Mihaela Daciana Natea, Maria Costea, Simion Costea
(editors)

EU and its Neighbours amid AI Transformation and Multi-Level Geopolitical Pressures

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Table of Contents / Sommaire

Préface éditoriale: Regards européens sur l'innovation, la sécurité et la mémoire 3
Hedi SAIDI

CHAPTER 1: Artificial Intelligence, Emerging Technologies and Digital Ethics in the EU 5

Enhancing Digital Trust in Game Development Through AI 6
Akvilė SVIDRAITĖ

Deepfake Threats And EU Law: Navigating Disinformation, Cyber Violence, And The Risks Of Digital Manipulation 17
Mariam MAKHNIASHVILI

Brain-Computer Interfaces In The Medical Field: Legal And Ethical Considerations Surrounding The Global Protection Of Human Rights 33
Francesca BUIATTI

Biohacking Regulatory and Ethical Dynamics in Europe and Latin America 56
Anis H. BAJREKTAREVIC, Valentina Carvajal CABALLERO 56

CHAPTER 2: EU Digital Governance, Data Protection and Financial Regulation 76

The Impact of Data Protection Legislation on Fintech and Financial Inclusion 77
Raluca Anica ONUFREICIUC, Dr Raul Felix HODOȘ, Crina MALCOCI

Perspectives on the Application of GDPR Rules Regarding the Protection of Sensitive Personal Data in Romanian and European Practice 89
Raul Felix HODOȘ

Indicators, Perceptions and Financial Education: Aligning Evidence with EU and OECD Policies 99
Raluca ȘANDRU, Silvia MIȘU

CHAPTER 3: European Democracy, Geopolitics, and History of Russian Power Projection 116

Russian interference in democratic processes – lessons from history 117
Ilie Florin CEUSAN

The SOE Redux: The 2024 European Parliament Elections in the Romanian Context 132
Luiza-Maria FILIMON, Mihaela IVĂNESCU 132

The 1994 Budapest Memorandum and European Security Architecture: Ukraine's Denuclearization and the Limits of 'Security Guarantees' 151
Aurel LAZĂR

Moscow Archives Revealing the Long History of Russian Power Projection 167
Maria COSTEA

CHAPTER 4: EU Neighbourhood and Mediterranean Dynamics 169

La Méditerranéité à l'épreuve des défis révolutionnaires et migratoires en Tunisie: Dynamiques et représentations / Mediterrancity Confronted with Revolutionary and Migratory Challenges in Tunisia: Dynamics and Representations 170
Mourad MHENNI

La question de l'entrepreneuriat dans les projets des entreprises indigènes en Tunisie: Un essai de fondement conceptuel et épistémologique / The Question of Entrepreneurship in Indigenous Enterprise Projects in Tunisia: A Conceptual and Epistemological Exploration 182
Adel BOUZID

Conclusions 197

Strategic Reflections for the EU and Its Neighbours in an Era of AI Transformation and Multi-Level Geopolitical Pressures 198
Mihaela Daciana NATEA, Maria COSTEA, Simion COSTEA

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Préface éditoriale: Regards européens sur l'innovation, la sécurité et la mémoire

Dans un moment où l'Europe, ses voisins et ses partenaires se trouvent simultanément éprouvée par les mutations technologiques, les incertitudes géopolitiques et les tensions de la mémoire historique[1], ce volume spécial de *L'Europe Unie* souhaite offrir un espace de réflexion dépassant les cloisonnements disciplinaires.

En continuant les excellentes analyses de tout une série de *L'Europe unie*[2], ce volume réunit des travaux qui témoignent d'une même haute exigence: comprendre l'Europe non seulement dans ses structures et ses normes, mais aussi dans ses vulnérabilités, ses ambitions et sa profondeur historique. Les contributions rassemblées ici, qu'elles portent sur les nouveaux territoires de l'intelligence artificielle, sur les défis de la gouvernance numérique, sur les fragilités de la démocratie contemporaine, sur les relations internationales[3], ou sur les héritages stratégiques du XIX^{e} siècle, convergent vers une idée essentielle: la construction européenne ne peut se penser qu'à la croisée de la raison critique, de la responsabilité politique et de la fidélité aux leçons du passé.

Ces travaux de très bonne facture scientifique visent intrinsèquement à stimuler la réflexion sur le devenir de l'Europe en abordant des défis majeurs comme la défense, la compétitivité, l'intégration politique et sociale, ainsi que l'autonomie stratégique. Les réflexions portent sur des réformes structurelles nécessaires pour une Union plus résiliente et forte face à un monde instable en impliquant aussi bien les institutions que les citoyens, les entreprises et la société civile.

Ce volume entend ainsi rappeler que l'étude de l'Europe impose une double vigilance: vigilance intellectuelle, face à la complexité du réel; vigilance civique, face aux menaces qui pèsent sur ses valeurs fondatrices. À travers des analyses variées et des perspectives complémentaires, les auteurs contribuent à nourrir cette vigilance, indispensable à toute ambition européenne durable.

Le présent volume témoigne de l'ouverture résolue de *L'Europe Unie* vers un espace scientifique véritablement **international et interdisciplinaire**, réunissant des chercheurs issus d'un large éventail de traditions académiques. Cette édition rassemble des contributions provenant de **11 pays** :

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[1] Simion Costea (ed.) *Histoire et mémoires: Entre savoirs, interprétations et transmission. Colloque international en hommage au Professeur Hedi Saidi. Book of Abstracts / Livre des résumés. University of Sousse (Tunisia), 17–19 April 2025,* coordonné par Hafedh Ben Hassine, Adel Bouzid, Manel Kanzali, Sofiene Ben Moussa (Cluj-Napoca: Napoca Star, 2025).

[2] This special volume is one of a series, including also:
Natea, Mihaela Daciana; Costea, Simion (eds), *The EU foreign and security dilemmas in a challenging world (L'Europe unie/United Europe Paris, 19/2023, special volume)* Paris – Cluj- Napoca: Napoca Star, 2023.
Natea, Mihaela Daciana; Costea, Simion (eds), *EU Law and Politics at the Crossroads: Navigating the Complexities of AI, Digitalization, Data Protection, Security, and Radicalization (L'Europe unie/United Europe, Paris, 20/2023, special volume),* Paris- Cluj-Napoca: Napoca Star, 2023. DOI 10.5281/zenodo.15182658.
Natea, Mihaela Daciana; Costea, Simion (eds), *EU and its neighbours: resilience and multicultural harmony (L'Europe unie/United Europe Paris, 21/2024, special volume)* Paris – Cluj-Napoca: Napoca Star, 2024.
Natea, Mihaela Daciana; Costea, Simion (eds), *EU Enlargement and Resilience: Legal and Economic Reforms on Georgia's Path to Integration, (L'Europe unie/United Europe 22/2025- special volume),* Paris-Cluj Napoca: Napoca Star, 2025.

[3] See also: Natea, Mihaela Daciana; Costea, Maria; Costea, Simion. *EU Security and Multicultural Societies. Dealing with a Russian Empire Revival*, Paris, L'Harmattan, 2024. Costea, Maria, Costea Simion, "Ukraine between EU and Eurasian Regional Project in 2013", in *Transylvanian Review*, Vol. XXIV, Supplement No. 1, 2015, p.113-131. Simion Costea, "EU-Ukraine Relations and the Eastern Partnership: Challenges, Progress and Potential", in *European Foreign Affairs Review*, volume 16, issue 2, 2011, p.259-276.

– **Estonie** (Akvilė Svidraitė, Tallinn University of Technology) ;
– **Géorgie** (Mariam Makhniashvili, Economic Policy Research Center, Tbilissi) ;
– **Italie** (Francesca Buiatti, Université d'Udine) ;
– **Autriche / Slovénie** (Prof. Dr. Anis H. Bajrektarevic, IFIMES, Vienne/Ljubljana) ;
– **Colombie** (Valentina Caballero, Universidad de Los Andes, Bogotá) ;
– **France** (Raluca Anica Onufreiciuc, Université Paris–Panthéon-Assas, Dr Hedi Saidi – Universite Catholique de Lille) ;
– **Roumanie** (Dr. Raul Felix Hodoș – Bucharest Université des Etudes Economiques, et Crina Malcoci UMFST; Dr. Raluca Șandru et Dr. Silvia Mișu -Universités de Bucharest et Cluj; Ilie Florin Ceușan -UMFST; Dr. Luiza-Maria Filimon et Dr. Mihaela Ivănescu – Université Constanta; Dr. Aurel Lazăr UMFST; Dr. Maria Costea – Académie Roumaine ; Dr. Simion Costea - UMFST) ;
– **Tunisie** (Dr. Mourad Mhenni ; Dr. Adel Bouzid, Université de Sousse).

Cette diversité géographique est impressionnante: elle garantit la confrontation de perspectives, l'échange méthodologique et l'enrichissement mutuel des approches. Elle démontre également la capacité du journal à attirer des **chercheurs confirmés** et reconnus au niveau international, publiés dans des revues de grand impact (Scopus, WoS, Erih+, EBSCO, DOAJ etc.), ainsi que des jeunes chercheurs engagés dans une recherche de pointe. Cette articulation entre **excellence confirmée et renouvellement générationnel** constitue l'une des forces de ce volume.

La **qualité** et la structure du volume — articulant **analyse juridique, réflexion historique, étude géopolitique et approches socio-anthropologiques** — atteste d'une exigence scientifique constante. Ainsi se trouve consolidée l'identité scientifique de *L'Europe Unie*: un espace de recherche ouvert, exigeant et profondément ancré dans les débats contemporains qui façonnent l'avenir de l'Europe et de ses partenaires.

Votre engagement et votre professionnalisme sont d'une **grande valeur ajoutée** pour ce numéro spécial. C'est le reflet du formidable travail d'équipe que nous partageons. Je rends grâce aux chercheurs dont la rigueur, l'indépendance d'esprit et la générosité scientifique donnent à ce numéro sa cohérence et sa dignité. Puissent leurs travaux éclairer les débats de notre temps et inspirer, modestement mais fermement, une Europe fidèle à sa vocation de lucidité et d'humanisme.

Je vous en souhaite bonne et enrichissante lecture. Très cordialement.

DR HEDI SAIDI
Chevalier de la Légion d'honneur
Chevalier des Palmes académiques
Professeur des universités, HDR, Université Catholique de Lille (France)
Président d'honneur de la publication L'Europe unie
Dirigeant de collection L'Harmattan Paris

CHAPTER 1
Artificial Intelligence, Emerging Technologies and Digital Ethics in the EU

Enhancing Digital Trust in Game Development Through AI

AKVILĖ SVIDRAITĖ[1]
DEPARTMENT OF LAW, TALLINN UNIVERSITY OF TECHNOLOGY

Abstract: *Gaming is one of the fastest-growing entertainment markets, with global revenues projected to reach $312 billion by 2027. While the European Union (EU) leads in game creation, it faces challenges in distribution and publishing. The integration of Artificial Intelligence (AI) presents opportunities for growth, especially for enhancing digital trust, but also raises legal, ethical, and regulatory concerns that directly impact digital trust in the industry.*
For this purpose, this research poses the exploratory research question of how digital trust could be improved in game development with the help of AI. Specifically, it aims to: (1) define key components of digital trust in the gaming industry, (2) identify opportunities to foster digital trust in AI-assisted game development, and (3) outline necessary steps to mitigate legal and ethical risks.
Using an empirical research methodology, this study analyzes case studies, industry best practices, and EU hard and soft law. The findings aim to encourage game developers, legal professionals, and end-users to actively shape a trustworthy gaming ecosystem.
Keywords: *digital trust, gaming, artificial intelligence.*

INTRODUCTION

The essence of every video game lies in the competitive nature of human cognition, shaped by deep-rooted instincts and impulses[2]. Whether competing against another player, an AI-driven opponent, or the game's own mechanics, gaming inherently involves a challenge. Historically, games such as chess or checkers were among the earliest widely played competitive activities. These games emphasized skill, strategy, and tactics, maintaining symmetrical playing fields where randomness played no role in determining outcomes. At their core, they were not only about winning but also about achieving a refined level of play that could be recognized for its depth and complexity[3].

Researchers Max Sjöblom and Juho Hamari in their study provide different types of needs that people aim to meet when gaming. Those are cognitive (aim to acquire new information, knowledge, comprehension), affective (aim to have emotional pleasant or aesthetic experience), personal integrative (aim to enhance credibility, confidence and status), social integrative (aim to enhance connections with family, friends, etc.), and tension release (aim to escape and to do different activities than usually).[4]

Today, the gaming industry is experiencing unprecedented growth, with global revenue expected to reach $312 billion by 2027[5]. While the European Union (EU) remains a leader in game

[1] Akvilė Svidraitė (akvile.svidraite@gabnys.com) has been studying International and European Union Law in the Department of Law, School of Business and Governance, Tallinn University of Technology. ORCID: 0009-0000-7312-1530.
[2] Bertrand Russell, *Authority and the Individual*, London, Routledge, 2009.
[3] Tim Fields, *Game Development 2042: The Future of Game Design, Development, and Publishing*, Taylor & Francis Group, 2022.
[4] Max Sjöblom, Juho Hamari, "Why do people watch others play video games? An empirical study on the motivations of Twitch users", in *Computers in Human Behavior*, Vol. 75, 2017, pp. 985–996.
[5] PricewaterhouseCoopers. ***Top 5 developments driving growth for video games***. PwC. Retrieved February 5, 2025, from https://www.pwc.com/us/en/tech-effect/emerging-tech/emerging-technology-trends-in-the-gaming-industry.html.

creation, it faces challenges in distribution and publishing[6]. One of the key drivers of industry transformation is Artificial Intelligence (AI), which is increasingly being integrated across various phases of game development.

AI is revolutionizing game production by enhancing multiple aspects, including game mechanics, physics, art, and design. Beyond content creation, AI plays a crucial role in the testing phase, improving efficiency, identifying glitches, and ensuring high-quality gameplay, making quality assurance process more efficient. Traditionally, game testing has relied heavily on manual processes, which can be time-consuming and prone to human error. AI-driven tools provide automation that detects bugs, enhances performance, and prevents game-breaking issues before release. Yet, the role of AI in gaming extends beyond technical improvements; it also contributes to digital trust, an essential factor in fostering fair, secure, and ethical gaming environments.

Although yet there is no single globally agreed-upon definition of digital trust, researchers provide their own suggestions on the matter, as well as key components for trust to occur. AI can contribute to strengthening digital trust in several ways. Firstly, it can improve game integrity: AI-driven tools can prevent cheating by detecting abnormal player behaviors. It can also moderate online interactions, filtering offensive user-generated content and preventing from harassment. Secondly, it can improve player well-being: AI can manage playtime to prevent from development of gaming addiction, give recommendations to player to take breaks according to their playtime, enforce age-appropriate content, monitor in-game behavior to assign trust scores to players. Thirdly, it can contribute to enhancing cybersecurity and personal data protection within the game platform: AI can enhance the security of gaming platforms by safeguarding personal data, preventing fraud, and protecting system infrastructure from cyber threats.

While above-mentioned developments present opportunities for creating a safer gaming environment, they also raise legal and ethical concerns. Principles of transparency, fairness, and accountability must be ensured when AI is used in decision-making processes that affect players' experiences and interactions.

This research investigates the central exploratory question of what measures can be implemented to build digital trust in AI-assisted game development. To address this, the study aims (1) to define the key components of the definition of digital trust in the gaming industry, (2) to identify strategies that would help fostering digital trust in game development with the help of AI, (3) to outline necessary steps to be taken in order to mitigate legal and ethical risks associated with AI integration in game development. Although there is academic literature on digital trust as such and AI application in game development, there is a notable gap in literature examining the intersection of these two fields – improvement of digital trust in game development with the help of AI. For this reason, the purpose of this study is to bridge that gap by exploring how AI can actively contribute to building and reinforcing digital trust in game development.

To reach the above-mentioned objectives, this research will be carried out by applying empirical methodology. The methods consist of employing a systematic literature review with a qualitative approach. This study will focus on content analysis and institutional analysis of existing literature, policies, and industry practices. Google Scholar database and databases that are made accessible by TalTech Library were used to carry out this research. Keywords of digital trust, game development, gaming industry, artificial intelligence were used together with Boolean operators. With regards to the institutional analysis, International Game Developer Association was chosen as the world's largest non-profit membership organization for all game creators, together with Anti-Defamation League as leading anti-hate organization in the world.

[6] European Commission: Directorate-General for Communications Networks, Content and Technology. (2023). Understanding the value of a European video games society: final report. Publications Office of the European Union. https://data.europa.eu/doi/10.2759/332575.

The research is limited to online multiplayer games, where players interact not only with the game but also with one another through their game actions, chat or voice communication, if those functions are enabled. By addressing these concerns, this study aims to contribute valuable insights into AI-driven trust-building mechanisms in game development, helping developers, legal professionals, policymakers and end-users to actively shape a more transparent, trustworthy, ethical gaming ecosystem.

KEY COMPONENTS OF DIGITAL TRUST

Before diving into analyzing different options that could contribute to establishment of digital trust in game development, it is crucial to be clear on the definition itself of 'digital trust'. However, it is important to mention that yet there is no single, globally agreed-upon definition neither of trust as such nor of digital trust. However, analyzing the concept of digital trust, there are common traits of digital trust that researchers agree on. Researchers agree on the following components necessary for the trust to occur, which can be applicable for digital trust as well:[7]

1) Two actors must exist: the trustor and the trustee.

2) Vulnerability must be displayed (trust exists only in a hazardous or uncertain situation).

3) Trust leads to actions, mostly risk-taking behaviors.

4) Trust is a highly subjective issue (trust is influenced by numerous subjective individual and environmental circumstances, and as such is dependent on the context of situation).

Moreover, researchers Piotr Pietrzak and Josu Takala in their research found that currently there is quite a few academic articles analyzing digital trust, however they focus a lot on the concept and case studies, not so much on the theoretical perspective. For that reason, they conclude that the research of digital trust still has not achieved its maturity. However, in order to contribute to the maturity of digital trust theoretical concept, they provide their own definition of digital trust. They define it as "the measure of confidence which workers, consumers/buyers, partners and other stakeholders have in an organization's ability to protect data and the privacy of individuals." Not only they contribute with the definition, but they also mention key differences between digital and non-digital trust, outlining that the following characteristics belongs to specifically digital trust: actors, produced actions, vulnerability, and subjective matter.[8] Nevertheless, their research was limited to only one database – the Institute for Scientific Information – Web of Science (ISI) and they only took into consideration articles written in English and that consisted of the term "digital trust". Often synonyms are used in articles researching the same or closely related topic of digital trust.

In my research, I agree to the definition that P. Pietrzak and J. Takala provided. However, I would slightly extend the definition by adding more items to be protected: not only ability to protect data and the privacy of individuals can play role in defining digital trust, but also protecting individuals honor, dignity and digital well-being, especially when it comes to consumers being able to interact with one another when using given means of communication (e.g., chat) in the product or service provided by the organization. It means that organization's ability to moderate those interactions in between their consumers can contribute to establishing digital trust of their product or service. Definition of well-being, especially digital one, is indeed subjective, however in my research I am referring to organization's ability to impact player's behavior towards one's own benefit, for

[7] Francis Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity*, New York, The Free Press, 1995.
Roger C. Mayer, James H. Davis, F. David Schoorman, "An Integrative Model of Organizational Trust", in *Academy of Management Review*, Vol. 20, No. 3, 1995, pp. 709–734.
Guido Möllering, *Trust: Reason, Routine, Reflexivity*, Oxford, Elsevier, 2006.

[8] Piotr Pietrzak, Jukka Takala, "Digital Trust – A Systematic Literature Review", in *Forum Scientiae Oeconomia*, Vol. 9, No. 3, 2021, pp. 59–71.

instance, by informing regarding how much time was already spent playing, providing reminders to take breaks in order to prevent from development of addictive behavior, provide clear disclaimers if there are any loot boxes implemented in the video game as those can cause not only harmful effect, but are strictly approached by regulators in many EU countries due to its similarity to gambling (gambling has features of game, paid amount, element of chance and outcome resulting in win or loss, so do loot boxes).

As for the components of digital trust, Deloitte, the largest professional services of audit, consulting, tax and related services network in the world, shares similar approach to definition of digital trust as P. Pietrzak and J. Takala did in terms of adding privacy and control as one of the key pillars of trust. However, besides privacy and control, Deloitte includes (1) ethics and responsibility; (2) transparency and accessibility; (3) security and reliability, as crucial components to be considered when talking about digital trust.[9]

Therefore, in this research contribution to build and / or increase digital trust is viewed through the lenses of protection of player's personal data, privacy, dignity, honor, digital well-being by applying principles of transparency, accessibility, security, reliability and control.

APPLICATION OF AI IN GAME DEVELOPMENT

In recent years, AI has become a key driver of innovation across various emerging technologies, and the gaming industry is no exception[10]. AI is revolutionizing game development at multiple stages, from production, taking into consideration game mechanics, design, stylistics, to testing, enabling faster, more efficient processes while enhancing the overall quality of games and reliability of test results. Overall, it cuts significantly the time needed to fully develop a game and consequently it decreases the budget necessary for a game to be developed and ready to be published[11].

