants, performed the surgical intervention. During the recovery after the operation, Marta Trancu Rainer stood by the queen's side day and night, treating her with the same exactingness as each of her patients, hence the queen's reply regarding the attitude of Marta Trancu Rainer, „une attitude gendarme”³⁸⁷.

On September 17, she is decorated with the order Queen Maria together with Cantacuzino, Vicol, Butoianu, Mamulea and M. Minovici.

³⁸⁴ Op. cit p 84

³⁸⁵ Op. cit. p 103

³⁸⁶ Op. cit. pp104-105

³⁸⁷ Op. cit. p 201

On November 26, 1935, she was elected a corresponding member of the Academy and later a national associate member. On July 6, 1938, she was elected a full member of the Biological, Physico-chemical and Natural Sciences section, the report for the appointment of full member being done by prof. I.C. Parhon. In January 1936, she was appointed a honorary member of the *Associations of Interns and former hospital interns*, the president at the time being Gh. St. Constantinescu; in June she was appointed a honorary member of the Biology Society.

Regarding Marta Trancu Rainer, we are not only talking about a professional doctor whose brilliant career marked Romanian medicine, but about a complete woman, a perfect wife and mother. The exhausting work in the hospital was doubled by the work at home, the concern for the husband and daughter Sofia. She stood by her husband's side until his last moments of life, and Dr. Rainer on his deathbed said: "Hold up like you've held up all your life. There was no being in the world who could do what you did. You were the light of my life (...) You were a saint and you remain a saint."³⁸⁸

On February 10, 1944, she went with Iosif Rainer to make her will and she donated her entire fortune: "On February 10, we went to the court and the University to legalize the will. My husband and I left everything to the University."³⁸⁹

After her husband's death, she continued to carry his memory forward, made donations to the Medical Society of Physical Education and the Romanian Academy for the awarding of prizes to some biology works. Steps were taken to have the National Institute of Anthropology and the Institute of Anatomy bear her husband's name and she took care that a plaque executed according to the plans of the painter Ștefan Popescu was placed at the entrance to the National Institute of Anthropology, receiving favorable approval from the Senate for this.

Fighting all her life for the recognition of the merits of female doctors and saving the lives of her patients, Marta Trancu-Rainer fits the words of Mother Teresa - "A life not lived for others is not a life." We remain grateful to Marta Trancu Rainer for her hard work in the field of surgery, obstetrics and gynecology and especially for her personal example provided.

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³⁸⁸ Op. cit. p 266

³⁸⁹ Op. cit. p 260

HEALTH CARE OF THE NURSING MOTHER INFANT COUPLE

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Abstract

It is known that knowledge of breastfeeding and nursing newborn it is not inherited , but can be aquired. If a mother is surrounded by experienced women, their experience will be transmited as the need arises. But in many situation, if this traditional support system is not present, the health care system may be a mother's main source of information and corect support.

The first step in preparing mothers for breastfeeding is to ensure during pregnancy the corect nutritional status by explaining to the pregnant women how and what to eat and what nutrients and other vitamins cand take during pregnancy.

Advice on this subject should be provided systematically , togheter with breastfeeding education in a manner that is understandable and in the same time to be adapted at the local, cultural and religious customs. It also must be induced that lactation is a natural process by which milk is synthesized and secreted from the mammary glands of the postpartum female breasts as the response of the newborn sucking at the nipple and may be a process that can need help if it is to be succesful.

Key Words: pregnancy, mother, breastfeeding, process, newborn, lactation

Introduction

Knowledge of breastfeeding is not inherited but can be acquired. If a mother is surrounded by experienced women, their expertise will be passed on as the need arises. If this traditional support system is not present, the health care system may be a mother's main source of support and correct information.

Preparing mothers for breastfeeding

It is important that every attempt be made to ensure the basic nutritional status of women during pregnancy. Advice on this subject should be provided systematically, together with breastfeeding education, in a manner that is understandable and not at variance with local, cultural and religious customs. It must also be emphasized that lactation is a natural biological process, which needs reinforcement if it is to be successful.

Given adequate teaching and support, all mothers are capable of breastfeeding and coping with any problems that may arise. The best teachers will be breastfeeding mothers; the full cooperation of women's groups and other organizations working for the support of breastfeeding should be sought and, where possible, incorporated in the health care system.