Firstly, taking into consideration production stage, throughout the years it got transformed with the help of AI leading to streamlined development of workflows, reduce of costs, and improved efficiency. It plays a key role in generating intelligent, adaptive in-game opponents, enriching gameplay, and delivering unique player experiences. Furthermore, AI-driven testing improves bug detection and resolution, ensuring a more polished and seamless final product.[12]

Some researchers divide the application of AI in game development into three main categories. One type is rule-based AI, that utilized predefined rules and logic to control game characters and environments. The second type is learning-based AI, that implements machine learning algorithms to adapt to player behavior and improve in-game decision-making. The third type is evolutionary AI, that employs optimization techniques to generate game content dynamically, creating more immersive and responsive experiences.[13]

AI-assisted design is transforming game development through automated content creation and procedural generation. Researchers and developers have leveraged AI tools like **Evolutionary Dungeon Designer** to facilitate collaboration between human designers and AI, enhancing

[9] Nitin Albinson, Satish Balaji, Yi Chu, *Building Digital Trust: Technology Can Lead the Way*, Deloitte Insights, 2019.
[10] Yang Lu, "Artificial Intelligence: A Survey on Evolution, Models, Applications and Future Trends", in *Journal of Management Analytics*, Vol. 6, No. 1, 2019, pp. 1–29.
[11] Mubarak M.F., Milda Petraite, "Industry 4.0 Technologies, Digital Trust and Technological Orientation: What Matters in Open Innovation?", in *Technological Forecasting & Social Change*, Vol. 161, 2020, article no. 120332.
[12] Mark O. Riedl, Alexander Zook, "AI for Game Production", in *2013 IEEE Conference on Computational Intelligence in Games (CIG)*, IEEE, 2013, pp. 1–8.
[13] Safal Antony, Sabari T., R. Joshua, N. Jayapandian, "Artificial Intelligence Involvement in Graphic Game Development", in *Proceedings of the 2023 International Conference on Artificial Intelligence and Smart Systems (ICAISS)*, 2023, pp. 82–86.

procedural content generation. Additionally, **human-AI co-creative tools** allow game designers to generate personalized game content more efficiently. Several AI-powered tools are already being used in, for instance, indie game development, such as. Examples of those are **ChatGPT and GitHub Copilot**, that assist in coding and scriptwriting. Then, **DALL-E-2, Midjourney and Adobe Firefly** help in generating character designs, game environments, and concept art. Another example is **AI Voice Generators (e.g., Riffusion, Audiocraft)** that help in creating character voices, narration, and soundtracks.[14] All these tools empower developers to turn their creative visions into real functioning games more quickly and efficiently.[15]

With regards to the testing stage, AI has brought significant transformations to this stage as it did for production stage. Before application of AI allowed to widely automate game testing, it was and still is quite a manual process. Human testers, usually called Quality Assurance (QA) testers, would play the game extensively to identify bugs, glitches, and gameplay issues. Overall manual game testing would include the phases of exploratory testing, test case execution, regression testing, stress and load testing, performance testing, localization testing, user experience testing, playtesting, bug reporting and documentation. While manual testing provides valuable human insight into the user experience, it is extremely time-consuming, requires lots of resources, and is subject to human error.[16] Nowadays, many of these testing phases can be executed automatically with the help of AI, while the human tester can provide the valuable insights that only a human player could, such as insights on the user experience.

AI is transforming the game testing industry by automating repetitive tasks, enhancing accuracy, and improving the overall quality of games. By leveraging AI, developers can detect bugs, optimize performance, and enhance player experience more efficiently than ever before. AI is capable to carry out, for instance, automated testing, bug detection and error prediction, AI-driven playtesting, performance optimization, procedural testing for open-world games, user experience testing to an extent, adaptive difficulty testing, automated localization and text verification, security and anti-cheat testing, and player behavior analysis.

Moreover, it is worth noting that although application of AI in game development brings multiple advantages, it is also quite criticized. There are arguments that the term "artificial intelligence" is misleading in the context of video games, "*since AI in video games primarily relies on computational rules rather than true cognitive learning systems. Unlike self-learning AI that adapts based on arbitrary data input, game AI typically follows predefined logic to enhance the player experience.*"[17]

Furthermore, as usage of AI in game development is no longer a rare occurrence, the gaming industry faces challenges such as **digital trust** and ethical considerations regarding application of AI and its generated content or other results. Therefore, maintaining principles of human agency and oversight, technical robustness and safety, privacy and data governance, transparency, diversity, non-discrimination and fairness, societal and environmental well-being and accountability as stated

[14] Rima Panchanadikar, Graham Freeman, "I'm a Solo Developer but AI is My New Ill-Informed Co-Worker: Envisioning and Designing Generative AI to Support Indie Game Development", in *Proceedings of the ACM on Human-Computer Interaction*, Vol. 8 (CHI PLAY), 2024, pp. 1–26.

[15] Alexander Alvarez, Sebastian Dahlskog, Joan Font, Jon Holmberg, Camila Nolasco, Anton Österman, Sebastian Deterding, Sebastian Dahlskog, Christofer M. Olsson, Sebastian Risi, Christoph Salge, Mitu Khandaker, Joan Font, "Fostering Creativity in the Mixed-Initiative Evolutionary Dungeon Designer", in *ACM International Conference Proceeding Series*, 2018, pp. 1–8.

[16] Natalia Finska, *Modern Game Testing: Learn How to Test Games Professionally, Optimise Testing Effort and Skyrocket Your QA Career*, Packt Publishing, 2023.

[17] Andrej Filipović, "The Role of Artificial Intelligence in Video Game Development", in *Kultura Polisa*, Vol. 20, No. 3, 2023, pp. 50–67.

in the EU AI Act, and ethical AI practices is essential for the continuous growth of AI-driven game development. [18]

USING AI IN GAME DEVELOPMENT TO BUILD DIGITAL TRUST

Applying the use of AI in game development can be useful not only in production or testing stages, but also in building digital trust. Introducing additional features with the help of AI that would contribute to development of digital trust while playing the game does not constitute a separate part in overall game development process. Integration of features contributing to creating and / or increasing the level of digital trust can take place during production stage. However, applying the use of AI in the testing stage can contribute to development of digital trust as well due to higher accuracy of results.

Before we dive into specific ways on how development of digital trust could be improved with the help of AI, it is crucial to provide some clarification regarding the role of AI in game development. Usually, people perceive the application of AI as a threat: they notice that this technology is more superior than most of capabilities of a human being, then as a technology AI is complex, leading to people interpreting it in a way that is not necessarily correct, and it is always raising some legal and ethical concerns[19]. However, in games development, the role of AI is not to defeat human players or to make a game impossible to win. Oppositely, the goal of AI in games development is to improve the overall gaming experience of human players.[20]

One of the most often occurring issues in gaming is the hate-speech and harassment. These, if not countered, can lead to serious consequences, including players losing their trust of the game or gaming platform. Anti-Defamation League (ADL), leading anti-hate organization in the world, conducted research, where they asked asked 15 participants to play four the most popular online games. Those games were Valorant, Counterstrike 2, Overwatch 2, and Fortnite. They had to play for one hour and have nicknames from which different identities could be identified. Those identities were Jewish and Muslim religious and ethnic identities, as well as in national identities such as Chinese, Mexican, and Israeli. The findings of the research were that almost half of the participants experienced some form of harassment and one-third of the players experienced identity-based harassment. The findings of this research call for action to find ways to minimize disruptive behavior, harassment and hate and highlights that, "the impact of such negative behavior extends beyond the game itself".

Moreover, ADL has been investigating hate and harassment in online multiplayer games since 2019. Some other significant findings date back to 2023, when ADL found that 76% of adult participants, aged 18-45, reported experiencing harassment in online multiplayer games. Types of harassment include name-calling, trolling and other disrupted play, being excluded from a game. The same study found that 75% of teens, aged 10-17, had also experienced some form of harassment in online multiplayer games.[21]

But not all results of studies carried out by ADL are that disappointing. They also found that games have also been sites of prosocial and positive behavior. For instance, a 2021 ADL report found that 99% of online multiplayer game players reported experiencing positive interactions in online

[18] A.B. Rashid, M.A.K. Kausik, "AI Revolutionizing Industries Worldwide: A Comprehensive Overview of Its Diverse Applications", in *Hybrid Advances*, Vol. 7, 2024, article no. 100277.
[19] Zoran Bjelajac, Andrej Filipovic, "Artificial Intelligence: Human Ethics in Non-Human Entities", in *Proceedings of the 3rd Virtual International Conference 'Path to a Knowledge Society – Managing Risks and* Innovation (PaKSoM 2021'), Mathematical Institute of the Serbian Academy of Sciences and Arts, 2021.
[20] Helen Lou, "AI in Video Games: Toward a More Intelligent Game", in Science in the News, Harvard University, 28 August 2017.
[21] Anti-Defamation League, *Playing with Hate: How Online Gamers with Diverse Identity Usernames Are Treated*, 2025.

games, such as mentorship, friendship, and discovering new interests. Therefore, it points that keeping high level of digital trust within a gaming site is crucial.

To counter online hate-speech and harassment, AI could serve a purpose in being used in order to moderate chats and voice communications. Also, it can serve a purpose in creating a trust score within a game. Most popular multiplayer games, such as CS:GO, Valorant, League of Legends already have such system implemented with the help of AI. Calculation of the trust score throughout different games differ: some focus more on the prevention of cheating, while others pay more attention to prevention of hate-speech and harassment. Furthermore, AI can be used to create cheating detection systems that would enhance players experience and would increase overall digital trust.

With regards to protection of personal data, whenever a player in the chat types anything that could reveal his personal data, especially any data that falls under special categories of personal data, AI could be used to generate alerts to the player that one might be about to share some personal data and to ask if one is completely aware of that and if still wants to send that message.

Moreover, the AI can be used to model player experience, to contribute to procedural content generation, to track user behavior and to mine data, to enhance non-player character behaviors.[22] Improvement of these features can contribute to development or increase of digital trust. Furthermore, trust and safety (T&S) initiatives in gaming focus on creating an environment where players feel secure and empowered. By leveraging AI, developers can strengthen these initiatives, ensuring that integrity, transparency, and respect for players' rights remain at the core of the gaming experience. AI-driven tools can help game developers detect and prevent fraudulent activities, safeguard user data, and moderate interactions to foster a more inclusive and respectful gaming community.

One significant way AI enhances trust and safety is through real-time behavior monitoring and anomaly detection. AI algorithms can analyze player interactions, transactions, and gameplay patterns to identify potential misconduct, such as cheating, scamming, or exploitative behavior. For example, AI can flag unusual in-game financial transactions, reducing the risk of fraud and unauthorized purchases. Additionally, AI-powered moderation systems can automatically detect harmful behavior in chats or voice communications, minimizing the spread of hate speech and harassment.[23]

Transparency is another key aspect of digital trust. AI can contribute to greater transparency in gaming by ensuring that decisions made by in-game moderation tools, matchmaking algorithms, and anti-cheat systems are fair and explainable. Implementing AI models that provide players with clear feedback about moderation decisions—such as why a ban was issued or how matchmaking criteria are determined—can improve player trust in the game's fairness.

Furthermore, AI-driven personalization can enhance digital trust by ensuring that player experiences align with their preferences and comfort levels. By analyzing player data, AI can adjust game settings, difficulty levels, and in-game interactions to match individual preferences while respecting privacy and ethical considerations. This can be particularly useful for younger players or those who wish to avoid certain types of content, allowing them to customize their gaming experience without compromising their enjoyment or safety.

As AI continues to evolve, its role in game development will become even more integral to maintaining a secure and trustworthy gaming environment. By integrating AI-driven trust and safety mechanisms, developers can not only protect players but also cultivate a more positive and inclusive gaming culture.

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[22] Yasemin Karaca, Djameleddine Derias, Gözde Sarsar, *AI-Powered Procedural Content Generation: Enhancing NPC Behaviour for an Immersive Gaming Experience*, 2023.

[23] *Digital Thriving Playbook*, "Introduction to Trust and Safety", Thriving in Games Group, 2025.

LEGAL AND ETHICAL RISKS

While AI in game development offers numerous benefits, including enhanced digital trust, its implementation also brings legal and ethical risks that developers must carefully navigate. As AI continues to shape the industry, ensuring compliance with legal regulations and ethical standards is essential to maintaining player trust and fostering a responsible gaming environment.

One of the most pressing concerns is data privacy and protection. If an AI-powered chat system or player interaction model is integrated into a game, developers must ensure that user data is encrypted and not used for unintended purposes. If player-generated content is utilized for AI training, informed consent mechanisms should be in place, clearly outlining the ability to revoke consent at any time. Compliance with regulations such as the General Data Protection Regulation (GDPR) is non-negotiable, requiring developers to provide transparency regarding data collection, storage, and deletion processes. Measures such as Data Protection Agreements (DPA), Privacy Impact Assessments (PIA), Data Protection Impact Assessments (DPIA), Transfer Impact Assessments (TIA), Standard Contractual Clauses (SCCs), and Technical and Organizational Measures (TOMs) should be implemented to mitigate data security risks.

Additionally, the use of AI-generated content in gaming raises intellectual property concerns. Platforms like Steam initially prohibited AI-generated content before later revising their stance to require detailed disclosure from developers. This shift highlights the uncertainty surrounding AI's role in content creation, particularly regarding copyright infringement risks. Developers must stay informed about evolving legal frameworks and ensure that AI-generated assets comply with intellectual property laws.[24]

The **International Game Developers Association (IGDA)** has also emphasized ethical responsibilities within the industry through its **Code of Ethics**, which provides guidance for developers to maintain integrity, fairness, and player well-being. The IGDA Code highlights key ethical principles such as player respect, transparency in game design and monetization, and the responsibility to avoid exploitative mechanics. When integrating AI, developers should align with these principles by ensuring that AI-driven systems promote inclusivity, do not reinforce biases, and respect player agency. Adhering to the IGDA Code can help game developers navigate complex ethical challenges while fostering a more trustworthy gaming environment.[25]

Beyond legal considerations, ethical challenges surrounding AI in gaming include issues of fairness, transparency, and player autonomy. The European Union's AI Act emphasizes a risk-based approach to AI regulation, ensuring that high-risk AI systems align with the EU Charter of Fundamental Rights and ethical guidelines, such as those outlined by the High-Level Expert Group on AI (AI HLEG). These guidelines stress the importance of human agency and oversight, technical robustness, privacy, transparency, and fairness in AI applications.[26]

AI-driven game mechanics also raise ethical questions regarding player well-being. Data-driven retention strategies designed to maximize engagement can lead to addictive gameplay habits, potentially harming vulnerable players[27]. Monetization techniques, such as loot boxes and

[24] Carlos Guerrero-Romero, Simon M. Lucas, Diego Perez-Liebana, "Using a Team of General AI Algorithms to Assist Game Design and Testing", in *2018 IEEE Conference on Computational Intelligence and Games (CIG)*, IEEE, 2018, pp. 1–8.

[25] International Game Developers Association, *Core Values & Code of Ethics*, IGDA, 2025.

[26] European Parliament and Council of the European Union, *Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 on Laying Down Harmonised Rules on Artificial Intelligence and Amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828*, in *Official Journal of the European Union*, L 1689, 2024.

[27] Council of Europe, *Human Rights Guidelines for Online Games Providers*, Strasbourg, Directorate General of Human Rights and Legal Affairs, 2008.

pay-to-win models, may encourage irresponsible spending, particularly among younger audiences. Moreover, AI-based personalization models may unintentionally marginalize certain player groups by failing to account for individual differences or contextual decision-making. Ensuring that AI-driven game features are transparent, interpretable, and ethically sound is critical to maintaining digital trust.[28]

For game developers integrating AI systems provided by third-party vendors, it is crucial to review the policies and terms of these AI providers to ensure alignment with legal and ethical standards. In the EU, this means compliance with regulations such as the GDPR and the EU AI Act.

Despite these challenges, legal and ethical risks should not deter game developers from harnessing AI's potential to enhance digital trust. Instead, proactive risk management strategies, ethical AI design principles, and clear communication with players can help build a more transparent and responsible gaming ecosystem. By prioritizing trust and safety measures, the industry can continue to innovate while upholding the highest standards of integrity and fairness.

Conclusion

Digital trust is a fundamental aspect of the gaming experience, encompassing transparency, security, reliability, privacy, and fairness. As defined in this study, digital trust is not only about safeguarding player data and preventing cheating but also about fostering an environment where players feel safe, respected, and confident in the integrity of the game and its systems. The key components of digital trust—such as the relationship between trustor and trustee, the presence of vulnerability, risk-taking behavior, and subjective perception—highlight the complexity of building trust in AI-assisted game development. AI has the potential to reinforce these aspects by improving game integrity, moderating player interactions, and personalizing experiences while upholding ethical and legal standards.

As AI continues to transform the gaming industry, its potential to enhance digital trust is both promising and challenging. By integrating AI-driven solutions, developers can strengthen game integrity, improve player safety, and foster a more transparent and inclusive gaming environment. AI's ability to detect cheating, moderate interactions, safeguard personal data, and enhance user experience makes it a powerful tool in building and maintaining digital trust. However, to fully realize these benefits, developers must address the legal and ethical risks associated with AI implementation, including data privacy concerns, regulatory compliance, and responsible game design practices.

The gaming industry, particularly in the European Union, stands at a critical juncture where AI-driven innovation must be balanced with ethical considerations and legal responsibilities. Adopting best practices, such as aligning with the **IGDA Code of Ethics** and adhering to regulations like the **EU AI Act** and **GDPR**, is crucial to ensuring that AI applications remain fair, transparent, and accountable. Additionally, proactive trust-and-safety measures, including real-time behavior monitoring, clear consent mechanisms, and ethical AI use in game monetization, will be fundamental in securing player confidence.

While AI introduces complexities in game development, it should not be viewed as an obstacle but rather as an opportunity to create safer and more engaging gaming experiences. By embracing responsible AI development, implementing robust safeguards, and maintaining transparency with players, the gaming industry can lead by example in fostering a digital ecosystem built on trust.

[28] Magy Seif El-Nasr, Ethan Kleinman, Vanessa Volz, Pedro Lopes, Georgios N. Yannakakis, Pascal Kyburz, Farnaz Khosmood, Antonios Liapis, "Data-Driven Game Development: Ethical Considerations", in *ACM International Conference Proceeding Series*, 2020, pp. 1–10.

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2016/797 and (EU) 2020/1828 ***Official Journal of the European Union***, L 1689, 2024. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689**,** Accessed [5th of February 2025]

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Deepfake Threats And EU Law: Navigating Disinformation, Cyber Violence, And The Risks Of Digital Manipulation[1]

MARIAM MAKHNIASHVILI[2]
RESEARCH FELLOW
THE ECONOMIC POLICY RESEARCH CENTER, GEORGIA

Abstract: *The purpose of this study is to examine the challenges posed by AI-generated deepfakes. They are one form of so-called 'synthetic media', which draw on advances in AI, using algorithms and deep learning to change elements of a photo, video or audio track, or to recreate a person's voice or face with life-like subtlety. creating the illusion of staged actions by someone else.[3] Earlier versions of generative AI required coding capabilities and technical proficiency; today, anyone with internet access is constrained only creativity is required.[4] The goal of this paper is to explore critical areas where EU legislative regulation is essential to protect fundamental rights.*
This research explores deepfake narratives, their impact on elections, social engineering, and harassment, and how the European Union (EU) is responding through policy measures and legal frameworks. Additionally, it examines the legal accountability of deepfake creators and platforms, particularly in cases of image-based sexual abuse and political deception. By analyzing the intersection of Directive (EU) 2024/1385 with freedom of expression, this study aims to evaluate the effectiveness of EU strategies in defending truth and combating disinformation. Since false information falls into three categories—disinformation, misinformation, and malinformation—deepfakes are classified as disinformation.[5] Additionally, this study will discuss the AI Act and Digital Services Act, assessing their roles in regulating deepfake-generated content, ensuring transparency, and addressing platform accountability within the EU's legal framework.
Key words: *image-based sexual abuse, Deepfake, cyber harassment, EU policy on AI accountability, Disinformation.*

INTRODUCTION

The photos, video, and audio recordings were once considered the "gold standard" for proof of reality, new artificial intelligence (AI) models that can create realistic (but fake) content has fundamentally changed past notions of trust.[6] Deepfakes are videos in which one face

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[2] Mariam Makhniashvili (mmakh21@freeuni.edu.ge) is a MSCA fellow at EPRC, Georgia. She studies law at Free University of Tbilisi. Her academic and practical experience includes legal research and political analysis, and she is a practicing lawyer specializing in corporate, administrative, and criminal law. ORCID: 0009-0000-5145-828X.
[3] This definition is based on insights from Sam Gregory, Heard About Deepfakes? Don't Panic. Prepare., World Economic Forum, November 23, 2018, Heard about deepfakes? Don't panic. Prepare | World Economic Forum and GREVIO's General Recommendation No. 1 on the Digital Dimension of Violence Against Women, Council of Europe, Strasbourg, 2021. 1680a49147
[4] UNESCO, Exposing Technology-Facilitated Gender-Based Violence in an Era of Generative AI, World Trends in Freedom of Expression and Media Development Series, 2nd edition, Paris, UNESCO, 2023, ISBN 978-92-3-100669-2 387483eng.pdf
[5] Tom Dobber, Nadia Metoui, Damian Trilling, Natali Helberger, and Claes de Vreese, "Do (Microtargeted) Deepfakes Have Real Effects on Political Attitudes?" The International Journal of Press/Politics, vol. 26, no. 1, 2021, 69–91. Chochia, A.; Nässi, T. (2021). Ethics and Emerging Technologies – Facial Recognition. IDP Revista de Internet Derecho y Política, 34, 1–12. DOI: 10.7238/idp.v0i34.387466.
[6] Beena Ammanath, in a world of deepfakes, we must build a case for trustworthy synthetic AI content, World Economic Forum, May 30, 2024. We must build a case for trustworthy AI synthetic content | World Economic Forum

has been (seamlessly) replaced by another face and sound is manipulated, so as to create the illusion that another person's actions are being staged.[7]

Deepfake technology represents a transformative advancement in artificial intelligence and digital manipulation. It refers to the use of deep learning algorithms to create compelling and often deceptive media content.[8] They include images, audio files and moving images, either individually or in combination.[9] These manipulated media are created using machine learning, and can make it seem as if a person says or does something, while in reality, they have never said or done anything of the sorts.[10] The existence of deepfakes may lead people to lose faith in visual material when processing information. [11]

Experiments have proven that visual messages influence society more strongly than verbal ones. [12] Further studies showed that ''image bites" are more effectively to shape voter opinions than "sound bites."[13] Prior later demonstrated that survey respondents exhibited higher knowledge retention when factual recall questions included both visual and verbal information.[14] Deepfakes have the ability to generate both voice and visuals within the same material, making them highly deceptive and dangerous. That's precisely why it is extremely dangerous and worth paying close attention to.

AI technologies which can generate 'deepfakes' can also be used in the production of both misinformation and disinformation. According to the Global Risks Report 2024, misinformation and disinformation were identified as the most significant global risk over the next two years, Synthetic content will manipulate individuals, damage economies and fracture societies in numerous ways over the next two years. However, in the long term, their ranking is expected to shift to fifth place among the most pressing global risks.[15]

1. DEEPFAKE NARRATIVES: AI AND THE MANIPULATION OF TRUTH

Various terms have emerged to describe information that polarizes, and deceives. The most popular terms are misinformation and disinformation, they are sometimes used interchangeably, but researchers agree they are separate and distinct.[16]

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[7] GREVIO (Group of Experts on Action against Violence against Women and Domestic Violence), General Recommendation No. 1 on the digital dimension of violence against women, Strasbourg, Council of Europe, 2021. 1680a49147

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[13] Maria Elizabeth Grabe & Erik Page Bucy, Image Bite Politics: News and the Visual Framing of Elections, Oxford University Press, 2009.

[14] Markus Prior, Visual Political Knowledge: A Different Road to Competence? The Journal of Politics

[15] Global Risks Report 2024, World Economic Forum, January 10, 2024. WEF_The_Global_Risks_Report_2024.pdf

[16] Christina Nemr & William Gangware, Weapons of Mass Distraction: Foreign State-Sponsored Disinformation in the Digital Age. Weapons-of-Mass-Distraction-Foreign-State-Sponsored-Disinformation-in-the-Digital-Age.pdf

Misinformation is understood as the false information that is not intended to cause harm, unlike disinformation, which has a malicious intent.

We follow others in defining online disinformation as intentional behavior that purposively misleads and online misinformation as unintentional behavior that inadvertently misleads. Deepfakes are disinformation because they originate with intentional acts, but they become misinformation, too, if circulated online by people who mistakenly believe them to be truthful representations. For the purposes of this study, this distinction is not germane because we do not seek to explain the factors shaping a decision to share a deepfake.[17]

The spread of both disinformation and misinformation can have a range of harmful consequences, such as threatening our democracies, polarizing debates, and putting the health, security and environment of EU citizens at risk.[18]

Disinformation is widespread and harmful, epistemically and practically. We are facing a global information crisis that the Secretary-General of World Health Organization (WHO) has declared an 'infodemic'[19]

2. ARE DEEPFAKES REALLY A THREAT TO ELECTIONS?

What is the biggest threat from deepfakes? If you had asked people a year ago, many would have said their ability to disrupt global elections and create a misinformation and disinformation apocalypse, but that's not what happened. [20] In general, targeted phishing attacks on election officials or political parties can compromise sensitive information or introduce malware, often using deepfake technology. Beyond that, regarding disinformation and misinformation, AI-generated deepfake videos or audio recordings can be used to spread false information about candidates or manipulate public perception. Additionally, organized campaigns spreading misinformation through social media or other platforms can influence public opinion, undermine trust in election integrity, and ultimately sway election results. In reality, expectations were not met in reality and did not have the impact on the 2024 elections that many had predicted.[21]

We do not dispute that artificial intelligence has the ability to generate deepfakes, which can subsequently be used to spread disinformation and misinformation. However, its impact on society is very low when it comes to elections. Unfortunately, many studies focus on the capabilities of artificial intelligence, while discussing real-world outcomes less frequently.[22] In 2018, it was believed that disinformation campaigns could be part of hybrid threats to internal security, including election processes, particularly when combined with cyberattacks.[23]

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[22] N. Hamiel, Illusion of Influence: The AI-Generated Misinformation Apocalypse That Wasn't, Perilous Tech, July 18, 2024. Illusion of Influence: The AI-Generated Misinformation Apocalypse That Wasn't | Perilous Tech

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Everyone anticipated that generative AI would have a significant impact on the 2024 elections. According to the World Economic Forum (2024), Over the next two years, elections—including those in India—were expected to face serious challenges due to misinformation and disinformation, potentially harming democratic processes.[24] Factually, the prediction did not come true, as Prime Minister Narendra Modi's party, which led in election campaigns, mobilized its voter base using violent rhetoric against Muslims. The harm caused stemmed directly from the hateful rhetoric itself, rather than from the AI tools used to spread it.[25]

Numerous facts demonstrate that its influence on elections is minimal. From Meta's report, we read that less than 1% of AI-generated content was fact-checked misinformation during the 2024 elections. It appears that Meta took sufficient measures to minimize the impact of Generative AI on elections.[26] Additionally, they collaborated with other companies within the same industry, such as Amazon, Adobe X, Microsoft, OpenAI, TikTok, and others, culminating in the signing of The Tech Accord to Combat Deceptive Use of AI in 2024 Elections. Participating to mitigate the impact of disinformation, misinformation, and deepfakes on elections.[27] Deepfakes will not have deleterious consequences for democratic procedures, chiefly elections, because there is no evidence of interference in elections. To make such a prediction for the future, deepfakes should already be having some impact on elections. However, there is no evidence that they have.[28] Therefore, for real, the risks of deepfakes and AI-generated misinformation in elections are overestimated. AI-driven misinformation does not significantly change people's minds on highly polarized topics.

3. DEFENDING TRUTH: EU STRATEGIES AGAINST DISINFORMATION

Although deepfakes no longer influence elections, there are areas where they can still be used to manipulate people, for instance, Moldova's Prime Minister, Dorin Recean, described how AI-generated deepfakes, spread by foreign forces, impacted the public. These images showing children in military uniforms standing next to the EU flag, pushing a narrative that EU integration would lead to war. Suggesting that if Moldova seeks EU integration, the same outcome as in Ukraine would follow. Moldova's case is a clear example of how disinformation can manipulate public emotions and fears, shaping perceptions through strategic misinformation.[29] That's why it requires the European Union's attention.

Large-scale disinformation campaigns are a major challenge for Europe and require a coordinated response from EU countries, EU institutions, online platforms, news media and EU citizens as well.[30] In here, distinguishing between ethics, policy and law in the regulatory framework

[24] The Global Risks Report 2024, World Economic Forum, January 10, 2024. WEF_The_Global_Risks_Report_2024.pdf
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[29] Jesus Serrano, Protection vs. Censorship: How to Strike the Right Balance Curbing Online Disinformation, World Economic Forum, April 8, 2025. How to strike a balance curbing online disinformation | World Economic Forum
[30] Chochia, Archil; Sicat, Eden Grace Niñalga (2023). Ethics and Modern Technologies: Example of Navigating Children's Rights in an AI-Powered Learning Environment. In: Ramiro Troitiño, D.; Kerikmäe, T.; Hamuľák, O. (Ed.). Digital Development of the European Union. (129−141). Springer, Cham. DOI: 10.1007/978-3-031-27312-4_9.

of AI is important, but so it is to understand the alignment among principles, policies and legal acts.[31] Because it ensures coherence, facilitates innovation while increasing safety and trust. Such considerations are also seen to address societal changes and guides responsive legislative development.[32]

To provide an effective contribution to addressing the issue of disinformation, it is crucial to have the support of a multidisciplinary community including fact-checkers, academic researchers and other relevant stakeholders. The European Digital Media Observatory (EDMO) is a project that supports the independent community working to combat disinformation. The main mission is to combat online disinformation by fostering collaboration between fact-checkers, researchers, media organizations, and policymakers across Europe.[33]

The adoption of the Digital Services Act can be considered a milestone of the European constitutional strategy. In order to face the challenges raised by platform power[34], together with the Digital Markets Act.[35] It includes a range of obligations for platforms.

European Commission has brought together major online platforms, emerging and specialized platforms, players in the advertising industry, fact-checkers, research and civil society organizations to deliver a strengthened Code of Practice on Disinformation,[36] which sets out principles and commitments for online platforms and the advertising sector to counter the spread of disinformation online in the EU, which its signatories agreed to implement. It is the world's first self-regulatory instrument to fight disinformation.[37] The Digital Services Act (DSA) follows a similar narrative. First, the DSA is predicated on the concept that "what is illegal in the real world must also be illegal on platforms." The DSA mandates online platforms to support law enforcement, addressing the rapid pace and complexity of digital interactions that challenge traditional regulatory frameworks.[38] People trust business more than they trust media, with brands playing a fundamental role in the media environment as they directly shape narratives and indirectly support quality content and trustworthy information through their marketing investments.[39]

Beyond existing efforts, combating disinformation requires proactive measures. Local and regional authorities can launch awareness campaigns to promote ethics and tolerance in social media, while governments can fund educational initiatives or collaborate with civil society to address fake news. Larger programs can help citizens distinguish truth from disinformation, ensuring a more

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[31] Zengin, Aysegul; Chochia, Archil; Martínez-Ramil, Pablo (2025). Copyright in Text and Data Mining: Legal Challenges and the AIA's Role in the EU. International and Comparative Law Review, 25 (1).

[32] Şaban İbrahim Göksal, Maria Claudia Solarte Vasquez & Archil Chochia, The EU AI Act's Alignment within the European Union's Regulatory Framework on Artificial Intelligence, International and Comparative Law Review, vol. 24, no. 2, December 2024, p 25–53. The-EU-AI-Acts-Alignment-within-the-European-Unions-Regulatory-Framework-on-Artificial-Intelligence (1).pdf

[33] European Digital Media Observatory (EDMO), European Commission, 2025. European Digital Media Observatory (EDMO) | Shaping Europe's digital future

[34] Giovanni De Gregorio, Digital Constitutionalism and Freedom of Expression, Digital Constitutionalism in Europe, Cambridge University Press, May 6, 2022, chapter 5, pp. 157–215. Digital Constitutionalism and Freedom of Expression (Chapter 5) – Digital Constitutionalism in Europe

[35] *Proposal for a Regulation on Contestable and Fair Markets in the Digital Sector (Digital Markets Act)*, *European Commission*, December 15, 2020. EUR-Lex – 52020PC0842 – EN – EUR-Lex

[36] Mona Simion, Knowledge and Disinformation, Episteme, vol. 21, no. 4, December 2024, pp. 1208–1219. Published online by Cambridge University Press, June 29, 2023. Knowledge and Disinformation | Episteme | Cambridge Core

[37] Guidance to Strengthen the Code of Practice on Disinformation, European Commission, May 26, 2021. https://ec.europa.eu/commission/presscorner/api/files/document/print/en/qanda_21_2586/QANDA_21_2586_EN.pdf

[38] Joel P. Trachtman, Platform Responsibility: An International Legal Synthesis, Defeating Disinformation, Cambridge University Press, vol. 14, January 30, 2025. Platform Responsibility (Chapter 14) – Defeating Disinformation

[39] Principles for the Future of Responsible Media in the Era of AI, World Economic Forum, January 2024. WEF_Principles_for_the_Future_of_Responsible_Media_in_the_Era_of_AI_2024.pdf

informed and resilient society.[40] It is noteworthy that Fact-checkers who often called upon to mitigate the spread of deepfakes, play crucial role in today's information environment. They are able to keep up with technological changes in a disinformation environment quickly. [41] Fact-checking as a profession has significantly transformed over the past decades. While journalists traditionally carried out fact-checking as part of their work, today, independent organizations have taken on this role.[42] They are able to keep up with technological changes in a disinformation environment quickly. [43]

4. DEEPFAKES AND THEIR GENUINE INFLUENCE ON SOCIETY

Generative AI presents several real risks. Deepfakes cause harm in two main categories: harassment and social engineering.

4.1. Deepfakes as a Tool for Social Engineering

The first set of risks involves social engineering attacks. Deepfakes can be used to exploit both people and technology. For example, an attacker can use AI to clone a family member's voice and use it to try and scam a relative out of money. This type of scam is on the rise, prompting organizations such as the US Federal Trade Commission to issue a consumer alert.[44]

Scammers used AI-based software to impersonating a UK-based energy firm leader and successfully demanded a fraudulent transfer of $243,000 in 2019. Experts in cybercrime have described this incident as a rare case of AI being leveraged for hacking.[45] In early 2020, a bank manager in Hong Kong was tricked by scammers using AI voice-cloning technology and made large money transfers believing the request was real.[46] scammers used AI voice-cloning technology to trick at least eight elderly people in Canada, leading to a total loss of $200,000.[47]

4.2 Deepfakes and Harassment: A Growing Threat

Deepfakes can be used to target and harass individuals. The most extreme form of harassment involves the creation of non-consensual pornography, which can be used outright or as content for blackmail and sextortion scams.[48] This form of violence against women is referred to as 'image-based sexual abuse' ("IBSA"), "This term refers to all forms of the non-consensual creating,

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[40] Hate Speech and Fake News: The Impact on Working Conditions of Local and Regional Elected Representatives, Congress of Local and Regional Authorities of the Council of Europe, 43rd Session, CG (2022)43-11final, October 25, 2022. https://rm.coe.int/0900001680a8340b

[41] Teresa Weikmann & Sophie Lecheler, cutting through the Hype: Understanding the Implications of Deepfakes for the Fact-Checking Actor-Network, Digital Journalism, vol. 12, no. 2, March 2023. Cutting through the Hype: Understanding the Implications of Deepfakes for the Fact-Checking Actor-Ne

[42] Wilson Lowrey, The Emergence and Development of News Fact-Checking Sites: Institutional Logics and Population Ecology, Journalism Studies, vol. 18, no. 3, March 2017, pp. 376–394.

[43] Teresa Weikmann & Sophie Lecheler, cutting through the Hype: Understanding the Implications of Deepfakes for the Fact-Checking Actor-Network, Digital Journalism, vol. 12, no. 10, March 2023. Cutting through the Hype: Understanding the Implications of Deepfakes for the Fact-Checking Actor-Ne

[44] Nathan Hamiel, Deepfakes Proved a Different Threat Than Expected: Here's How to Defend Against Them, World Economic Forum, January 10, 2025. Deepfakes are here to stay and we should remain vigilant | World Economic Forum

[45] Catherine Stupp, Fraudsters Used AI to Mimic CEO's Voice in Unusual Cybercrime Case: Scams Using Artificial Intelligence Are a New Challenge for Companies, The Wall Street Journal. Fraudsters Used AI to Mimic CEO's Voice in Unusual Cybercrime Case – WSJ

[46] Thomas Brewster, Fraudsters Cloned Company Director's Voice in $35 Million Heist, Police Find, Forbes, October 14, 2021. Fraudsters Cloned Company Director's Voice In $35 Million Heist, Police Find

[47] Ryan Cooke, How Scammers Likely Used Artificial Intelligence to Con Newfoundland Seniors Out of $200K, CBC News, March 22, 2023. How scammers likely used artificial intelligence to con Newfoundland seniors out of $200K | CBC News

[48] Extortion, also called "sextortion," refers to the act of using the threat of publishing sexual content (images, videos, deepfakes, sexual rumors) to menace, coerce, or blackmail someone—either for more sexual content, for money, or both. *Source: GREVIO (Group of Experts on Action against Violence against Women and Domestic Violence), General Recommendation No. 1 on the digital dimension of violence against women, Strasbourg, Council of Europe, 2021.*

taking or sharing of intimate images or videos, including altered or manipulated media, and threats to distribute such material".[49] Significantly, IBSA goes beyond distribution, to encompass the non-consensual creation of intimate images or videos, particularly using artificial intelligence to alter material to make it sexual or pornographic.[50] Many Jurisdictions are recognizing deepfake pornographic materials as the new IBSA, intimate material can be quickly and cheaply generated using increasingly common and user-friendly technology.[51] A staggering 98% of deepfake videos circulating online are pornographic in nature.[52]

Image-based sexual abuse can have devastating consequences, profoundly impacting victims' lives. It often results in a drastic psychological and emotional break, where individuals feel an intrusive violation so severe that they mentally separate their life into two distinct phases: before and after the abuse.[53] One of the most pressing dangers online today is the financial sextortion of young people.[54] IBSA violates fundamental rights (In European scholarship, IBSA is considered a serious violation of sexual autonomy)[55] and undermines human dignity, eroding victims' self-worth and respect.[56]

5. EU POLICY AND ACTION ON IMAGE-BASED SEXUAL ABUSE: THE LEGAL DEVELOPMENT PATH

This type of harassment can have devastating consequences, making the adoption of legal measures essential. The EU still has a long road ahead in effectively combating violence against women, though its efforts can be traced back to a European Parliament Resolution in 1986 on violence against women.[57]

After the 2019 European elections, gender equality became a key focus in European politics. This was strongly supported by Ursula von der Leyen, the first female President of the European Commission.[58] Soon after, the Commission introduced the Gender Equality Strategy.[59] As part of its Strategy, the EU finalized its accession to the Council of Europe Convention on Preventing and

[49]Carlotta Rigotti & Clare McGlynn, Towards an EU Criminal Law on Violence Against Women: The Ambitions and Limitations of the Commission's Proposal to Criminalize Image-Based Sexual Abuse, New Journal of European Criminal Law, vol. 13, no. 4, 2022. Towards an EU criminal law on violence against women: The ambitions and limitations of the Commission's proposal to criminalise image-based sexual abuse – Carlotta Rigotti, Clare McGlynn, 2022

[50] Danielle K. Citron & Robert Chesney, Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security, California Law Review, vol. 107, no. 6, December 2019. Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security

[51] Carlotta Rigotti and Clare McGlynn, *Towards an EU Criminal Law on Violence Against Women: The Ambitions and Limitations of the Commission's Proposal to Criminalise Image-Based Sexual Abuse*, *New Journal of European Criminal Law* 13, no. 4, 2022.

[52] 2023 State of Deepfakes: Realities, Threats, and Impact, AI Advisory Boards, April 9, 2024. 2023 State Of Deepfakes: Realities, Threats, And Impact

[53] Clare McGlynn, Kelly Johnson, Erika Rackley, Nicola Henry, Nicola Gavey, Anastasia Powell & Asher Flynn, "It's Torture for the Soul": The Harms of Image-Based Sexual Abuse, Social & Legal Studies, vol. 30, no. 4, 2021, p 541.

[54] The Intervention Journey: A Roadmap to Effective Digital Safety Measures, World Economic Forum, March 2025.WEF_The_Intervention_Journey_A_Roadmap_to_Effective_Digital_Safety_Measures_2025.pdf

[55] Anja Schmidt, The Abuse of Sexual Images between Liberal Criminal Law and the Protection of Sexual Autonomy, Criminalizing Intimate Image Abuse: A Comparative Perspective, Oxford University Press, February 2024.

[56] Clare McGlynn & Erika Rackley, *Image-Based Sexual Abuse*, *Oxford Journal of Legal Studies*, vol. 37, no. 3, Autumn 2017. Image-Based Sexual Abuse | Oxford Journal of Legal Studies | Oxford Academic

[57] Council Conclusions on the Eradication of Violence Against Women in the European Union, Council of the European Union, March 8, 2010. COUNCIL OF

[58] Petra Debusscher, The EU Gender Equality Strategy 2020-2025: The Beginning of a New Season?, European Trade Union Institute, 2023. 05__The EU Gender Equality Strategy 2020-2025 the beginning of a new season.pdf

[59] Gender Equality Strategy 2020-2025, European Commission, 2025. Gender equality strategy – European Commission

Combating Violence Against Women and Domestic Violence, known as the "Istanbul Convention".[60] It should be noted that, several EU countries opposed the ratification of the Istanbul Convention. In 2019, the European Parliament requested a legal opinion from the ECJ on the EU's accession to the Istanbul Convention. In 2021, the ECJ ruled that Articles 78(2), 82(2), 84, and 336 TFEU allow the Council to adopt the Convention by qualified majority, without requiring full Member State agreement.[61] In 2021, the European Parliament urged the EU and its Member States to take measures against cyber violence targeting women, recognizing it as an extension of the sexual violence and abuse they face in offline spaces.[62] While negotiations were on-going regarding the EU's accession to the Istanbul Convention, the European Commission published a proposal addressing specific forms of cyber violence, including non-consensual sharing of manipulated material, cyber-stalking, cyber harassment, and cyber incitement to violence or hatred. The proposal mandated enhanced coordination and cooperation among Member States, acknowledging that the regulation of cyber violence remains fragmented, leaving victims vulnerable and unprotected.[63] In this regard, the Commission stressed that cyber violence is as prevalent and significant as physical forms of gender-based violence.

In May 2024, the European Union adopted landmark legislation, the first binding law, aiming to harmonize legislative and policy responses to violence against women and domestic violence across all its Member States.[64] However, across the EU there is little legislative action in this field, with recent Irish legislation being a notable exception. The comprehensive framework of the Istanbul Convention offers additional measures for prevention, prosecution, and coordination, helping to strengthen protections against digitally manipulated sexual abuse.[65] According to the Group of Experts on Action against Violence against Women and Domestic Violence (GREVIO), this provision applies to image-based sexual abuse (IBSA), including deepfake-generated sexual images.[66]

While not a complete solution, this provision marks an initial step for the EU and its Member States to strengthen protections against IBSA. Following several rounds of inter-institutional negotiations between the European Parliament and the Council, a political agreement was achieved in February 2024. In summary, while the EU institutions agreed to remove rape from the list of crimes included, Other significant proposals were retained including the criminalization of cyberflashing. Generally, in terms of the legal basis, the Commission relies on Article 83.1 TFEU which provides competence to establish minimum rules and define criminal offences "in the areas

[60] Ionel Zamfir, EU Accession to the Istanbul Convention, European Parliamentary Research Service, February 2023. EU accession to the Istanbul Convention

[61] *Opinion of the Court (Grand Chamber) on the Istanbul Convention*, *Court of Justice of the European Union*, October 6, 2021. EUR-Lex – 62019CV0001(02) – EN – EUR-Lex

[62] European Parliament, *Resolution on Combating Gender-Based Violence: Cyberviolence*, P9_TA(2021)0489, 14 December 2021, Texts adopted – Combating gender-based violence: cyberviolence – Tuesday, 14 December 2021

[63] *Proposal for a Directive on Combating Violence Against Women and Domestic Violence*, *European Commission*, March 8, 2022. EUR-Lex – 52022PC0105 – EN – EUR-Lex

[64] Directive (EU) 2024/1385 on Combating Violence Against Women and Domestic Violence, European Parliament & Council of the European Union. Directive – EU – 2024/1385 – EN – EUR-Lex

[65] Carlotta Rigotti and Clare McGlynn, *Towards an EU Criminal Law on Violence Against Women: The Ambitions and Limitations of the Commission's Proposal to Criminalise Image-Based Sexual Abuse*, *New Journal of European Criminal Law* 13, no. 4 (2022), Towards an EU criminal law on violence against women: The ambitions and limitations of the Commission's proposal to criminalise image-based sexual abuse – Carlotta Rigotti, Clare McGlynn, 2022

[66]Group of Experts on Action Against Violence Against Women and Domestic Violence (GREVIO), General Recommendation No. 1 on the Digital Dimension of Violence Against Women, 2024, https://rm.coe.int/grevio-rec-no-on-digital-violence-against-women/1680a49147

of particularly serious crime with a cross-border dimension resulting from the nature or impact of such offences". [67]

Additionally, the final agreement included the Council's amendment stipulating that cyber stalking and harassment, along with the non-consensual sharing of intimate images online, should only be considered criminal offenses across the EU when such actions are likely to cause serious psychological harm or instill fear for the victims' safety. Under Article 5 of Directive (EU) 2024/1385, Member States must ensure that making sexually explicit images, videos, or similar material publicly accessible via information and communication technologies (ICT) without the consent of the person depicted is punishable as a criminal offense—if the act is likely to cause serious harm to the victim.[68] The phrase " cause serious harm to that person" presents a challenge since victims may not immediately perceive the harm they've suffered. If serious harm becomes the primary criterion for punishment, offenders could escape accountability when the damage is not clearly acknowledged or proven. Therefore, I believe that the creation of such material using deepfake technology should be punishable, regardless of whether harm is present or not.