During pregnancy it is important to identify those mothers who are at high risk of not breastfeeding for social, physical, illness or other reason that can be unknown for the rest of the family or of the healthcare provider. The first step of prenatal care is examination of the breasts that must be made by a healthcare specialist. This will enable the identification of certain problems of the anatomic structure of the breast such as (inverted/retracted nipples) and the initiation of steps to correct them, for example the use of a breast shield or any other helpful device.

There are some certain information that should be passed on to the mother especially before delivery and also after the baby is born (Figure 1) because proper advice to the nursing mother is essential to help her to initiate and establish lactation.

Figure 1. Information for breastfeeding women

Put infant to breast within 1 hour of normal delivery

Colostrum is good for the infant

Frequent sucking is necessary to initiate milk flow

Amount and quality of breast milk naturally meet baby's needs

Sucking makes the uterus contract , which helps stop uterine bleeding

Breast size does not affect ability to breastfeed

Breast engorgement is normal 3-7 days after delivery.Frequent sucking will help reduce it

Bottle feeding can be dangerous for breastfeeding

Another essential point to make to the nursing mother is that it is normal for the babies to lose weight for the first few days following birth and it is not necessary to follow up the weight daily. There are born with stores of water , glycogen and fat to last until lactation is established. They regain their weight quickest if they are breastfeeding on demand from immediately after birth. There is great individual variation in time it takes for an infant to regain its birth weight , but on average it takes 10-14 days.

The role of the hospital personnel and practices

The majority of women in poor countries do not deliver at hospitals. However, it is still important to recognize that specific hospital routines can affect adversely the initiation and establishment of breast feeding by those new mother who do deliver in a hospital (Figure 2).

Delaying the first feed at the breast-a maternity ward should routinely put a baby to the breast immediately after any normal delivery. The baby is usually eager to suck, and this is an important time for mother infant bonding. Sucking can also help the delivery of the placenta and reduce bleeding.

Scheduled feeding-no restrictions on feeding times should be imposed. If the baby is fed on demand, its hunger dictates the frequency of feeds and so regulates the amount of milk produced. The mother's milk will come in sooner and she is less likely to become engorged.

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Figure 2. Common hospital routines that inhibit breastfeeding

Delaying the first feed at the breast	Test weighing
Scheduled feeding	Giving only one breast at each feed
Separation or nurseries	Fixed duration of feeds
Routine use of bottled formula or sugar water	Trying to empty the breasts

Separation of nurseries-It is best to keep the mother and infant together as much as possible. This allows the mother to feed on demand and gives the nursing staff more time for the babies whose mothers are ill.

Routine use of formula-Human milk is the only food that can ensure safe bacterial colonization of the newborn's intestinal tract. Babies fed with cow's milk will have their appetite decreased, which in turn prevents the frequent sucking necessary for establishment of lactation. In addition, use of a bottle with sugar and water to pacify a crying baby is a practice to be discouraged. It is better to avoid giving anything from a bottle to a newborn, unless of course the infant is premature or sick.

Test weighing-test weighing before and after each feed may ensure volume inaccuracy and composition not at all. It should be done only on special indications and discreetly, with recognition of its limitation.

Fixed durations of feeds-It is the best to let the baby decide how long to feed and to make sure the baby latches on correctly to the nipple, especially if it likes to suck for more than 10 minutes. The mother has to know that some babies who suck for a long time are sucking in a bad position, they are not satisfied so they continue to suck.

Emptying of breasts-It is not possible to completely empty a breast since milk is continuously secreted from the alveoli. The most efficient way to increase the milk supply is to give many feeds per day, without worrying if a little milk is left behind.

In general, tender nipples or a little discomfort may be experienced when the baby begins breastfeedings. But soreness usually comes from improper positioning. The best way to avoid nipple soreness is by proper positioning rather than the use of any nipple creams. The most important thing is to make sure that the baby's mouth does not suck on just the nipple and the baby's mouth should be wide open and it should latch on the areola (darker skin) around the nipple. Frequent, but short, sucking episodes should be encouraged so that it can prevent soreness.

Conclusions

The health and well-being of mothers and children are of integral importance to family life, community development and national socioeconomic progress. Given the relationship between breastfeeding and fertility, and the positive influence of breastfeeding on infant nutrition and immunology, the promotion of breastfeeding must be considered a vital part of any maternal and child health program and therefore regarded as a major public health priority.

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