According to Article 5(1)(b) of Directive (EU) 2024/1385, requires Member States to criminalize creation and distribution of AI-generated intimate deepfakes. This provision acknowledges the rapid rise of artificial intelligence and other technologies used to manipulate or alter images to falsely depict individuals as engaging in sexually explicit activities without their consent. It further criminalizes making such manipulated content publicly accessible through information and communication technologies (ICTs). According to Article 5(1)(c) of Directive (EU) 2024/1385, the scope of criminalized conduct is extended to include threats to distribute intimate or manipulated material covered under Article 5(1)(a) and 5(1)(b).[69]

Under Article 5(1)(b) of Directive (EU) 2024/1385, the definition of altered and deepfake imagery is narrow, covering only depictions of active engagement in sexually explicit activities. This excludes nude images, even if they are sexual in nature, leaving a gap in legal protection for victims. Regarding Article 5(1)(c) of Directive (EU) 2024/1385, it criminalizes threats related to the distribution of intimate or manipulated material but only when used to coerce, pressure, or manipulate a person into acting, agreeing to something, or refraining from a certain action. However, the provision does not explicitly cover threats made without coercive intent.[70]

The wording "making accessible to the public" in Article 5 of Directive (EU) 2024/1385 presents a significant legal issue. While deepfake-generated intimate content may not always reach a wide audience, its targeted dissemination—such as within a victim's family, workplace, or social circles—can still cause severe harm, including psychological trauma, reputational damage, and even fatal consequences. One of the most significant gaps in Article 5 of Directive (EU) 2024/1385 is that it only criminalizes the distribution or the threat of distribution of intimate or manipulated material. The mere creation of deepfake sexual images is not explicitly punishable, leaving a major loophole.

Article 7(b) addresses content that has been created or digitally altered to make it seem as though an individual is participating in sexual activities, without their consent. This provision is intended to regulate deepfakes or fake porn. Article 7(b) has a narrow scope, applying only to manipulated material where a person appears to be engaged in sexual activities. This definition could

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[67] *Consolidated Versions of the Treaty on European Union and the Treaty on the Functioning of the European Union*, *EUR-Lex*, October 26, 2012. eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT

[68] European Parliament and Council, *Directive (EU) 2024/1385 on Combating Violence Against Women and Domestic Violence*, 14 May 2024, Directive – EU – 2024/1385 – EN – EUR-Lex

[69] European Union, *Directive (EU) 2024/1385 on Combating Violence Against Women and Domestic Violence*, 14 May 2024, Directive – EU – 2024/1385 – EN – EUR-Lex

[70] Carlotta Rigotti, Clare McGlynn, and Franziska Benning, *Image-Based Sexual Abuse and EU Law: A Critical Analysis*, *German Law Journal* 25, no. 9 (2024)

lead to ambiguity, as it may exclude non-sexual nudity, such as images of people changing clothes or using restrooms, even if the content is considered sexualized. Due to these limitations, the draft risks excluding certain harmful content. A more clear and comprehensive approach would be to criminalize all intimate images, including nude and sexual content, as done in Article 7(a). Article 7(c) rightly criminalizes the intentional threat to distribute intimate images or videos, including deepfakes, recognizing the severe harm such threats inflict. By addressing both manipulated material and deepfake-related threats, this provision signals a strong commitment to tackling abuse and will necessitate legal changes across Member States. It should also cover blackmail where the perpetrator demands money to prevent distribution, a more common form of extortion where adults are the victims[71]

Overall, the regulation of IBSA and, in a broader context, online and technology-facilitated violence against women, was considered a significant milestone with the potential to bolster women's fundamental rights and safety in cyberspace. However, it was widely acknowledged that the current wording of the Directive was narrow in scope and did not adequately reflect the experiences of victim.[72]

5.1. Legal Sanctions for Deepfake-Related Violence

Article 10(4) of the EU Directive on combating violence against women and domestic violence sets a minimum punishment of at least one year of imprisonment for offenses covered in Article 7, which includes crimes related to deepfake abuse. [73] This penalty has been criticized by the EESC which considers that the sanction should be equivalent to the minimum for cyber-stalking which is a maximum of two years' imprisonment. Determining the severity of violence against women offenses is challenging, as victims' experiences can differ significantly. Simply raising criminal penalties may not be the most effective solution. Instead, criminalization plays a crucial role in recognizing image-based sexual abuse as a serious crime, but its primary goal should be to shift societal attitudes and prevent abuse, rather than solely increasing prison sentences.[74]

6. LEGAL SOLUTIONS: SUING THE CREATORS OF DEEP FAKES OR SUING THE PLATFORMS

First and foremost, it should be noted that victims often avoid filing lawsuits because the 'Streisand Effect' influences on their decision. The Streisand Effect tends to loom over the choice to sue, especially when the deepfake is humiliating or damages their reputation. Legal action inevitably draws public attention, and unless the victim is allowed to file under a pseudonym, pursuing a lawsuit may intensify the harm they experience.[75]

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[71] Carlotta Rigotti and Clare McGlynn, *Towards an EU Criminal Law on Violence Against Women: The Ambitions and Limitations of the Commission's Proposal to Criminalise Image-Based Sexual Abuse*, *New Journal of European Criminal Law* 13, no. 4, 2022, Towards an EU criminal law on violence against women: The ambitions and limitations of the Commission's proposal to criminalise image-based sexual abuse – Carlotta Rigotti, Clare McGlynn, 2022

[72] Carlotta Rigotti, Clare McGlynn, and Franziska Benning, *Image-Based Sexual Abuse and EU Law: A Critical Analysis*, *German Law Journal* 25, no. 9, 2024, Image-Based Sexual Abuse and EU Law: A Critical Analysis | German Law Journal | Cambridge Core

[73] European Parliament and Council, Directive (EU) 2024/1385 on Combating Violence Against Women and Domestic Violence, 14 May 2024. Directive – EU – 2024/1385 – EN – EUR-Lex

[74] Carlotta Rigotti and Clare McGlynn, *Towards an EU Criminal Law on Violence Against Women: The Ambitions and Limitations of the Commission's Proposal to Criminalise Image-Based Sexual Abuse*, *New Journal of European Criminal Law* 13, no. 4, 2022. Towards an EU criminal law on violence against women: The ambitions and limitations of the Commission's proposal to criminalise image-based sexual abuse – Carlotta Rigotti, Clare McGlynn, 2022

[75] Mike Masnick, *Since When Is It Illegal to Just Mention a Trademark Online?*, *Techdirt*, January 5, 2005. Since When Is It Illegal To Just Mention A Trademark Online? | Techdirt.

If a victim decides to sue the creator of a deep fake, multiple legal frameworks will come into play, including intellectual property and tort law.[76] If the original photo was taken by the victim, she will hold the copyright to that image[77]. The most severe cases of victims being targeted by fake news can fall under defamation law. However, suing every internet troll is wildly impractical. In most cases, online platforms such as Facebook or Twitter are the most viable defendants in a defamation lawsuit related to fake news.[78] Victims may also sue in tort for intentional infliction of emotional distress. This requires proof of "extreme and outrageous conduct."[79] It is often stated that conduct qualifies for the tort only if it is "so outrageous in character, and so extreme in degree, as to go beyond all possible bounds of decency, and to be regarded as atrocious, and utterly intolerable in a civilized community."[80]

It is challenging to hold individual deepfake creators accountable, so creators are not the only parties who might bear responsibility. Since content platform play a key role in enabling the distribution of deep fakes, and harmful deepfake creators can be difficult to track down, the most efficient and effective way to mitigate harm may be to impose liability on the platforms themselves. Online platforms are largely protected from civil liability for user-generated content under the Communications Decency Act (CDA), Section 230. This law grants immunity, preventing platforms from being treated as publishers or speakers of harmful content posted by users. Even if platforms encourage certain content, courts have interpreted Section 230 broadly, allowing them to avoid liability.[81]

In 2018, lawmakers modified the statute by enacting the Allow States and Victims to Fight Online Sex Trafficking Act ("FOSTA") to address websites' facilitation of sex trafficking. The idea is that online platforms should face the same liability for enabling illegal sex-trafficking, as offline outlets do.

7. REGULATING AI-GENERATED PORNOGRAPHIC DEEPFAKES UNDER THE DIGITAL SERVICES ACT AND AI ACT

In 2022, the EU introduced the Digital Services Act (DSA) as a fundamental element of its digital policy, aiming to protect fundamental rights while fostering a secure online environment.[82] DSA regulates online platforms, imposing size-based obligations. Under Article 2(h), "illegal content" is defined as any information that does not comply with EU or national law. Recital 12 specifically highlights the non-consensual sharing of private images, aligning with existing national legislation on certain forms of image-based sexual abuse (IBSA). This legal connection is expected to be reinforced by Article 5 of the Directive.

[76] Robert Chesney & Danielle Keats Citron, Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security, California Law Review, vol. 107, no. 6, 2019, pp. 1753–1767.
[77] Megan Farokhmanesh, Is It Legal to Swap Someone's Face into Porn Without Consent?, The Verge, January 30, 2018. Is it legal to swap someone's face into porn without consent? | The Verge
[78] Eric Goldman, Combatting Deepfakes Through the Right of Publicity, Lawfare, March 28, 2019. Perma | Combatting Deep Fakes through the Right of Publicity – Lawfare
[79] Robert Chesney & Danielle Keats Citron, Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security, California Law Review, vol. 107, no. 6, 2019, pp. 1753–1819.
[80] Benjamin C. Zipursky, Snyder v. Phelps, Outrageousness, and the Open Texture of Tort Law, DePaul Law Review, vol. 60, no. 2, 2011, p 473
[81] Robert Chesney & Danielle Keats Citron, Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security, California Law Review, vol. 107, no. 6, 2019, pp. 1753–1819.
[82] Aina Turillazzi, Federico Casolari, Mariarosaria Taddeo, and Luciano Floridi, *The Digital Services Act: An Analysis of Its Ethical, Legal, and Social Implications*, SSRN, 12 January 2022.

Additionally, Recital 87 refers to "illegal pornographic content", though its definition remains unclear "due to variations in pornography laws across Member States and the lack of EU competence in this area", the recital provides an explicit example: "content representing non-consensual sharing of intimate or manipulated material."[83] In Section 5, additional obligations are imposed for Very Large Online Platforms (VLOPs) and two as Very Large Online Search Engines (VLOSEs).[84] Platforms such as Facebook, Instagram, TikTok, fall into this category, though messaging apps like WhatsApp and Telegram are currently excluded, despite calls from various stakeholders for their inclusion. Under Article 34, VLOPs and VLOSEs must assess risks related to illegal content and gender-based violence. Article 35 requires prompt removal of non-consensual material, distinguishing deepfakes from authentic images, and collaborating with other platforms to prevent content from spreading further. While the DSA applies to all online platforms serving EU users, enforcement is decentralized, relying on Member States, which may lead to inconsistencies in addressing IBSA. The effectiveness of this framework depends on regulators' engagement and their willingness to hold platforms accountable.[85]

In 2021, the European Commission published its proposal for the AI Act. Three years later, the European Parliament and the Council approved the final text, but it will take additional years before this legislation becomes enforceable at the national level.[86] Additionally, the AI Act applies to developers, distributors, and users of AI systems within the EU market, ensuring accountability for AI-generated content. The European Commission is expected to adopt implementation measures for labeling and detection of deepfake materials, but enforcement remains decentralized, relying on Member States.[87]

8. THE INTERSECTION OF DIRECTIVE (EU) 2024/1385 AND FREEDOM OF EXPRESSION

The Council included a concluding paragraph in Article 5 of Directive (EU) 2024/1385, clarifying that its criminalization mandate must be applied in full respect of the rights, freedoms, and principles established in Article 6 TEU.[88] It is unclear what has prompted this provision, as EU law is already supposed to be fully harmonized, and this principle is taken into account when adopting directives. It also underscores that this criminalization is implemented without prejudice to fundamental principles related to freedom of expression. That's why I will dedicate a separate section to freedom of expression.

[83] Carlotta Rigotti, Clare McGlynn, and Franziska Benning, *Image-Based Sexual Abuse and EU Law: A Critical Analysis*, *German Law Journal* 25, no. 9 (2024), Image-Based Sexual Abuse and EU Law: A Critical Analysis | German Law Journal | Cambridge Core

[84] Access Now, *VLOPs or Flops: Is Big Tech Dodging Accountability in the EU?*, 4 May 2023, VLOPs or flops: Is Big Tech dodging accountability in the EU? – Access Now

[85] Carlotta Rigotti, Clare McGlynn, and Franziska Benning, *Image-Based Sexual Abuse and EU Law: A Critical Analysis*, *German Law Journal* 25, no. 9 (2024), Image-Based Sexual Abuse and EU Law: A Critical Analysis | German Law Journal | Cambridge Core

[86] European Union, *Artificial Intelligence Act*, 2024.

[87] Carlotta Rigotti, Clare McGlynn, and Franziska Benning, *Image-Based Sexual Abuse and EU Law: A Critical Analysis*, *German Law Journal* 25, no. 9 (2024), Image-Based Sexual Abuse and EU Law: A Critical Analysis | German Law Journal | Cambridge Core

[88] European Union, *Directive (EU) 2024/1385 on Combating Violence Against Women and Domestic Violence*, 14 May 2024, Directive – EU – 2024/1385 – EN – EUR-Lex

Freedom of expression is one of the cornerstones of democratic society.[89] Digital technologies fundamentally change our understanding of what liberty of speech is. the digital age subtly alters our understanding of liberty of expression.[90]

Would suppressing deepfakes violate freedom of expression norms? Two simple answers are rejected: that deepfakes do not deserve protection under freedom of expression legislation because they are fake by definition; and that deepfakes can be targeted if but only if they are misleadingly presented as authentic.[91]

Based on Article 50.4 of AI act, the only exception is for deepfakes created as part of creative, satirical, artistic, or fictional work, thereby falling under freedom of expression. However, this exemption does not address the harm caused by sexually explicit deepfakes, where labeling alone does not mitigate violations of autonomy and sexual integrity.

As Koltay details, the EU is also developing multiple other measures. For present purposes, this can be illustrated by the Strengthened Code of Practice on Disinformation, the Digital Services Act (DSA). The measures together reflect positive and negative dimensions of democratic free speech, and they do things consistent with the positive dimensions of free expression in a way that is harder to imagine in the USA. The measures include indirect horizontal requirements on private actors, such as DSA obligations on platforms. The DSA requires very large platforms to assess and mitigate systemic risks while protecting fundamental rights, but enforcement challenges remain. Balancing risk regulation and free expression is complex, especially for US-based platforms with narrower rights frameworks.

9. CONCLUSION

Ultimately, it is clear that deepfakes represent one of the most serious challenges in today's digital reality. They serve as a powerful tool for spreading disinformation, which, according to the World Economic Forum, ranks among the top 10 threats facing humanity. The European Union's regulatory response is crucial in addressing this issue, ensuring accountability and transparency in AI-generated content.

Furthermore, collective action is essential in tackling disinformation effectively. A key demonstration of this commitment is the European Commission's initiative, which has brought together major online platforms, emerging and specialized digital services, advertising industry players, fact-checkers, researchers, and civil society organizations to establish a strengthened Code of Practice on Disinformation. This collaborative approach aims to enhance online integrity, content moderation, and platform responsibility in preventing the spread of misleading AI-generated narratives.

Image-based sexual abuse (IBSA) involves the non-consensual creation, distribution, or threats related to intimate materials. It is a serious gendered harm that has become increasingly common, especially with advancements in digital technology.

The European Union (EU) has recognized the urgency of addressing gender-based violence, including its online dimensions. A recent directive specifically targets IBSA by criminalizing the unauthorized sharing of intimate or manipulated content and cyberflashing. Additionally, the Digital

[89] Giovanni De Gregorio, Digital Constitutionalism and Freedom of Expression, Digital Constitutionalism in Europe: Reframing Rights and Powers in the Algorithmic Society, Cambridge University Press, 2022, Digital Constitutionalism and Freedom of Expression (Chapter 5) – Digital Constitutionalism in Europe

[90] Jack M. Balkin, Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society, New York University Law Review 79, no. 1 2004, Digital Speech and Democratic Culture: a Theory of Freedom of Expression for the Information Society by Jack M. Balkin:: SSRN

[91] Alex Barber, *Freedom of Expression Meets Deepfakes*, *Synthese* 202, no. 40, 2023, Freedom of expression meets deepfakes | Synthese

Services Act (DSA) and AI Act strengthen regulations by holding online platforms, search engines, and AI developers accountable, ensuring transparency and safeguards in digital environments.

Despite certain **gaps in the Istanbul Convention and other legislative acts**, the **European Union's efforts** in addressing gender-based violence remain commendable. The EU has **taken significant steps** to regulate **image-based sexual abuse (IBSA) and online harms**, but there are **still areas that require improvement and refinement**.

Hopefully, **future revisions** will **fill existing gaps** and **enhance protections**, ensuring a **stronger and more comprehensive framework** against digital and gender-based violence. Continuous **legal evolution** and **multilateral cooperation** are essential in **strengthening these regulations**.

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Brain-Computer Interfaces In The Medical Field: Legal And Ethical Considerations Surrounding The Global Protection Of Human Rights

DR. FRANCESCA BUIATTI[1]
DEPARTMENT OF HUMANISTIC STUDIES AND CULTURAL HERITAGE, UNIVERSITY OF UDINE, ITALY

Abstract: *This paper explores the ethical and legal implications of brain-computer interfaces, which uniquely connect the human brain to external devices and have the potential to revolutionise the medical field. As BCI technologies advance rapidly, significant ethical concerns have surfaced, particularly regarding regulation and the protection of human rights. The research underscores the urgent need for a coherent global regulatory framework that can effectively address these challenges, emphasising the importance of robust human rights protections in the adoption of such frameworks. The paper employs a multidisciplinary approach that combines technical, policy, and legal analyses to redefine core human rights concepts, such as freedom of thought, right to privacy, integrity, and identity, within the context of BCI use. The study aims to shed light on the fragmented global legal landscape surrounding BCIs and advocate for a unified legal response that safeguards users' rights in an increasingly digital world.*
Keywords: *Artificial Intelligence, Brain-Computer Interfaces, Human Rights, International Governance, Neurorights.*

INTRODUCTION

In recent decades, technological progress has led to the emergence of new frontiers in areas that were previously the exclusive domain of science fiction. Among the most promising and, at the same time, controversial innovations are brain-computer interfaces, devices capable of recording and decoding, or even influencing, the human neural activity, by connecting the brain with external electronic systems, such as computers, prostheses or other digital devices. To date, they represent one of the most advanced frontiers of biomedical technology, as they have the potential to radically revolutionise the fields of medicine and neuroengineering, introducing extraordinary possibilities for improving the cognitive and physical health of human beings.

At the present time, a considerable number of companies across the globe are engaged in the development and testing of their own brain-computer interfaces, with the objective of making them available for sale. Companies including Neuralink, Synchron, Neurable, Emotiv, Kernel, NextMind, and others, are at the vanguard of the development of brain-computer interfaces. Their objective is to engineer revolutionary devices with potential applications extending from medical to consumer neurodevices. Despite having been operational for several years, these companies have only recently become the focus of an intense media scrutiny. This was particularly evident at the beginning of 2024, when Elon Musk made a public announcement regarding the first human implantation of his company Neuralink's Telepathy chip. The potential of this specific implant is to treat serious medical conditions, including paralysis, blindness and neurodegenerative diseases, thereby paving the way for pioneering medical therapies. While there are other companies engaged in similar neurotechnological developments, Neuralink has attracted significant attention for a number of reasons, including the leading-edge advancement of its technologies and the involvement of its founder, a prominent figure in the global technology industry. His public statements, which were often visionary and provocative, contributed to a widespread discussion of the project and thus also of the broader research field. From that moment on, it became clear to the world how such technologies could revolutionise the way humans interact with technology.

[1] Francesca Buiatti is a Master's student in Philosophy of Digital Technologies and Artificial Intelligence at the Department of Humanistic Studies and Cultural Heritage, University of Udine, Italy. ORCID: https://orcid.org/0009-0001-8932-6327

Simultaneously, the concept of implanting microchips in the human brain gave rise to significant ethical debates and concerns. In this regard, it is essential to acknowledge that the aforementioned competitive landscape of businesses operates within a domain that, while not entirely devoid of regulation, lacks explicit provisions or considerations tailored to the unique challenges and requirements associated with neurotechnologies, including brain-computer interfaces. The global regulatory framework remains fragmented, with disparate standards of protection across countries and notable legal ambiguities. Indeed, despite the growing economic and media interest in such technologies, their advancement and integration are occurring within a fragmented global legal landscape, exposing the worldwide user base to significant hazards, particularly in the realms of privacy and security. Such regulatory misalignment is currently fostering competition among manufacturers, who are often prioritising the speed of development over ethical considerations. In the absence of cohesive regulatory guidance, companies are inclined to launch products that have not undergone sufficient testing or to engage in aggressive commercial practices that neglect the long-term implications of brain-computer interfaces, especially regarding users' fundamental rights. It therefore appears clear that a unified global approach to the regulation of BCIs is essential to mitigate risks and protect the user base, ensuring that technological advancements do not outpace the necessary legal and ethical considerations.

The objective of this paper is to examine the ethical and legal implications of brain-computer interfaces, with a specific focus on the safeguarding of rights and principles as enshrined in contemporary international human rights instruments.

This research employs a multidisciplinary approach, with a particular emphasis on the technical, policy, and legal aspects. The modes of inquiry employed are reflected in the three main sections that structure this work.

The initial section presents a technical analysis of brain-computer interfaces, based on a systematic review of scientific literature, including academic articles, research publications, and technical reports. The section presents an analysis of the principal medical applications, thereby delineating the scope of this research, which excludes brain-computer interfaces employed outside the medical field, such as commercial neurodevices designed to facilitate cognitive enhancement for non-medical purposes or to enable broader forms of interaction with computing systems.

The second section of this paper employs a qualitative and comparative analysis of the international policy landscape, with the objective of evaluating the manner in which disparate international organisations are addressing the necessity for a specific and ethically-oriented regulation of brain-computer interfaces.

The third section employs a legal methodology to investigate the influence of brain-computer interfaces on the protection of human rights, with a particular emphasis on the concepts of privacy, autonomy, identity and physical and mental integrity. It examines the applicability of international regulatory instruments, particularly human rights conventions, to BCIs. The section identifies the need of an updated legal framework and proposes prospective models for the protection of relevant interests. Furthermore, it reexamines and redefines concepts such as freedom of thought, privacy, integrity and identity, and considers the potential for the so-called 'neurorights', such as that of cognitive liberty, to be universally recognised.

SECTION I: BRAIN-COMPUTER INTERFACES

1. Definition of neurotechnology and brain-computer interface

The academic literature presents a diverse array of perspectives on the definition of brain-computer interfaces. However, in order to gain an accurate understanding of the nature of such technology, it is first necessary to establish a clear definition of the broader field of neurotechnology,

which can actually be promptly retrieved inside the 'Recommendation on Responsible Innovation in Neurotechnology', adopted by the OECD Council on December 11, 2019. According to this document, neurotechnologies are "devices and procedures used to access, monitor, investigate, assess, manipulate, and/or emulate the structure and function of the neural systems of natural persons"[2]. Interestingly, the current spectrum of neurotechnologies encompasses various mechanisms, including those of electronic, optical, magnetic, acoustical, and chemical nature[3], which facilitate an enhanced comprehension of neural processes while permitting researchers' interaction with the human nervous system for a multitude of scopes envisaged by the medical domain.

Notably, the most relevant achievement for the purposes of this field of study has been the development of the so-called brain-computer interfaces (hereinafter 'BCIs'), also known as neural interfaces or brain-machine interfaces. The term was first introduced in 1973 by Jacques J. Vidal. In his paper entitled 'Toward Direct Brain-Computer Communication', Vidal initially defined BCIs as "utilising the brain signals in a man-computer dialogue"[4] and "as a means of control over external processes such as computers or prosthetic devices"[5]. Today BCIs can be essentially defined as computer-based systems that allow users to carry out desired actions while circumventing the body's traditional efferent pathways, such as peripheral nerves and muscles[6]. Indeed, by directly measuring and interpreting brain signals, BCIs enable a bidirectional communication between the nervous system and information and communication technology (ICT) devices, which paves the way for monitoring the brain, exerting a direct control over an external device via the brain, as well as influencing neural activity by means of electrical stimulation of specific regions[7].

2. Current applications in the medical field

BCIs were born to be applied in the medical field. Indeed, their advent is frequently attributed to the pioneering work of Dr. Grey Walter in 1964. During this period, Dr. Walter conducted an unprecedented experiment in which he implanted electrodes into the motor areas of a patient's brain. He connected the electrodes to a slide projector and demonstrated that the patient could advance the slides without physical movement only by utilising the amplified signals from the implanted electrodes in the motor cortex. This is considered the first instance of controlling an external device through brain activity alone[8]. Subsequently, the advancement of this technology in the medical field has been striking. To this day, BCI research continues to offer significant benefits to patients who utilise it, thereby completely revolutionising their lives. The applications of this technology in the medical field are manifold and diverse, given that BCIs are employed for purposes of prevention, diagnosis, treatment, rehabilitation and management of diseases.

Firstly, BCI has the potential to be utilised as a preventative measure. One such example is a prospective treatment for refractory epilepsy, which employs a BCI to automatically detect seizures and trigger stimulation to abort them[9]. Consequently, the integration of BCIs into wearable devices

[2] Organization for Economic Co-operation and Development, "Recommendation of the Council on Responsible Innovation in Neurotechnology", OECD/LEGAL/0457 (Dec. 11, 2019). https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0457 Accessed: 24.01.2025.

[3] Rafael Yuste, Tomás de la Quadra-Salcedo, and Miguel García Fernández, "Neuro-Rights and New Charts of Digital Rights: A Dialogue Beyond the Limits of the Law", in *Indiana Journal of Global Legal Studies* 30, no. 1, 2023, p. 21.

[4] Jacques J. Vidal, "Toward Direct Brain-Computer Communication", in *Annual review of biophysics and bioengineering*, vol. 2, 1973, pp. 157-158

[5] Ibid., p. 163.

[6] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", in *15 U. St. Thomas J.L. & Pub. Pol'y*, 2021, p. 329.

[7] Alžběta Solarczyk Krausová, "Legal aspects of brain-computer interfaces", in *Masaryk University Journal of Law and Technology* 8, 2014, p. 201.

[8] Alžběta Solarczyk Krausová, "Legal aspects of brain-computer interfaces", p. 200.

[9] Vladimir Maksimenko et al., "Brain-computer interface for the epileptic seizures prediction and prevention", in *2020 8th International Winter Conference on Brain-Computer Interface (BCI)*, Gangwon, Korea (South), 2020, p. 1.

has facilitated continuous ambulatory monitoring, enabling individuals to engage in their daily activities while the electrical activity associated with seizures is persistently observed[10].

The use of BCIs for diagnostic purposes is becoming increasingly present across various medical fields as well, as their capacity to analyse brain signals in real-time offers a distinctive advantage in the identification and diagnosis of neurological conditions. One notable example is the integration of scalp EEG within BCI technology, which is transforming the diagnosis of brain tumours[11].

With regard to the treatment and restoration of bodily functions, the applications of BCI are of the utmost diversity. Indeed, as will be discussed later on, BCIs may facilitate the restoration of sensory functions, potentially enabling individuals with sensory defects or injuries to regain their vision, hearing, tactile perception, and mobility[12]. Moreover, BCIs may play a role also in the restoration of autonomic functions like bladder and bowel control, sexual function, and the regulation of heart rate and blood pressure[13].

Furthermore, BCI has facilitated the management and, potentially, the treatment of neurodegenerative diseases such as Dementia, Alzheimer's disease and Parkinson's disease[14].

Additionally, the technology facilitates the management of neurological and psychiatric disorders, including cognitive and mood disorders, through the precise modulation of brain activity[15]. This is exemplified by the effective utilisation of BCIs to train individuals to regulate their cerebral signals, thereby alleviating symptoms of depression or Attention-Deficit Hyperactivity Disorder (ADHD) through neurofeedback[16]. Furthermore, novel forms of precision neurotherapy have been devised, whereby neural circuits can be selectively targeted, modulated or even reprogrammed[17].

One of the most pressing objective for clinical BCI research at this time is the development of solutions for individuals diagnosed with Locked-in Syndrome (LiS) and advanced Amyotrophic Lateral Sclerosis (ALS)[18]. As both conditions result in the complete loss of voluntary muscle movement while preserving sensory and cognitive functions, BCIs provide a means of communication and task performance that would otherwise be impossible for these individuals[19]. In this regard, the provision of BCI-based access to computers and virtual keyboards is actually able to facilitate an enhanced communication[20]. In addition, it is now possible also to synthesise speech effectively and to decipher even the earliest attempts at handwriting[21]. Indeed, recent advances in deep neural networks and latent diffusion models have demonstrated the capacity to decode a range

[10] Wireko Andrew Awuah et al, "Bridging Minds and Machines: The Recent Advances of Brain-Computer Interfaces in Neurological and Neurosurgical Applications", p. 142.
[11] Ibid.
[12] Rafael Yuste, "Advocating for neurodata privacy and neurotechnology regulation", in *Nature Protocols* 18, 2023, p. 2870.
[13] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 334.
[14] Wireko Andrew Awuah et al, "Bridging Minds and Machines: The Recent Advances of Brain-Computer Interfaces in Neurological and Neurosurgical Applications", p. 140.
[15] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 334.
[16] Elisabeth Hildt, "Brain-Computer Interaction and Medical Access to the Brain: Individual, Social and Ethical Implications", in *Studies in Ethics, Law, and Technology* 4, no. 3, 2010, p. 5.
[17] Rafael Yuste, "Advocating for neurodata privacy and neurotechnology regulation", p. 2870.
[18] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 333.
[19] Anastasia Greenberg, "Inside the Mind's Eye: An International Perspective on Data Privacy Law in the Age of Brain Machine Interfaces", p. 89.
[20] Elisabeth Hildt, "Brain-Computer Interaction and Medical Access to the Brain: Individual, Social and Ethical Implications", p. 5.
[21] Rafael Yuste, "Advocating for neurodata privacy and neurotechnology regulation", p. 2870.

of cognitive processes, including also speech perception, semantic representation of images and silent reading[22].

A final, but by no means least, application of BCI in the field of rehabilitation and assistance is the control of prostheses. Indeed, BCIs offer a potential avenue for individuals with severe motor impairments to regain lost motor functions by directly controlling neuroprostheses or other mobility-assisting devices, such as powered wheelchairs, hand orthoses, robotic arms, or powered exoskeletons[23]. Leaving aside impairments that have a purely motor nature, another prevalent type of BCI neuroprosthesis that may be recalled is the cochlear implant, a diminutive electronic apparatus that stimulates the cochlear nerve, thereby enabling patients afflicted with hearing loss to finally discern sounds[24]. Similarly, also a new type of visual prosthesis capable of stimulating neurons in the visual cortex has recently been developed[25].

In conclusion, the centrality of the BCI issue and the importance of discussing it in depth are self-evident when considering the myriad of applications in the medical field. However, the integration of these technologies into medical practices requires not only technological advances, but also profound ethical and legal reflections.

SECTION II: THE CALL FOR A CONCRETE GLOBAL REGULATORY ACTION

As of the present date, national legal frameworks have far proven underdeveloped for the effective regulation of BCIs. Indeed, such technologies are generally legislated as medical products within domestic legal systems and the lack of a more specific regulation on the matter leaves significant issues unaddressed, including the potential for the misuse of such devices and the necessity for transparent and accountable practices in the handling of sensitive neurological information. These deficiencies clearly impede the complete protection of individual rights. Notably, only a limited number of countries such as some U.S. States, Chile, Brazil, the UK, Spain and Colombia have enacted specific legislation aimed at safeguarding individuals' rights from the issues arising from advancements in neurotechnology or have amended their personal data protection legislation to explicitly encompass neurodata. However, these disparate and piecemeal national initiatives are still insufficient to confront the full range of current and prospective challenges posed by BCIs[26].

Given the complexity and global scope of these concerns, it is manifest that more comprehensive and coordinated international regulatory structures are needed to ensure effective protection of rights and responsible governance of BCIs. As science becomes increasingly globalised, addressing new challenges requires a coherent and effective collective response[27]. Technological advancements now transcend national boundaries and impact societies worldwide. In order to effectively address many interconnected issues, including ethical considerations, data privacy, regulatory standards and human rights protections, it is thus essential to adopt a collaborative international approach. Such cooperation could guarantee the harmonisation of regulations and

[22] Ibid.
[23] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 333-334.
[24] Marta Sosa Navarro and Salvador Dura-Bernal, "Human Rights Systems of Protection from Neurotechnologies that Alter Brain Activity", p. 908.
[25] Ibid., p. 909.
[26] Milena Costas Trascasas, "Assessing the human rights impact of neurotechnology: towards the recognition of 'neurorights'", Research proposal presented at the Human Rights Council, Advisory Committee, 28th session, A/HRC/AC/28/2 (Aug. 2022). https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/advisorycommittee/session28/2022-08-09/AC28-Human-rights-impact-of-neurotechnology.docx Accessed: 24.01.2025.
[27] State University of New York, Downstate Health Sciences University, UNESCO, University of Milan-Bicocca (Italy), *The Risks and Challenges of Neurotechnologies for Human Rights* (UNESCO Publishing, 2023), p. 30.

policies, fostering innovation while safeguarding against potential risks and ensuring equitable benefits for all populations.

As a matter of fact, without a unified worldwide strategy, fragmented national efforts would inevitably fall short in managing the complexities of modern scientific progress. The challenges are manifold. Foremost among them is the potential for individual countries to undertake the regulation of neurotechnologies without conducting a thorough and comprehensive assessment of the associated implications. This approach could lead governments to focus legislation solely on concerns relevant to their own specific socio-economic and political contexts, while neglecting or failing to adequately address issues that are significant to other cultures, political systems, or economies[28]. Another critical challenge lies in the capacity of transnational actors, such as private technology developers, to circumvent existing human rights norms. Indeed, the conventional international legal framework imposes direct legal obligations on states, frequently excluding non-state actors from its formal scope. Human rights law generally obliges states to protect individuals from violations by non-state actors, rather than holding the actors themselves accountable. This lacuna in governance is especially problematic in the context of rapidly advancing neurotechnologies, where private companies play a central role in innovation and deployment[29]. Further exacerbating these challenges is the decline in multilateral lawmaking, driven by geopolitical tensions and political reluctance among states to regulate large corporations. This decline provides transnational firms with greater freedom to engage in practices such as forum shopping, strategically selecting jurisdictions with minimal regulatory oversight to advance their interests[30].

In light of the aforementioned concerns, numerous international actors have explicitly called for a stance to be taken by states and other international and supranational entities. Indeed, from the perspective of the international governance, numerous international organisations are already playing a crucial role in addressing the need for clarification, while urging member states to guarantee specific protection in their legislation against new emerging forms of fundamental rights violations[31].

The Organisation for Economic Co-operation and Development (OECD) was the first international organisation to take action in this field. Notably, in 2019 it published the 'Recommendation of the Council on Responsible Innovation in Neurotechnology', which is considered to be the very first internationally-recognised standard in the field of neurotechnology governance, serving as a reference point for governments and innovators to navigate the ethical, legal, and societal challenges associated with the emerging neurotechnologies in the medical field. The document places peculiar emphasis on nine principles. For the topics that will be subsequently covered in this paper, the following are of particular importance: the promotion of responsible innovation in healthcare, the prioritisation of safety assessment, the creation of oversight and advisory bodies, the elimination of discrimination, the safeguarding of personal brain data and the anticipation and monitoring of potential unintended use and/or misuse.

Following the publication of this foundational document, the topic of neurotechnology regulation was immediately addressed in Europe as well. In this context, it is pertinent to cite the 2020 Resolution 2344 of the Parliamentary Assembly of the Council of Europe, entitled 'The

[28] Karen Herrera-Ferrá et al, "Contextual and Cultural Perspectives on Neurorights: Reflections Toward an International Consensus", in *AJOB neuroscience*, vol. 14, 4, 2023, p. 360.

[29] Walter Johnson, Lucille Tournas and Reina Magistro Nadler, "Implementing Neurorights: Legal and Regulatory Considerations", in *Neuroethics* 18, 5, 2025, p. 8.

[30] Ibid., p. 9.

[31] State University of New York, Downstate Health Sciences University, UNESCO, University of Milan-Bicocca (Italy), *The Risks and Challenges of Neurotechnologies for Human Rights*, p. 26.

brain-computer interface: new rights or new threats to fundamental freedoms?'[32]. This document actually represents the prime instance in which BCIs are specifically treated as the focal point of an official political declaration. Peculiar is that the Assembly specifically proposes the establishment of new human rights, under the nomenclature of 'neurorights', urging Member States to adopt comprehensive legal and ethical frameworks as well in order to integrate them. The ethical principles highlighted in the present document are consistent with those set forth in the preceding OECD document. Subsequently, as part of its Strategic Action Plan on Human Rights and Technologies in Biomedicine (2020-2025), the Council of Europe published also series of fundamental reports, the most significant of which is the one named 'Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field'[33], written by Professor Marcello Ienca. The latter is of particular importance for the purposes of this research, as it is the first document to address extensively the issue of human rights in relation to the use of BCI in the medical field. Indeed, the text provides an exhaustive examination of the proposal of four principal neurorights (namely, cognitive liberty, mental privacy, mental integrity and psychological continuity) and of the academic discourse surrounding their acknowledgement. Given the significance of this subject matter, this paper will offer a comprehensive investigation of it, particularly in Section III.

With regard to the European Union, while it has already in place a fragmented yet relatively comprehensive framework for regulating neurotechnologies within the medical field, encompassing instruments such as the Medical Device Regulation (MDR)[34], the General Data Protection Regulation (GDPR)[35], and the Artificial Intelligence Act (AI Act)[36], there has been a notable lack of explicit public political statements addressing the potential risks to fundamental rights posed by BCIs. Despite the European Union's significant funding of neurotechnologies through its Horizon 2020 and Horizon Europe programmes, which have driven advancements in various neuroscientific fields, the only document explicitly addressing the need for human rights protection in this legal domain is the 'León Declaration on European Neurotechnology: A Human-Centric and Rights-Oriented Approach'[37]. However, this declaration is notably brief and lacks detailed guidance. It was signed by the Ministers for Telecommunications and Digitalisation, who committed themselves to promoting the development of neurotechnologies in a way that is "human-centred and

[32] Council of Europe, Parliamentary Assemby, "The brain-computer interface: new rights or new threats to fundamental freedoms?", Resolution 2344 (Oct. 22, 2020). https://pace.coe.int/en/files/28810/html Accessed: 24.01.2025.

[33] Marcello Ienca, "Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field", Report commissioned by the Committee on Bioethics (DH-BIO) of the Council of Europe (Oct. 2021). https://www.researchgate.net/publication/356412675_COMMON_HUMAN_RIGHTS_CHALLENGES_RAISED_BY_DIFFERENT_APPLICATIONS_OF_NEUROTECHNOLOGIES_IN_THE_BIOMEDICAL_FIELD Accessed: 24.01.2025.

[34] European Union, "Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC", Official Journal of the European Union, L 117 (Apr. 5, 2017). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R0745 Accessed: 24.01.2025.

[35] European Union, "Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with regard to the Processing of Personal Data and on the Free Movement of such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation)", Official Journal of the European Union, L 119 (Apr. 27, 2016). https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32016R0679 Accessed: 24.01.2025.

[36] European Union, "Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act)", Official Journal of the European Union, L series (Jun. 13, 2024). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689 Accessed: 24.01.2025.

[37] Spanish Presidency of the Council of the European Union, "León Declaration on European Neurotechnology: A Human Centric and Rights-Oriented Approach", (Oct. 24, 2023). https://spanish-presidency.consilium.europa.eu/en/news/leon-declaracion-european-neurotechnology-human-rights/ Accessed: 24.01.2025.

rights-oriented". According to the declaration, the European Commission, in collaboration with the recently established European Centre for Algorithmic Transparency, should facilitate high-level expert discussions with a view to evaluating the extent to which current regulatory and policy frameworks, including forthcoming legislative proposals, safeguard individual and collective rights in the context of neurotechnologies. Nevertheless, it is evident that the political discourse remains at an early, embryonic stage of development.

In the Americas, the Inter-American Juridical Committee on Neuroscience also sought to address the topic as early as 2021 by issuing the 'Declaration on Neuroscience, Neurotechnologies and Human Rights: New Legal Challenges for the Americas'[38]. Its content was furthermore developed inside the subsequent 2023 declaration, entitled 'Inter-American Declaration of Principles Regarding Neuroscience, Neurotechnologies and Human Rights'[39], which stresses the respect for human dignity, privacy, and autonomy, while emphasising the need to safeguard mental integrity, ensure informed consent, and promote equal access to neurotechnological benefits, urging states to establish effective protection mechanisms, especially for vulnerable groups.

A robust and impactful contribution to the global discourse on neurotechnology has actually been proffered by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Indeed, from an international governance perspective, UNESCO was the first intergovernmental organisation to advocate Member States to incorporate strong protections against emerging violations of fundamental rights into their legislation[40]. In this regard, it is crucial to acknowledge the seminal contribution of the UNESCO International Bioethics Committee. From the legal point of view, the 2021 report, named 'Ethical Issues Of Neurotechnology'[41] addresses the need for "a new set of neuro-specific human rights", namely those referring to the integrity and autonomy of the mind, the continuity of the individual's identity and psychological state, the right to privacy, the accessibility and the pursuit of social justice. Furthermore, it is evident that UNESCO is willing to develop the first international normative instrument to address the pertinent issue. Indeed, as a decision of UNESCO's General Conference at its 42nd session, the Director-General constituted an Ad Hoc Expert Group (AHEG) with the objective of preparing the draft text of a recommendation, which is going to be finalised during the 43rd session, in November 2025. As for today, the draft was distributed to member states in September 2024, with the objective of enabling them to provide comments and observations in preparation for the intergovernmental meeting scheduled for May 2025. If analysed, the 'First Draft of a Recommendation On The Ethics Of Neurotechnology'[42] places particular emphasis on a number of key ethical principles, including human dignity, individual agency, mental privacy, cognitive liberty, equitable access and harm prevention. Furthermore, it proposes specific cybersecurity measures to identify vulnerabilities. In this regard, ethical data

[38] Inter-American Juridical Committee, "Declaration of the Inter-American Juridical Committee on Neuroscience, Neurotechnologies and Human Rights: New Legal Challenges for the Americas", OCJI/DEC. 01 (XCIX-0/21) (Aug. 11, 2021). http://www.oas.org/en/sla/iajc/docs/CJI-DEC_01_XCIX-O-21_ENG.pdf Accessed: 24.01.2025.

[39] Inter-American Juridical Committee "Inter-American Declaration of Principles Regarding Neuroscience, Neurotechnologies and Human Rights", CJI/RES. 281 (CII-O/23) corr.1 (Mar. 9, 2023). https://www.oas.org/en/sla/iajc/docs/CJI-RES_281_CII-O-23_corr1_ENG.pdf Accessed: 24.01.2025.

[40] State University of New York, Downstate Health Sciences University, UNESCO, University of Milan-Bicocca (Italy), *The Risks and Challenges of Neurotechnologies for Human Rights*, p. 27.

[41] United Nations Educational, Scientific and Cultural Organization, International Bioethics Committee, "Ethical Issues Of Neurotechnology", Report (Dec. 2021). https://doi.org/10.54678/QNKB6229 Accessed: 24.01.2025.

[42] United Nations Educational, Scientific and Cultural Organization, Ad Hoc Expert Group, "Outcome document of the first meeting of the AHEG: first draft of a Recommendation on the Ethics of Neurotechnology (first version)", SHS/BIO/AHEG-Neuro/2024/1.REV (May 2024). https://unesdoc.unesco.org/ark:/48223/pf0000389768?posInSet=1&queryId=cfc56e24-7a88-4b19-90e7-63bcfc4e556b Accessed: 24.01.2025.

processing guidelines for neural and cognitive biometric data are included, with a detailed and authoritative focus on data protection.

Building on this, it must also be acknowledged that, from a political standpoint, the initial stance taken by the United Nations on the issue has been of notable importance as well. In marked contrast to the approach adopted by the Council of Europe, the United Nations did not undertake the responsibility of establishing novel human rights specifically designed to safeguard the mind from the encroachment of BCIs or their misuse. Instead, inside the 2021 Secretary General's Report 'Our Common Agenda'[43], it adopted a relatively conservative approach, asserting that "updating or clarifying our application of human rights frameworks and standards" would suffice as a means of ensuring adequate protection. Nevertheless, this stance was slightly revised following the invitation from the United Nations Human Rights Council Advisory Committee to the drafting group to assess the "need and opportunity of recognising an additional set of rights, in particular neurorights"[44]. Subsequently, on the basis of the aforementioned report, Resolution 51/3 on 'Neurotechnology and human rights' was adopted by the Human Rights Council on 6 October 2022[45], which called upon the Advisory Committee to prepare a comprehensive study "on the impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights", with particular attention to the formulation of recommendations. Furthermore, it requested the UN High Commissioner for Human Rights to highly consider the impact of neurotechnology on human rights and fundamental freedoms within its mandate. To date, the most recent session of the Human Rights Council Advisory Committee on this topic was held in December 2024. The Committee acknowledged the final Report produced by the drafting group, which was officially presented to the Human Rights Council at its 57th session in September-October 2024. The paper, named 'Impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights'[46], "provides action-oriented recommendations on how these issues can be addressed within the Council, its special procedures and its subsidiary bodies in a coherent, holistic, inclusive manner". The draft document requests in particular the Advisory Committee to develop a set of very specific guiding principles regarding the application of the human rights framework to neurotechnology, which will be submitted to the Human Rights Council in September 2025, at its 60th session. Moreover, in December 2024, the Advisory Committee also resolved to submit a research proposal, entitled 'Elaboration of Guiding Principles on the Application of the Human Rights Framework to Neurotechnology', to the Human Rights Council for consideration and approval. Consequently, developments in this regard remain ongoing.

In conclusion, it appears evident that politics significantly influences the adoption and effectiveness of rights protection systems, since political leaders and international organisations shape legal and regulatory frameworks based on their priorities, ideologies, and power dynamics. Up until this point, neurotechnology has clearly not been a significant focus for legal systems.

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[43] United Nations, Secretary General, "Our Common Agenda", Report (Sep. 2021). https://doi.org/10.18356/97892 10010122 Accessed: 24.01.2025.

[44] Milena Costas Trascasas, "Assessing the human rights impact of neurotechnology: towards the recognition of 'neurorights'", Research proposal presented at the Human Rights Council, Advisory Committee, 28th session, A/HRC/AC/28/2 (Aug. 2022). https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/ advisorycommittee/session28/2022-08-09/AC28-Human-rights-impact-of-neurotechnology.docx Accessed: 24.01.2025.

[45] United Nations, General Assemby, Human Rights Council, Resolution 51/3 on "Neurotechnology and human rights", A/HRC/RES/51/3 (Oct. 6, 2022). https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/HRC/RES/51/3&Lang =E Accessed: 24.01.2025.

[46] Milena Costas Trascasas, "Impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights", Paper presented at the Human Rights Council, Advisory Committee, 31th session, A/HRC/AC/31/CRP.1 (Feb. 2024). https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/ advisorycommittee/sessions/session31/a-hrc-ac-31-crp-1.docx Accessed: 24.01.2025.

Despite this, in just a few years, neurorights have transitioned from a theoretical concept to a significant topic of discussion within international political arenas. Today there is a clear and remarkable convergence of opinion among international organisations, including groups of concerned academics, scientists, engineers and technologists, professional societies and national governmental bodies, on the necessity for common points to be established in order to ensure that human rights and general BCIs standards are met[47].

With respect to this discussion, it is essential to recall that the ethical guidelines, declarations, resolutions, and recommendations presented in the preceding pages do not possess legal authority. Rather, they fall under the category of soft law and serve as supplementary tools to existing legislative frameworks[48]. It should be acknowledged, however, that this is not a completely negative point. Indeed, the diverse applications of BCIs in the future will require a combination of soft and hard governance tools to be addressed: soft governance has the potential to promote ethical responsibility and flexibility among diverse actors, including states and private entities. In contrast, hard governance provides clear, authoritative safeguards. Together, these complementary approaches can balance innovation with accountability, supporting the responsible and ethically grounded development of this kind of technologies.

SECTION III: THE HUMAN RIGHTS IMPACT OF BRAIN-COMPUTER INTERFACES

1. Reconceptualising existing interpretations or framing new human rights?

As can be grasped from the preceding Section II, in comparison with other fields of research, neurotechnology is still in its infancy in terms of subject-related human rights considerations. Nevertheless, as can be observed in the policy statements of the major international organisations, today's primary objective of the international community, even prior to the formulation of comprehensive regulations governing the myriad implications and facets of BCIs in the medical domain, is the actual assurance of a robust and efficacious framework for the protection of individuals' rights. However, it must be highlighted that the academic debate is characterised by a significant degree of divergence in this respect: while certain legal scholars and organisations advocate a transformation in the interpretation of rights currently enshrined in international frameworks of protection of human rights, conversely, other groups and entities emphasise the pressing necessity to recognise novel human rights with the objective of safeguarding the cognitive sphere in a more targeted and effective manner[49].

As previously indicated, the United Nations is among the proponents of the approach that aims to revise the existing international instruments for the protection of human rights. Proponents of this approach generally maintain that the current legal frameworks are sufficiently robust and that enhanced protection of brain data and cognitive integrity can be achieved through an expanded interpretation of existing provisions. This view is reinforced by the broad consensus and widespread acceptance these instruments already hold among state parties.

The second proposed solution envisages instead the improvement of the existing corpus of human rights through the establishment of new rights designed to safeguard brain data and the collective integrity of the human mind. This nascent category of human rights would introduce a new, fundamental level of protection, which is manifestly lacking in the existing frameworks[50].

[47] Rafael Yuste, "Advocating for neurodata privacy and neurotechnology regulation", p. 2870.
[48] Ibid., p. 2871.
[49] Marcello Ienca, "Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field", p. 66.
[50] Marcello Ienca, "Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field", p. 7.

Indeed, it can be argued that these are rights that, at the time of their initial conceptualisation, were not explicitly acknowledged within any human rights treaty nor otherwise recognised as rights in the legal context[51], but that, nevertheless, offer needed insights into unanswered questions about the conceptual and practical application of neurosciences and of more specific neurotechnological developments such as BCIs. This novel set of human rights for the brain has actually been identified within the relevant academic literature under the designation of 'neurorights'. The term was initially put forth by Marcello Ienca and Roberto Adorno in April 2017. Subsequent years have witnessed a refinement of the definition, whereby neurorights are understood as "the ethical, legal, social, or natural principles of freedom or entitlement related to a person's cerebral and mental domain; that is, the fundamental normative rules for the protection and preservation of the human brain and mind"[52]. From that moment on, the term was met with considerable approval within the academic community, as it efficaciously addressed what was perceived to be a pressing gap in the legal conceptual framework. Indeed, an analysis of contemporary discourse reveals a growing tendency in general comments on international treaties and UN reports to reference technological advances, which can be interpreted as an indication of a potential shift in discourse towards the recognition of neurorights as well[53]. Indeed, given that these rights are not currently in force and therefore do not yet exist in any official sense, it falls upon the states to formally recognise them. However, the process of recognition at the international level is not straightforward and, above all, not univocal. In the first instance, neurorights could either be incorporated into existing protocols or instruments, or else they could be introduced by way of new and topic-specific multilateral instruments. Alternatively, as a second possibility, they could be incorporated into soft law instruments, which frequently become the foundation for customary international law and later treaty adoption. A third potential outcome is that they may evolve to become established customary norms. In such an instance, the application of both the elements of state practice and 'opinio iuris' would be necessary, thereby raising the bar in terms of the requisite conditions. Ultimately, neurorights may also be acknowledged indirectly through a shift in case law by adjudication bodies[54].

In light of the aforementioned points, it can be reasonably posited that the acknowledgement of neurorights may prove a valuable instrument, as the subsequent incorporation of these instruments into national constitutions would afford individuals recourse to domestic court enforcement mechanisms, thereby guaranteeing the efficacy of the right[55]. Furthermore, the recognition of these issues could be instrumental also as an advocacy tool, directing greater attention towards the matter, thus encouraging legislative action on the part of the states[56], as it has been the case with the famous 2021 Chilean reforms, which resulted in the amendment of the constitution, particularly of Article 19, which now explicitly provides for the protection of the right to mental integrity and the neuroprotection of brain activity and its data[57]. Since that seminal event, the concept of neurorights

[51] Nora Hertz, "Neurorights – Do we Need New Human Rights? A Reconsideration of the Right to Freedom of Thought", p. 2.
[52] Marcello Ienca, "On Neurorights", in *Frontiers in human neuroscience*, vol. 15 701258, 2021, p. 1.
[53] Jared Genser, Stephanie Herrmann and Rafael Yuste, "International Human Rights Protection Gaps in the Age of Neurotechnology", p. 6.
[54] Nora Hertz, "Neurorights – Do we Need New Human Rights? A Reconsideration of the Right to Freedom of Thought", p. 9.
[55] Marta Sosa Navarro and Salvador Dura-Bernal, "Human Rights Systems of Protection from Neurotechnologies That Alter Brain Activity", p. 922.
[56] Nora Hertz, "Neurorights – Do we Need New Human Rights? A Reconsideration of the Right to Freedom of Thought", p. 11.
[57] Marcello Ienca, "Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field", p. 65.

has become the subject of growing debate, with other states also demonstrating their willingness to embrace an approach that aligns with the Chilean perspective.

Nevertheless, it is crucial to acknowledge that the recognition of new rights is not without significant risks, the most pressing of which is the potential dilution of existing rights. This concern, often described as "rights inflation," arises from the tendency to label all morally desirable claims as human rights. If unchecked, this phenomenon could undermine the credibility and coherence of the human rights framework, fostering skepticism toward its legitimacy and effectiveness.

In conclusion, it is not possible to recognise any claim as a human right. It is, nevertheless, still possible to employ these claims as a means of expanding the interpretation of existing rights. This is exemplified by proposals such as mental integrity, mental privacy and psychological continuity. Indeed, while these concepts may not be recognised as human rights in a standalone sense, they may still be used to update and adapt existing rights in light of the risks posed by BCIs.

2. The neuroright to cognitive liberty

To date, only one conceptualisation of neurorights merits particular recognition for its analytical sophistication, namely that put forth by the legal scholars Jan Christoph Bublitz and Nita A. Farahany[58]. Both authors contend that the introduction of a single additional human right is both necessary and sufficient: that of the right to cognitive liberty.

The right to cognitive liberty actually represents a contemporary but autonomous evolution of the traditional aforementioned concept of freedom of thought. In particular, this updated term is a separate acknowledgement of the current and growing capacity to monitor and manipulate cognitive functions[59]. Indeed, this concept specifically guarantees individuals "the right to alter one's mental states with the help of neurotools as well as to refuse to do so"[60]. The notion thus encompasses both a positive and a negative dimension[61]. On the one hand, it emphasises the individual's autonomy over their mental life, empowering them to make decisions regarding their own cognitive and emotional well-being. On the other hand, it safeguards mental capacities from unwarranted influence by protecting individuals against external attempts to alter their thoughts, emotions, or mental processes without their consent. This protection would ensure that one's mental processes remain free from manipulation or coercion by others, whether through direct intervention with neurotechnological tools or even through more subtle means of influence.

In order to gain an understanding of the reasons why, in contrast with other notions, cognitive liberty must be acknowledged as a new neuroright, it is necessary to highlight three key factors. Firstly, cognitive liberty is an inherent attribute of all human beings, aligning with the definition of human rights as inalienable fundamental rights to which a person is entitled simply by virtue of being human[62]. Secondly, it may be further posited that the right to regulate one's consciousness and electrochemical thought processes represents also the indispensable foundation for nearly every other freedom, thereby making it a constituent element of human rights[63]. Indeed, since they have a direct impact on an individual's capacity to think, reason, and make autonomous decisions, it is evident that consciousness and thought processes are fundamental to human agency, self-determination, and moral judgement. In the absence of control over one's own mind, the capacity to make autonomous decisions, including those pertaining to freedom of speech, political

[58] Ibid., 4.
[59] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 350.
[60] Jan Christoph Bublitz, "My Mind Is Mine!? Cognitive Liberty as a Legal Concept", in Hildt E, Franke AG, eds. "Cognitive Enhancement. An Interdisciplinary Perspective", in *Springer*, 2013, pp. 233–64.
[61] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 350.
[62] Marcello Ienca and Roberto Andorno, "Towards new human rights in the age of neuroscience and neurotechnology", p. 11.
[63] Wrye Sententia, "Neuroethical considerations: cognitive liberty and converging technologies for improving human cognition", in *Annals of the New York Academy of Sciences*, vol. 1013, 2004, p. 227.

participation, religious expression, and personal privacy, would be significantly undermined. Furthermore, it is through conscious thought that individuals maintain a sense of identity, continuity, and selfhood, all of which are essential to the integrity of all other human rights. Consequently, as it is the neurocognitive foundation for all other liberties, it can be lastly asserted that cognitive liberty cannot be merely subsumed under existing rights and support for this assertion is provided by the fact that it lacks the potential for rights inflation[64].

However, for the analytical purposes of this research, it is crucial to note that, in the future, the concept of cognitive liberty, which represents the fullest and most all-encompassing power over one's own mind, will require balancing with the necessity for medical treatment. Achieving this balance firstly necessitates the safeguarding of the right to reject or consent to treatment, whilst acknowledging that the refusal of essential interventions could result in harm. This interplay gives rise to a series of profound ethical questions concerning informed consent, coercion, and the prioritisation of mental autonomy over public health objectives. It is therefore vital that these competing imperatives are resolved in order to ensure that future governance frameworks respect both cognitive rights and the imperatives of medical necessity and proportionality.

3. The twofold protection of the mind

The academic discourse also frequently addresses the examination of the concepts of mental integrity, mental privacy and psychological continuity. Although these notions cannot be considered as neurorights in a standalone capacity, they can be conceived as being closely interconnected and, in particular, encompassed by the neuroright to cognitive liberty. Indeed, cognitive liberty, as the foundation of all other freedoms, is essential for the protection of mental privacy, mental integrity, and psychological continuity. In its positive sense, it parallels the relationship between freedom of thought and rights to privacy, integrity, and identity. Therefore, just as freedom of thought underpins these rights, cognitive liberty is the basis for safeguarding an individual's mental sphere, protecting against unwanted interference, and ensuring the continuity of personal identity[65].

It is thus imperative that these concepts be discussed further, as they are fundamental to ensuring comprehensive protection of the mental domain. Indeed, the brain can be regarded as the ultimate repository of both informational privacy and human identity, given that it encompasses a vast array of unexecuted behaviours, inner monologues and other actions that are not manifest in the external world and are highly distinctive of the individual in question. The utilisation of BCI technology may, however, result in the inadverted disclosure of these elements, thereby rendering them susceptible to many risks.

In view of the aforementioned considerations, it is imperative to establish a dual-layered framework for the protection of the mind. Firstly, it is crucial to ensure 'ex-ante' safeguards, which focus on proactive measures to protect mental privacy at the earliest stages, even before data are captured, transmitted, or processed by BCIs. These protections aim to prevent the unauthorised collection or misuse of neural data at its origin. In addition, the establishment of 'ex-post' safeguards is of equal importance. These are intended to provide a second line of defence after the data have been processed or utilised, and are designed to shield individuals from potential external intrusions, such as unauthorised access to neural data, and to guard against the manipulation of cognitive or brain functions. The dual approach of proactively preventing risks and reactively mitigating harms ensures a comprehensive framework that aligns with the ethical and legal challenges posed by the development and application of BCIs.

[64] Marcello Ienca and Roberto Andorno, "Towards new human rights in the age of neuroscience and neurotechnology", p. 11.

[65] Marcello Ienca and Roberto Andorno, "Towards new human rights in the age of neuroscience and neurotechnology", p. 24.

Accordingly, in order to compose a research that is both comprehensive and exhaustive, the concepts of mental privacy, mental integrity and psychological continuity will be addressed in the following pages.

3.1 Mental privacy: the 'ex-ante' protection of brain data

In the contemporary digital age, the right to privacy is widely regarded as an indispensable human right, enshrined in foundational instruments such as in Article 12 of the 'Universal Declaration of Human Rights' (UDHR) [66], Article 17 of the International Covenant on Civil and Political Rights' (ICCPR)[67], Article 8 of the 'European Convention on Human Rights' (ECHR)[68], and Article 7 of the 'Charter of Fundamental Rights of the European Union' (CFREU)[69]. In essence, it affords individuals the capacity to determine the extent to which their personal information may be disseminated to others. It is therefore possible to posit that privacy may be conceived not only as a right, but also as an ability[70].

The concept of mental privacy, by extension, stipulates that the content of brain activity, both conscious and unconscious, should not be decoded without the consent of the individual in question[71]. This particular interpretation is based on the premise that the nature of brain data is distinct from that of other forms of personal data. Indeed, brain data are characterised by an intimate nature, representing a first-person perspective on one's inner personhood, thus embodying unique moral relevance. Furthermore, brain activity is directly related to cognitive or affective states, such as emotions, allowing insight into the individuals' perception of the world around them[72]. Therefore, from a philosophical perspective, brain 'reading' represents a profound challenge to an individual's sense of self, as BCIs may be capable of detecting brain states that may be even beyond the subject's conscious awareness. Nevertheless, no efficacious measures have yet been identified to protect mental privacy.

In the context of BCI usage, data, specifically referring to processed brain signal recordings, can be considered a central, cross-cutting infrastructural component of the working of such technology[73]. This is because they are essential to the very functioning of machine learning algorithms, whose effectiveness increases in proportion to the amount of data they process. Interestingly, this characteristic gives rise to a specific privacy-related phenomenon known as the 'privacy paradox': as the demand for data increases to improve the functionality of BCIs, individuals are confronted with the dilemma of trading their mental privacy for the convenience of advanced digital tools or the advancement of medical research. This is particularly evident in Article 7 of the CFREU, which stipulates that the right to privacy is not absolute, as it must be weighed against other

[66] United Nations General Assembly, "Universal Declaration of Human Rights", 217 A (III) (Dec. 1948). https://www.un.org/sites/un2.un.org/files/2021/03/udhr.pdf Accessed: 24.01.2025.
[67] United Nations General Assembly, "International Covenant on Civil and Political Rights", United Nations, Treaty Series, vol. 999 (Dec. 1966). https://www.ohchr.org/sites/default/files/ccpr.pdf Accessed: 24.01.2025.
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[70] Marcello Ienca, "Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field", p. 29.
[71] Rafael Yuste, Tomás de la Quadra-Salcedo, and Miguel García Fernández, "Neuro-Rights and New Charts of Digital Rights: A Dialogue Beyond the Limits of the Law", p. 23.
[72] Anita S. Jwa and Nicole Martinez-Martin, "Rationales and Approaches to Protecting Brain Data: a Scoping Review", in *Neuroethics* 17, 2, 2024, p. 8.
[73] Stephen Rainey, "Neurorights as Hohfeldian Privileges", in *Neuroethics* 16, 9, 2023, p. 10.

rights, such as those enshrined inside Article 13, which guarantees academic freedom and the freedom to conduct scientific research[74].

Returning to matters of a more technical nature, although the BCI technology itself requires only specific data types to carry out the intended final action, during the initial signal acquisition phase, the entirety of the brain's activity is recorded. This characteristic of the functioning of BCIs clearly shows that their fundamental operation inevitably entails an infringement of mental privacy, as it is not possible for the individual to select by default the specific data types that will be collected. This issue therefore raises significant questions about the ability of individuals to throughly control access to their personal data. To illustrate this point, it is possible to consider a concrete example pertaining to a specific regulatory framework, namely that of the European Union. Indeed, the General Data Protection Regulation (GDPR), particularly in Article 5, stipulates that data are only to be collected for specific purposes and that data outside that precise domain are not to be collected and processed at all. Although no explicit legal reference has been made thus far, it seems probable that, in the future, this rule will not be completely applicable to BCIs. This is because such legal limitation would result in the creation of interfaces with reduced functionality, which would in turn cause problems for their users.

With regard to the processing of cerebral information, instead, in accordance with the prevailing European Union legislation, brain data are considered to fall within the category of health data and are therefore classified as 'sensitive' personal data. The same also happens in other legislations, such as in the U.S. under the federal Health Insurance Portability and Accountability Act (HIPAA)[75]. In the EU GDPR, health data are subject to many strict prohibitions with regard to their processing. Despite this, the processing of data disclosing "racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation" may be permitted, provided that the interested party has been duly informed and has consented to such processing (Article 9 GDPR). In this regard, it can be argued that since BCIs operate through algorithms, the many prohibitions set forth in Article 9 would render the processing of numerous datasets impractical. Therefore, it is evident that the legislation will require a comprehensive revision in order to prevent users from providing total consent to processing solely for the purpose of ensuring the proper and ideal functioning of the BCI devices.

A further technical challenge that must be acknowledged is the potential for re-identification of data, which arises from the recording of information derived from brain activity. Especially in the medical context, the protection of recorded data can be ensured through the process of anonymisation. Indeed, the advent of the open science movement in neuroscience has led to the establishment of a multitude of global data-sharing platforms. Notable repositories in the USA include the International Neuroimaging Data-Sharing Initiative, OpenNeuro, the Human Connectome Project, and the Alzheimer's Disease Neuroimaging Initiative. These have been primarily funded by U.S. federal agencies, including the National Institutes of Health and the BRAIN Initiative. In the European Union, notable repositories include EBRAINS, which was established by the Human Brain Project, and the UK Biobank[76]. The aforementioned databases have been designed in such a way as to permit a high degree of anonymisation of the health data stored within them.

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[74] Anastasia Greenberg, "Inside the Mind's Eye: An International Perspective on Data Privacy Law in the Age of Brain Machine Interfaces", p. 98.

[75] U.S. Congress, "Health Insurance Portability and Accountability Act of 1996", Public Law 104 – 191 (Aug 20, 1996). https://www.govinfo.gov/content/pkg/PLAW-104publ191/pdf/PLAW-104publ191.pdf Accessed: 24.01.2025.

[76] Anita S. Jwa and Russell A. Poldrack, "Addressing privacy risk in neuroscience data: from data protection to harm prevention", in *Journal of law and the biosciences* vol. 9,2 lsac025, 2022, p. 4.

However, given the intimate nature of brain data, the more complex and rich they are, the easier it is to re-identify them[77]. Indeed, the risk is that, due to their intrinsic detailed biometric information, it would feasible to distinguish and trace back the identity of individuals, hampering the whole system of protection[78]. The analysis of brain data may thus facilitate the identification of the subjects' current health status and potentially enable the estimation of the prospective risk of developing neuropsychiatric disorders[79]. Hence, it can be argued that a genuine 'inception problem' emerges, insofar as there will be a need not only to safeguard the information itself, but also the source of that information, given their inherent interconnection[80].

For all the aforementioned reasons it becomes evident that an assessment of both the probability and the severity of harm resulting from potential infringements on privacy ought to be conducted in the future by legislators when evaluating the privacy risks associated with the different applications of BCIs[81]. In this regard, the recent legislative action taken by the state of Colorado on April 17, 2024 is worthy of particular mention. Indeed, the Colorado House and Senate passed Bill No. 24-1058[82] to safeguard the privacy of individuals' biological and neural data as private property, following the precedent set by the 2021 Chilean neuroprotection bill. A further number of comparable legislative initiatives are presently under consideration only in Mexico, Brazil, Costa Rica, Colombia, Argentina and Uruguay, although it is anticipated that the number of countries enacting similar measures will expand over the forthcoming years.

3.2 Mental integrity and psychological continuity: the 'ex-post' protection from brain hacking and manipulation

It bears repeating that BCIs have the potential to be used for the commission of extremely harmful crimes. In this context, the term 'neurocrimes' is actually a more accurate designation, encompassing offenses perpetrated against individuals or groups of individuals with the specific intent to cause direct or indirect physical and mental harm, as well as reputational and property damage, by accessing or manipulating neural information through the use of neural devices[83]. A peculiar characteristic that must be noted in this regard is that neurocrime doesn't always require direct access to the brain. Instead, these criminal activities are more likely to happen by indirectly affecting the brain. This could involve tampering with, altering, or disrupting the devices that interact with or process brain functions[84]. Such actions may indeed be exemplified by the hacking of BCIs, the tampering with of neuroprosthetics, the theft of neurodata, the manipulation of neurostimulation devices, or the subtle influencing of cognitive processes without consent. Essentially, these crimes target the technology that connects to the brain, rather than the brain itself, potentially leading to unintended consequences on cognitive processes or brain activity. The concept of 'neurosecurity'

[77] Anastasia Greenberg, "Inside the Mind's Eye: An International Perspective on Data Privacy Law in the Age of Brain Machine Interfaces", p. 101.
[78] Marcello Ienca, "Common Human-Rights Challenges Raised by Different Applications of Neurotechnologies in the Biomedical Field", p. 32.
[79] Anita S. Jwa and Russell A. Poldrack, "Addressing privacy risk in neuroscience data: from data protection to harm prevention", p. 5.
[80] Marcello Ienca and Roberto Andorno, "Towards new human rights in the age of neuroscience and neurotechnology", p. 14.
[81] Anita S. Jwa and Russell A. Poldrack, "Addressing privacy risk in neuroscience data: from data protection to harm prevention", p. 3.
[82] General Assembly of the State of Colorado, " Protect Privacy of Biological Data Concerning protecting the privacy of individuals' biological data, and, in connection therewith, protecting the privacy of neural data and expanding the scope of the 'Colorado Privacy Act' accordingly", House Bill 24-1058 (Apr. 17, 2024). https://leg.colorado.gov/sites/default/files/2024a_1058_signed.pdf Accessed: 24.01.2025.
[83] Marcello Ienca and Pim Haselager, "Hacking the brain: brain–computer interfacing technology and the ethics of neurosecurity", p. 119.
[84] Ibid.

has therefore emerged as the framework for protecting these neural devices from malicious attacks, ensuring the safety and privacy of users' brain data[85].

In considering the principal forms of neurocriminality, two distinct categories emerge: malicious brain hacking and manipulation. Indeed, the integration of BCI devices into daily life introduces both the risk of unauthorised access and of manipulation of neural information, analogously to the hacking of computer systems in the context of computer crimes. In order to protect neural devices, akin to hacking in computer crimes, it is thus necessary to implement stringent safeguards. These safeguards must ensure the confidentiality, integrity and availability of the data stored on the device: confidentiality ensures that private brain data remain secure from intruders, integrity protects the device from being tampered with, and availability guarantees that authorised users can always access the device[86]. In this regard, it is notable that invasive BCIs have proven significantly more vulnerable to intrusion and manipulation, given their higher spatial resolution[87].

With regard specifically to the potential for manipulation, this may be either direct or indirect: while indirect concerns relate to more obliquely implemented techniques such as neuromarketing, direct manipulation is particularly relevant for the purposes of this discourse. This involves the possibility of directly modulating neural activities, thereby altering the subject's behaviour, cognition and affective states through the BCI[88]. Hackers may for instance alter the stimuli presented to the user, thereby potentially disclosing private information. It is noteworthy that the aforementioned scenario bears similarity to the domain of spyware; however, in this case, the hackers in question extract brain signals directly. Measurement manipulation, on the other hand, entails the alteration of the BCI during the data processing, with the objective of disrupting its functions or taking control of the device. The objective of decoding and classifying manipulation, instead, is specifically to generate unintended outputs by introducing noise, interfering with machine learning, or overriding signals, which could result in the replacement of user control. Lastly, feedback manipulation may target the user's perception at the conclusion of each cycle, potentially inducing specific cognitive states or actions for illicit purposes, such as fraud or identity theft[89].

In this respect, it is crucial to highlight the instrumental role that artificial intelligence may play in facilitating and fostering such practices of hacking and manipulation. Indeed, the utilisation of AI, in addition to streamlining the collection, analysis and interpretation of vast quantities of brain data stored within the memory of BCIs, could also potentially be employed to perform long-lasting manipulations. In particular, the opacity of algorithms, coupled with prolonged access to neural interfaces, may render such practices extremely challenging to detect and neutralise. In this regard, while there is currently no regulatory framework explicitly targeting manipulative practices with specific regard to BCIs, the European Union AI Act offers a potential avenue for safeguarding against these activities in instances where they are conducted through the use of algorithms. In particular, Article 5, which enumerates the so-called 'prohibited AI practices', emphasizes, in point (a), the prohibition of the sale, use, or deployment of AI systems that employ subliminal, manipulative, or deceptive techniques to distort a person's ability to make informed decisions, leading to actions they would not normally take, and causing or likely causing significant harm to individuals or groups. To provide context and elucidate the relevance of this specific article to the

[85] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 339.
[86] Ibid.
[87] Elisabeth Hildt, "Brain-Computer Interaction and Medical Access to the Brain: Individual, Social and Ethical Implications", p. 8.
[88] Anita S. Jwa and Nicole Martinez-Martin, "Rationales and Approaches to Protecting Brain Data: a Scoping Review", p. 10.
[89] Marcello Ienca and Pim Haselager, "Hacking the brain: brain–computer interfacing technology and the ethics of neurosecurity", p. 122-124.

broader discourse of this paper, it is essential to cite the interpretive aid offered by recital number 29. As specified in the latter, the manipulation in question "could be facilitated, for example, by machine-brain interfaces (...) as they allow for a higher degree of control of what stimuli are presented to persons, insofar as they may materially distort their behaviour in a significantly harmful manner". Moreover, it is of particular interest for the purposes of this discussion to consider also a further specification that is proposed within the same recital. Indeed, the text additionally states that "the prohibitions of manipulative and exploitative practices in this Regulation should not affect lawful practices in the context of medical treatment such as psychological treatment of a mental disease or physical rehabilitation, when those practices are carried out in accordance with the applicable law and medical standards, for example explicit consent of the individuals or their legal representatives", therefore strongly safeguarding the legitimate and medically-justified practices of brain manipulation that are conducted in accordance with the relevant regulations. In contrast, any and all practices falling outside of the aforementioned scope are strictly prohibited.

In light of the all the proposed evidence, it appears reasonable to affirm that neurocrimes possess the tangible potential to endanger not only the physical, but also the psychological sphere, impairing the sense of identity, personhood, and autonomy of the users. By interfering with a person's cognitive processes or brain functions, these actions may undermine fundamental moral values, including autonomy, free will, and self-determination[90]. In other words, they may infringe on a person's right to control their own thoughts and sense of self, which are in particular fundamental elements of two separate yet interrelated concepts: the notion of mental integrity and the idea of psychological continuity.

In terms of mental integrity, the latter can be conceived as a specific reconceptualisation of an older existing right, namely that of physical and mental integrity. This last notion is reflected in Article 3 of the CFREU, Article 17 of the 'Convention on the Rights of Persons with Disabilities' (CRPD)[91] and in Articles 1 and 7 of the 'Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine' (Oviedo Convention)[92]. Interestingly, the drafters of these human rights instruments intentionally acknowledged the body-mind duality inside their provisions, recognising the fact that interventions involving the brain are more profound and invasive than the majority of other bodily procedures. It is for this reason that the articles in question make explicit reference to the concept of mental integrity. In this regard, it is worth noting that this distinction between physical and mental health, which can be traced back to Descartes' philosophy of body-mind dualism, posits the body and mind as distinct and separable entities[93]. It is, however, also important to acknowledge that despite the widespread integration of this dualism into most legal systems, the protections enshrined in the aforementioned articles are only extended systematically to bodies and brains, and not to minds or mental states. Indeed, current legal frameworks are framed in reductionist tones and largely interpret mental integrity as the right to mental health, addressing it primarily from a psychiatric or psychological perspective[94]. However, with the advent of neurotechnologies, it should become imperative for the law to change this understanding. Indeed, as these technologies have the capacity to interface with and potentially alter cognitive processes, the concept of mental integrity must evolve

[90] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 339.
[91] United Nations, General Assembly, "Convention on the Rights of Persons with Disabilities", A/RES/61/106 (Jan. 24, 2007). https://www.ohchr.org/sites/default/files/Ch_IV_15.pdf Accessed: 24.01.2025.
[92] Council of Europe, "Convention for the protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine", ETS No. 164 (Dec. 1, 1999). https://rm.coe.int/168007cf98 Accessed: 24.01.2025.
[93] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 351.
[94] Ibid.

to address the broader implications of such interventions. In particular, this broadened scope should not only guarantee individuals with cognitive conditions the right to access psychiatric care, but should ensure the protection of all individuals' mental spheres from undue harm[95]. This implies that the expanded framework should encompass the safeguarding of cognitive functions from any form of unauthorised manipulation or interference, even in the absence of a diagnosable mental condition. The aforementioned arguments lead to the conclusion that this conceptualisation could specifically protect everyone's right to safeguard their mental well-being from potential harm[96]. In this regard, it is important to highlight that, in order for an action to be regarded as an harm to an individual's mental integrity, multiple prerequisites must be met: it must be demonstrated that direct access to and manipulation of neural signalling has occurred; furthermore, it must be established that the action was conducted without the subject's informed consent, and it must be shown that the action caused physical and/or psychological harm[97]. In the event that all of the aforementioned elements are present, it can be reasonably asserted that a genuine infringement of the right to mental integrity has occurred. Consequently, it is imperative that specific protections are duly applied.

With regard to the concept of psychological continuity, instead, this particular recognition stems from the fact that BCIs may potentially cause unintentional shifts in mental states that play a key role in shaping personality, namely changes in how a person thinks, feels, and remembers. Such alterations may not only affect specific mental states but could also disrupt the continuity of personality traits and memories that form the core of an individual's identity. Indeed, modifications in brain function resulting from brain stimulation through BCIs have the potential to cause unintended alterations in an individual's fundamental mental states and such modifications may even influence memory. Alterations in memory can consequently alter an individual's perception of themselves, which in turn impacts their identity[98]. It must be noted that the inviolability of the individual's personal identity is today protected by the provisions contained in Article 8 ECHR and Article 22 UDHR, which pertain to the safeguarding of psychological continuity, albeit in disparate ways. Article 8 ECHR, which guarantees the right to private and family life, directly protects psychological continuity by safeguarding individuals from intrusions that could disrupt their sense of self and cognitive stability. Indeed, psychological continuity is closely associated with the concept of private life, as it encompasses an individual's mental and emotional stability, the capacity to maintain a consistent sense of self, and autonomy over personal identity. Such intrusions, which disrupt the individual's sense of self, including unauthorised access to mental states or manipulation of cognitive functions, can be considered violations of the right to private life. Accordingly, this article has been interpreted as protecting personal identity and mental autonomy, which are essential for maintaining a consistent sense of self over time. Conversely, Article 22 UDHR emphasises the right to the free development of personality, which is directly associated with psychological continuity as well. A coherent and uninterrupted sense of self is indeed essential for the development of one's personality. Disruptions to memory or cognitive function, whether through neurotechnological interference or other means, have the potential to impair an individual's capacity to fully develop their personality. Collectively, these two articles offer a supplementary approach to the safeguarding of integrity and identity against prospective neurotechnology-facilitated

[95] Ibid.
[96] Marcello Ienca and Roberto Andorno, "Towards new human rights in the age of neuroscience and neurotechnology", p. 18.
[97] Ibid.
[98] Marcello Ienca and Roberto Andorno, "Towards new human rights in the age of neuroscience and neurotechnology", p. 20.

interventions that entail the illicit alteration of a person's neural computation, resulting in harm to the victim[99].

In consideration of the aforementioned aspects, it becomes evident that the notions of mental integrity and psychological continuity are inextricably intertwined. However, they are distinct in terms of their scope: while the right to mental integrity is primarily concerned with the protection of individuals from direct harm to their mental or neural functions, in contrast, the right to psychological continuity extends beyond this to encompass situations where there may be disruptions to a person's mental state that do not necessarily involve direct harm to the brain or mind. This could entail circumstances wherein an individual's identity, personality, or memory may be influenced, even if their mental integrity remains uncompromised. In essence, the right to psychological continuity addresses broader concerns regarding the maintenance of a stable and coherent sense of self over time, extending beyond the mere prevention of direct mental harm provided by mental integrity.

In conclusion, as these concepts gain increasing importance in the years to come, it will fall to legislators to analyse them in depth and determine whether it is legitimate to access or interfere with a person's neural activity and, if so, under what conditions this may occur.

CONCLUSION

This work showed that while the potential of BCIs is undeniably groundbreaking, their development and application in the medical field raise complex ethical, legal and societal issues regarding the integration of the human brain with artificial systems.

As these technologies rapidly evolve, the need for a robust regulatory framework becomes increasingly pressing. The drawbacks associated with prioritising market expansion over responsible innovation are becoming increasingly evident. The establishment of clear global guidelines is imperative, as they could assist producers by promoting responsible innovation, mitigating legal uncertainties, and ensuring ethical progress. Achieving this objective necessitates a balanced and coordinated global regulatory approach, one which is capable of protecting users whilst also fostering sustainable innovation.

Additionally, it has been possible to highlight that at the heart of the legal debate on BCIs are critical issues such as personal autonomy, privacy, integrity and identity, which can not be underestimated by the international legislators. These technologies, while offering promising medical benefits, expose individuals to concerning vulnerabilities such as the potential for unauthorised access to their neural data and for manipulation. As a consequence, ensuring informed consent and protecting the mental sphere against exploitation are paramount to ethically integrating BCIs into the medical practice.

However, the way forward is still highly debated. Whether rights will be expanded remains uncertain, as existing legal mechanisms, supplemented by emerging regulatory approaches such as soft law instruments, may still offer adequate protection. What is clear, though, is that the emergence of neurorights, once a theoretical concern, has now become central to global policy discussions. Undoubtedly, the potential of BCIs to fundamentally alter human cognition and interaction requires legislation to evolve and expand to address the risks and complexities involved. The emergence of new rights cannot be nipped in the bud by overly conservative tendencies, as failure to act proactively may result in unforeseen threats that undermine individual freedoms and core societal values. Nevertheless, while the exploration of neurorights may constitute an indispensable stage in this process, it is imperative to proceed with circumspection in order to preclude any dilution of the intrinsic value of existing human rights.

[99] Nadine Liv, "Neurolaw: Brain-Computer Interfaces", p. 351.

In conclusion, it appears clear that only through the establishment of comprehensive safeguards and ethical guidelines it will be possible to ensure that these innovations enhance human potential while safeguarding the core tenets of human rights. As BCIs represent a future filled with both promise and peril, it is incumbent upon us to approach this evolving frontier with a combination of thoughtfulness and caution. It is therefore evident that these considerations are of paramount importance in determining the future trajectory of human existence, which will undoubtedly become inextricably intertwined with the domain of artificial intelligence. However, it is imperative for us to ensure that the fundamental essence of what it means to be human will not be compromised during this process.

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Biohacking Regulatory and Ethical Dynamics in Europe and Latin America

PROF. DR. ANIS H. BAJREKTAREVIC[1]
INTERNATIONAL INSTITUTE FOR MIDDLE EAST AND BALKAN STUDIES (IFIMES), VIENNA/ LJUBLJANA
VALENTINA CARVAJAL CABALLERO[2]
UNIVERSIDAD DE LOS ANDES: BOGOTÁ, COLUMBIA

Abstract: *Biohacking, a burgeoning movement within the realm of DIY biology, represents a significant intersection of technology, ethics, information systems and personal empowerment. This scientific article explores the multifaceted dimensions of biohacking, with a particular emphasis on its manifestations and implications in Europe and Latin America. By examining the regulatory frameworks such as the General Data Protection Regulation (GDPR) and their impact on biohacking practices, this study delves into the ethical considerations, technological advancements, and socio-political influences shaping the biohacking landscape. Through an in-depth analysis of grassroots innovations in Latin America and established biohacking hubs in Europe, this article underscores the potential and challenges of biohacking in fostering innovation, addressing local and global issues, and navigating the complex interplay between individual autonomy and regulatory oversight. This study highlights pressing concerns such as biopiracy, where indigenous genetic resources risk exploitation without equitable benefit-sharing frameworks, and cybersecurity vulnerabilities, particularly in Latin America. The article also examines biohacking's potential to drive sustainable innovation while emphasizing the need for harmonized global legal frameworks to protect indigenous knowledge and address environmental governance gaps.*

Keywords: *Biohacking, GDPR, DIY biology, Biotechnology, Ethics, Latin America, Europe, Data Privacy, Information Systems*

INTRODUCTION

Biohacking, defined as the practice of DIY biology aimed at enhancing human capabilities through technological and biological interventions, has emerged as a significant trend intersecting critical discussions on ethics, technology, and regulation in the digital age[3]. For the purpose of this work, we will hereby operate with our own definition: **externally induced, concealed gene (information hoovering, sequestrating, doctoring and/or) intervention for non-transparent ends**. This very definition underscores the clandestine and purpose-driven aspects of certain biohacking practices, highlighting the ethical complexities involved.[4]

[1] **Anis H. Bajrektarevic** is chairperson and professor in international law and global political studies, Vienna, Austria. He has authored nine books (for American and European publishers) and numerous articles on, mainly, geopolitics energy and technology. Professor is editor of the NY-based GHIR (Geopolitics, History and Intl. Relations) journal, and editorial board member of several similar specialized magazines on three continents. His 10th book 'Justice and Home Affairs Diplomacy' is scheduled for release later this year in New York.
Anis H. Bajrektarevic, **https://orcid.org/0009-0002-4111-1068; https://www.scopus.com/authid/detail.uri?authorId=36547341700; Scopus preview - Scopus - Author Feedback Wizard Scopus – Document search results | Signed in; www.ifimes.org** Bajrektarevic, Anis - Web of Science Researcher Profile ; Web of Science ResearcherIDCFE-0040-2022

[2] Valentina Carvajal Caballero of the Colombia 's Universidad de Los Andes, is specializing in communication and digital media. As an Information Officer at IFIMES, she applies her expertise in research and digital transformation, while combining her entrepreneurial drive with a deep understanding of Latin American digital landscapes to promote positive change through technology. Valentina Carvajal Caballero, **https://orcid.org/0009-0005-6047-9089**

[3] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567 578.

[4] *Biohacking: Technology, Development, Ethics by Prof. Anis H ...*, https://ovilehti.blogspot.com/2025/02/biohacking-technology-development.html .

Biohacking encompasses a wide array of practices, from simple lifestyle modifications such as dietary changes and nootropic use to more complex genetic engineering and implant technologies. This diversity within biohacking reflects its underlying ethos of democratizing access to biotechnological tools and knowledge, enabling individuals to experiment with and optimize their own biology[5]. The movement's growth is fuelled by advancements in biotechnology, increased accessibility to scientific information, and a growing community of enthusiasts who advocate for personal and collective empowerment through biological self-experimentation.

In Europe, biohacking has been bolstered by a supportive regulatory environment and a strong culture of innovation. Community laboratories and collaborative initiatives provide biohackers with the resources and networks necessary to pursue their experiments, fostering an ecosystem where scientific inquiry is accessible to non-professionals[6]. Conversely, in Latin America, biohacking often emerges as a grassroots response to local challenges, such as limited access to healthcare and agricultural technologies. Here, biohackers leverage biotechnology to develop low-cost solutions tailored to the region's specific needs, highlighting the movement's potential to drive social and economic development[7]. Having this said, biohacking, when intersecting with indigenous genetic resources, exposes the lack of robust international protections. For instance, the biotechnological innovations in Brazil's Morfogenesis project leverage indigenous farming practices but face criticism for inadequate benefit-sharing agreements, highlighting the enforcement gap in frameworks like the Nagoya Protocol[8]. The lack of enforcement of international agreements like the Nagoya Protocol has allowed patents on indigenous plants, such as Guarana, to be filed without sharing the benefits with local communities. Addressing this enforcement gap requires stronger collaboration between governments, international organizations, and biohacking communities to establish equitable and enforceable benefit-sharing agreements. Similarly, cyber vulnerabilities in Latin America further compound the risks of exploitation and misuse, as many grassroots projects lack sufficient digital safeguards.

The intersection of biohacking with GDPR is particularly salient, as biohackers frequently engage with technologies that collect and utilize personal health data. The GDPR's stringent requirements on data protection, consent, and ownership pose both challenges and opportunities for biohackers, necessitating a nuanced understanding of regulatory compliance alongside innovative experimentation[9].

This article aims to dissect these dynamics, offering insights into how biohacking practices can align with ethical standards and legal frameworks while continuing to advance personal and societal well-being. (Smith 2021)

CORE COMPONENTS OF BIOHACKING

Biohacking comprises several core components that collectively aim to optimize human performance and well-being. These components include:

[5] Lebowitz, M. 2017. "What Is Biohacking? An Overview of the DIY Biology Movement." *BioScience Journal* 822-829. https://doi.org/10.1093/biosci/bix097

[6] Wyeth, K. 2020. "Community Labs and the Democratization of Biotechnology in Europe." *European Journal of Innovation Management* 865-880. https://doi.org/10.1108/EJIM-07-2019-0315

[7] Mendes, A., J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Agriculture." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1590/0100-204X20220040

[8] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[9] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

Lifestyle Optimization

Lifestyle optimization involves making deliberate changes to daily habits and routines to enhance overall health and productivity. This includes practices such as meditation, exercise regimens, and biofeedback techniques aimed at improving mental and physical well-being[10].

Diet and Nutrition

Diet and nutrition-focused biohacking entails modifying dietary intake to achieve specific health outcomes. This may involve the use of nootropics, supplements, and personalized nutrition plans designed to enhance cognitive function, energy levels, and metabolic health[11].

Sleep Optimization

Sleep optimization strategies aim to improve sleep quality and duration through various interventions. Techniques such as sleep tracking, environmental adjustments, and the use of sleep-enhancing technologies are employed to maximize restorative sleep and overall health[12].

Physical and Cognitive Enhancement

Physical and cognitive enhancement involves the use of biotechnological tools and interventions to boost physical strength, endurance, and cognitive abilities. This includes the use of performance-enhancing drugs, neurostimulation devices, and genetic modifications to achieve superior physiological and mental performance[13].

DIY Biology

DIY Biology, or biohacking in a biological sense, refers to the grassroots movement where individuals engage in biological experiments outside of traditional laboratory settings. This encompasses activities such as genetic engineering, synthetic biology, and the creation of bio-art, aimed at exploring and expanding the boundaries of biological science[14].

Transhumanism

Transhumanism is a philosophical and scientific movement that advocates for the transformation of the human condition through advanced technologies. Biohacking plays a crucial role in transhumanism by enabling enhancements that transcend natural biological limitations, thereby promoting the evolution of humans into a post-human state[15].

Understanding these core components provides a comprehensive framework for analysing the diverse practices within the biohacking movement and their respective ethical and regulatory implications.

REGULATORY FRAMEWORKS AND DATA PRIVACY: THE IMPACT OF GDPR

Biohacking encompasses a diverse range of activities, from simple lifestyle modifications to complex genetic engineering, aimed at optimizing human biology[16]. The integration of biohacking

[10] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[11] Lebowitz, M. 2017. "What Is Biohacking? An Overview of the DIY Biology Movement." *BioScience Journal* 822-829. https://doi.org/10.1093/biosci/bix097

[12] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[13] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[14] Ford, B. 2015. "The Rise of DIY Biology: Biohacking and Citizen Science." *Biotechnology Advances* 440-448.

[15] Latour, B. 2018. "We Have Never Been Modern." *Harvard University Press.*

[16] Lebowitz, M. 2017. "What Is Biohacking? An Overview of the DIY Biology Movement." *BioScience Journal* 822-829. https://doi.org/10.1093/biosci/bix097

practices with advanced technologies such as CRISPR gene editing and wearable health devices has heightened the relevance of data privacy and protection[17].

The GDPR, enacted in 2018, provides a stringent framework for handling personal data, including sensitive health information, directly impacting biohacking activities reliant on data collection and analysis[18]. However, in Latin America, where biohacking often intersects with indigenous knowledge systems, compliance with GDPR poses unique challenges. Under the GDPR, biohackers must navigate strict requirements regarding consent, data ownership, and the ethical use of personal health data, mandating transparency and accountability in data processing[19]. While the GDPR offers robust protections in Europe, its absence in Latin America leaves biohacking projects vulnerable to data misuse and breaches due to a lack of encryption protocols and cybersecurity standards. This disparity highlights the urgent need for Latin American countries to adopt similar data protection frameworks, ensuring that biohacking innovations can flourish securely and ethically. Before the number of the UN ODC Forums, the Member States have started expressing their consolidated concerns already by mid 2010s. The accelerated collection and sharing of personal health records (data) kept raising cybersecurity risks, moral and business ethics considerations, as sophisticated hackers could target biohacking databases for malicious purposes, underscoring the need for robust encryption and secure data protocols.

For instance, biohackers conducting genetic modifications must ensure informed consent and secure data handling. The GDPR's emphasis on data minimization and purpose limitation requires biohackers to carefully consider the extent of data they collect and the specific objectives of their experiments, thereby fostering a culture of ethical responsibility and data stewardship within the biohacking community[20].

Furthermore, the GDPR's extraterritorial scope means that biohacking activities in Latin America may also need to comply with European data protection standards if they involve the processing of data from European Union citizens[21].

The stringent protections offered by GDPR in Europe serve as a benchmark for Latin American biohacking initiatives, which often collect sensitive health and environmental data. For instance, Colombian grassroots biohackers monitor water quality using biosensors that collect geolocated data. However, this process lacks robust encryption and secure data storage, leaving it vulnerable to exploitation. The absence of GDPR-like frameworks in the region underscores the need for transnational collaborations to enhance data protection. This global dimension of data regulation underscores the importance of international collaboration and harmonization of ethical standards in biohacking practices, ensuring that innovations are both legally compliant and ethically sound across different jurisdictions[22].

Biohackers conducting genetic modifications, for instance, must ensure informed consent and secure data handling. GDPR's extraterritorial scope also affects Latin American biohackers processing data involving EU citizens. Compliance challenges underline the need for international collaboration to harmonize ethical standards across different jurisdictions.

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[17] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[18] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[19] Union, European. 2016. "General Data Protection Regulation (GDPR)." *Official Journal of the European Union.*

[20] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[21] European Union. 2016. "General Data Protection Regulation (GDPR)." *Official Journal of the European Union.*

[22] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

DATA PRIVACY CHALLENGES IN BIOHACKING

The collection and utilization of personal health data in biohacking raise significant privacy concerns. Biohackers often gather extensive datasets, including genetic information, biometric readings, and behavioural metrics, which can be highly sensitive and personally identifiable[23]. Ensuring the privacy and security of this data is paramount to prevent unauthorized access, misuse, or discrimination based on genetic or health information[24].

One of the primary challenges is the anonymization of data. While biohackers may attempt to anonymize personal data to comply with GDPR requirements, the risk of re-identification remains, especially with the increasing sophistication of data analytics and machine learning techniques[25]. Therefore, biohackers must adopt advanced data protection strategies, such as encryption and secure data storage solutions, to safeguard personal information and maintain the trust of participants[26].

Additionally, the decentralized nature of biohacking poses unique challenges for data governance. Unlike traditional research institutions, biohackers often operate independently or within small community labs, lacking the formalized data management protocols and oversight mechanisms that institutional researchers typically employ[27]. This decentralization can lead to inconsistencies in data handling practices, making it difficult to ensure compliance with GDPR and other data protection regulations. Developing standardized guidelines and best practices for data management in biohacking is essential to address these challenges and promote responsible data stewardship[28].

ETHICAL RESEARCH PRACTICES IN BIOHACKING

Ethical considerations in biohacking extend beyond data privacy to encompass broader issues of consent, autonomy, and the responsible use of biotechnological tools. Biohackers must ensure that their experiments do not infringe upon the rights and well-being of participants, maintaining transparency and accountability in their research practices[29]. This involves obtaining informed consent, providing clear and comprehensive information about the potential risks and benefits of participation, and respecting participants' autonomy to withdraw from experiments at any time[30].

Moreover, biohackers have a responsibility to consider the societal implications of their work, particularly in areas such as genetic engineering and human enhancement. The potential for unintended consequences, such as the creation of genetically modified organisms or the augmentation of human capabilities, necessitates a cautious and reflective approach to biohacking practices[31]. Engaging with ethicists, policymakers, and the broader community can help biohackers

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[23] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[24] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[25] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[26] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[27] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[28] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[29] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[30] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[31] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

navigate these complex ethical landscapes, ensuring that their innovations align with societal values and ethical standards[32].

For example, in the Amazon Basin, biopiracy remains a critical issue, as companies often exploit plants with medicinal properties traditionally used by indigenous communities. For instance, patents on genetic modifications derived from the Guarana plant have been filed without benefit-sharing. Similarly, biohacking projects in Latin America, such as those working with genetically modified crops, risk replicating these patterns if legal safeguards like the Nagoya Protocol are not enforced.

Overall, GDPR significantly influences biohacking practices by imposing strict data protection requirements that necessitate ethical and responsible data management. By adhering to these regulations, biohackers can foster a culture of trust and accountability, ensuring that their innovative pursuits do not compromise individual privacy or societal well-being. The intersection of biohacking and GDPR underscores the need for ongoing dialogue and collaboration between biohackers, regulators, and ethicists to navigate the evolving challenges of DIY biology in the digital age.

ADDITIONAL REGULATORY CONSIDERATIONS

Beyond the General Data Protection Regulation (GDPR), several other regulatory frameworks significantly impact biohacking practices by setting standards for clinical trials, medical devices, and genetically modified organisms (GMOs). EU Regulation No 536/2014 governs clinical trials on medicinal products, directly intersecting with biohacking activities that involve human trials. This regulation ensures that any biohacking experiments involving human subjects adhere to strict safety and ethical standards, safeguarding participants' health and rights.

Similarly, the Medical Device Regulation (MDR) – Regulation (EU) 2017/745 establishes rigorous standards for medical devices, affecting biohackers who develop implantable devices or health monitoring technologies. Compliance with MDR is crucial for biohackers to ensure that their devices are safe, effective, and legally marketable within the European Union.

Furthermore, the Biotechnology Directive regulates the use of genetically modified organisms (GMOs), which directly impacts biohacking projects involving genetic modifications. This directive mandates thorough risk assessments and labelling requirements to prevent potential environmental and health risks associated with GMOs. On an international level, the Oviedo Convention on Human Rights and Biomedicine emphasizes human rights in biomedicine, setting ethical standards for genetic research and modifications that biohackers must follow to respect individual rights and societal values.

In the Americas, the American Charter of Fundamental Rights outlines fundamental rights that influence ethical considerations in biotechnology and biohacking, ensuring that practices align with broader human rights principles. Understanding and navigating these regulatory frameworks is essential for biohackers to maintain compliance, uphold ethical responsibilities, and promote the safe and responsible advancement of DIY biology.

THE ROLE OF TECHNOLOGY IN BIOHACKING

Technological advancements are the cornerstone of biohacking, enabling individuals to manipulate biological systems and enhance their physiological and cognitive functions[33]. Tools like

[32] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[33] Ford, B. 2015. "The Rise of DIY Biology: Biohacking and Citizen Science." *Biotechnology Advances* 440-448.

CRISPR-Cas9 exemplify the power of biohacking to redefine personal and collective empowerment, yet they also raise ethical dilemmas about access, misuse, and societal implications. Balancing these opportunities and risks requires transparent discussions among biohackers, ethicists, and policymakers to ensure that the benefits of such technologies are equitably distributed and responsibly managed. Tools such as CRISPR-Cas9 for gene editing, biosensors for real-time health monitoring, and open-source biotechnological platforms have democratized access to scientific experimentation, allowing non-professionals to engage in sophisticated biological research[34]. This accessibility has transformed biohacking from a niche hobby into a global movement with significant implications for personal health, environmental sustainability, and technological innovation.

TECHNOLOGICAL ADAPTATIONS IN EUROPE

In Europe, the biohacking movement benefits from greater access to funding, infrastructure, and regulatory support. European biohackers often operate in community laboratories, such as La Paillasse in France and BioCurious in Germany, which provide the tools and space necessary for sophisticated experimentation. These well-established labs offer opportunities for collaboration between biohackers, scientists, and entrepreneurs, creating an environment where innovation can flourish.

A notable example of technological adaptation in Europe is the use of CRISPR gene-editing technology by biohackers to explore genetic modifications that could enhance human health. In Germany, biohackers at Open BioLabs have conducted experiments using CRISPR to modify yeast strains for more efficient biofuel production. This type of experimentation not only showcases the technological capabilities of European biohackers but also highlights the potential for biohacking to contribute to broader societal goals, such as renewable energy development.

Additionally, European biohackers are leveraging wearable technology to optimize human performance. Projects focused on developing implants that monitor biometric data are becoming increasingly popular. In Sweden, for instance, biohackers have implanted RFID chips that allow users to perform everyday activities, such as unlocking doors or making payments, without the need for physical devices. This integration of technology into the human body reflects a broader trend in European biohacking towards enhancing human capabilities through seamless technological interfaces.

The regulatory landscape in Europe also plays a critical role in shaping biohacking practices. The implementation of GDPR has set a high standard for data privacy and protection, which European biohackers must navigate carefully. This regulation has led to the development of innovative data management solutions, such as encrypted data storage and decentralized data networks, ensuring that personal information collected during biohacking experiments is handled ethically and securely. The emphasis on data privacy in Europe not only protects individuals but also enhances the credibility of the biohacking movement, fostering public trust and encouraging broader participation.

TECHNOLOGICAL ADAPTATIONS IN LATIN AMERICA

Biohacking in Latin America has adapted to address socio-economic challenges through innovative technological applications. The movement in Latin America is characterized by its grassroots nature, focusing on accessibility, affordability, and community involvement. Biohackers in the region are utilizing technology to address pressing issues, such as public health, food security,

[34] Latour, B. 2018. "We Have Never Been Modern." *Harvard University Press.*

and environmental sustainability, which are often exacerbated by limited access to resources and formal healthcare infrastructure.

One significant example of technological adaptation is found in Brazil, where biohackers use synthetic biology to create low-cost diagnostic tools for diseases like Zika and Dengue, which are prevalent in the region. The Morfogenesis project, for instance, employs synthetic biology to develop crops resistant to pests and climate change, directly targeting the needs of rural communities that face significant challenges in maintaining agricultural productivity. By focusing on crop resilience, these initiatives aim to reduce reliance on chemical pesticides and enhance food security. The impact of such biohacking activities has been significant, as it has led to an increase in crop yields and reduced costs for farmers, demonstrating the tangible benefits of grassroots biohacking initiatives.

In Colombia, biohackers have developed biosensors to monitor water quality, which plays a crucial role in addressing the issue of water contamination in rural areas. These biosensors, while utilising microorganisms to detect pollutants, provide real-time data that empowers communities to take immediate action in safeguarding their water supplies. This innovation helps to protect public health but also encourages community engagement in environmental governance. By making technology accessible to those outside of traditional scientific circles, biohackers are enabling local populations to participate directly in solving issues that affect their daily lives.

Venezuela presents another compelling case of technological adaptation, particularly in the face of economic challenges and food shortages. Biohackers in Venezuela have pioneered urban hydroponic systems and genetically modified crops to enhance food production within urban environments. These efforts are critical in a country where access to fresh produce is limited due to the ongoing economic crisis. By establishing small-scale urban farms, biohackers are improving food security and empowering urban residents to take control of their food sources. The positive impacts of these urban agricultural initiatives include increased food availability, community resilience, and the promotion of sustainable farming practices that require fewer natural resources compared to traditional agriculture.

Another example is the use of wearable technology for healthcare monitoring in Ecuador. Local biohackers have developed low-cost wearable devices that track vital signs such as heart rate, blood pressure, and oxygen levels. These devices are particularly impactful in underserved regions where access to healthcare is scarce. By providing real-time health monitoring, these wearables enable early detection of potential health issues and facilitate timely medical intervention. These devices monitor vital signs like oxygen saturation and heart rates, providing real-time data to patients and healthcare workers. By integrating indigenous practices, such as using natural remedies alongside technological interventions, these biohacking initiatives bridge systemic gaps while fostering local resilience. These grassroots efforts highlight the adaptability and resilience of biohacking communities, proving that local innovations can address systemic challenges when supported by appropriate technologies and collaborative frameworks. However, without robust cybersecurity measures, these technologies remain vulnerable to misuse. The adoption of such technology not only improves individual health outcomes but also reduces the strain on public healthcare systems, which are often overburdened.

A deeper analysis of these initiatives reveals that biohacking in Latin America is driven by necessity and creativity, leveraging limited resources to create impactful solutions. Unlike in Europe, where biohacking often takes place in well-equipped community labs, Latin American biohackers frequently operate with minimal infrastructure. This disparity necessitates a high degree of innovation, as biohackers must adapt existing technologies or develop new ones from scratch to suit their specific needs. The focus on low-cost, scalable solutions is a defining feature of Latin American biohacking, allowing communities to address systemic challenges in a sustainable manner.

COMPARATIVE ANALYSIS: LATIN AMERICA VS. EUROPE

While both Latin America and Europe have thriving biohacking communities, the motivations, challenges, and technological adaptations in each region differ significantly. In Latin America, biohacking is largely driven by necessity—addressing issues such as healthcare access, food security, and environmental sustainability in the face of economic and infrastructural limitations. The focus on low-cost, locally adapted solutions is a defining characteristic of Latin American biohacking, which often operates without the support of formal institutions or regulatory frameworks.

In contrast, European biohacking is characterized by its access to resources, infrastructure, and regulatory support. Community laboratories in Europe are well-equipped and often receive funding from governmental and private entities, enabling biohackers to pursue ambitious projects that push the boundaries of biotechnology. The focus in Europe is often on enhancing human capabilities and exploring the ethical implications of new technologies, with a strong emphasis on regulatory compliance and data privacy.

Despite these differences, there are valuable lessons that each region can learn from the other. Latin America's emphasis on grassroots innovation and community involvement could inspire European biohackers to engage more directly with local communities and address pressing societal issues. The adaptability and resourcefulness of Latin American biohackers demonstrate the potential of biohacking to create impactful solutions even in resource-constrained environments.

Conversely, Latin American biohackers could benefit from the structured regulatory environment and community laboratory model found in Europe. The establishment of more community labs in Latin America, with support from both local governments and international organizations, could provide the infrastructure needed to expand biohacking initiatives and ensure that experiments are conducted safely and ethically. Additionally, adopting data protection standards similar to GDPR could enhance the credibility of Latin American biohacking and build public trust, facilitating greater community involvement and support.

In conclusion, while the biohacking landscapes of Europe and Latin America differ in their approaches and contexts, both regions contribute significantly to the global biohacking movement. In Europe, biohackers benefit from structured environments such as La Paillasse in France, where GDPR compliance ensures data protection and ethical oversight. Conversely, in Latin America, grassroots innovations like Venezuela's urban agriculture projects adapt to resource constraints, addressing food insecurity. By fostering knowledge exchange, European regulatory rigor could inform scalable frameworks for Latin America, enhancing the global biohacking ecosystem. By learning from each other's strengths—whether it be grassroots innovation or regulatory rigor—biohackers in both regions can continue to push the boundaries of DIY biology, creating solutions that are innovative, ethical, and impactful.

OPEN-SOURCE BIOTECHNOLOGY AND COLLABORATIVE INNOVATION

Open-source biotechnology platforms play a crucial role in the biohacking movement, promoting collaborative innovation and the free exchange of knowledge[35]. These platforms provide biohackers with access to genetic sequences, protocols, and software tools, facilitating the replication and modification of experiments across different communities and regions[36]. The open-source ethos

[35] Peters, G, and P Gärdenfors. 2019. "Democratizing Biotechnology: The Role of Open-Source Tools in Biohacking." *Journal of Open Science* 12-25. https://doi.org/10.3389/fbloc.2019.00012

[36] Ford, B. 2015. "The Rise of DIY Biology: Biohacking and Citizen Science." *Biotechnology Advances* 440-448.

aligns with the principles of democratization and inclusivity, ensuring that advancements in biotechnology are accessible to all, regardless of geographical or economic barriers[37].

In Europe, organizations like the Hackteria Network exemplify the power of open-source collaboration in biohacking. Hackteria brings together biohackers, artists, and scientists to explore sustainable biotechnologies and creative applications of biology[38]. Open-source platforms enable biohackers to develop innovative solutions for local challenges, such as affordable diagnostics and environmental monitoring tools, tailored to their communities' specific needs. Through workshops, hackathons, and collaborative projects, Hackteria fosters an environment where interdisciplinary collaboration drives innovation and addresses societal needs[39]. By fostering knowledge-sharing and accessibility, these platforms empower underserved regions to address pressing issues, bridging the gap between grassroots innovation and broader societal impact. This approach not only accelerates technological advancements but also encourages the ethical and responsible use of biotechnology by integrating diverse perspectives and expertise[40].

Similarly, in Latin America, open-source biotechnology initiatives enable biohackers to develop and share solutions tailored to local challenges. Projects such as the Morfogenesis project in Brazil utilize synthetic biology to create affordable agricultural tools, while the Biohackers Club in Argentina focuses on developing low-cost diagnostic tests for public health issues like Chagas disease[41]. These collaborative efforts demonstrate how open-source platforms can facilitate the dissemination of knowledge and resources, empowering communities to address their specific needs through innovative biotechnological solutions[42].

ETHICAL AND SAFETY CONCERNS IN BIOHACKING

Conversely, the unregulated nature of biohacking raises critical ethical and safety concerns that must be addressed to ensure the responsible advancement of DIY biology[43]. One of the primary ethical issues is the potential for biohacking practices to infringe upon individual autonomy and informed consent. Without proper oversight, biohackers may conduct experiments that carry significant risks to participants, including unintended biological consequences and long-term health effects[44]. Ensuring that biohackers adhere to ethical standards and obtain informed consent is essential to protect the rights and well-being of individuals involved in DIY biology projects[45].

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[37] Latour, B. 2018. "We Have Never Been Modern." *Harvard University Press.*

[38] Hackteria. 2021. "Biohacking for a Sustainable Future." *Hackteria Network.*

[39] Wyeth, K. 2020. "Community Labs and the Democratization of Biotechnology in Europe." *European Journal of Innovation Management* 865-880. https://doi.org/10.1108/EJIM-07-2019-0315

[40] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[41] Mendes, A., J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Agriculture." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1590/0100-204X20220040; Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[42] Rodriguez, M and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[43] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[44] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[45] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

Safety is another major concern associated with biohacking, particularly when dealing with genetic modifications and the manipulation of biological systems[46]. The lack of formal regulatory frameworks and oversight mechanisms in many biohacking communities can lead to reckless experimentation, resulting in unintended environmental or public health hazards[47]. For example, the accidental release of genetically modified organisms into the environment could have far-reaching ecological impacts, highlighting the need for stringent safety protocols and responsible practices within the biohacking community[48].

Additionally, the potential for biohacking to be exploited for unethical purposes poses significant risks. The misuse of biotechnological tools for harmful ends, such as the creation of biological weapons or the unauthorized modification of human genetics, underscores the importance of establishing comprehensive ethical guidelines and regulatory frameworks[49]. Ensuring that biohacking practices are conducted responsibly and ethically requires a concerted effort to promote accountability, transparency, and adherence to established standards within the DIY biology movement[50].

BALANCING INNOVATION AND REGULATION

Balancing the innovative potential of biohacking with the need for ethical and safety oversight is a complex but essential task. While regulation can help mitigate the risks associated with DIY biology, overly restrictive measures may stifle innovation and hinder the democratization of biotechnology[51]. Therefore, it is crucial to develop regulatory frameworks that strike a balance between fostering creativity and ensuring responsible practices within the biohacking community[52].

One approach to achieving this balance is the establishment of clear ethical guidelines and best practices tailored to the unique nature of biohacking[53]. These guidelines should emphasize the importance of informed consent, data protection, and the responsible use of biotechnological tools, while also providing flexibility to accommodate the diverse range of biohacking activities[54]. Collaborative efforts between biohackers, ethicists, policymakers, and regulatory bodies can facilitate the development of adaptive and inclusive frameworks that promote both innovation and safety[55].

Education and training are also critical components in ensuring the responsible practice of biohacking. By providing biohackers with access to knowledge about ethical research practices, safety protocols, and regulatory compliance, the biohacking community can cultivate a culture of

[46] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[47] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[48] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[49] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[50] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[51] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[52] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[53] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[54] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[55] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

accountability and responsible innovation[56]. Community laboratories and collaborative initiatives play a pivotal role in this regard, offering training programs and resources that empower biohackers to conduct their experiments ethically and safely[57].

In conclusion, while biohacking offers significant opportunities for personal and societal advancement, it also presents substantial ethical and safety challenges that must be addressed through thoughtful regulation and responsible practices. By fostering a culture of ethical responsibility and collaboration, the biohacking community can harness its innovative potential while safeguarding individual rights and public health.

BIOHACKING OUTSIDE OF INSTITUTIONAL OVERSIGHT

Despite the supportive infrastructure, the rapid evolution of biohacking presents challenges in regulatory oversight. The decentralized and diverse nature of biohacking activities complicates the enforcement of ethical standards, potentially resulting in unsafe practices that could undermine public trust in biotechnology[58]. Ensuring consistent compliance across various biohacking communities requires adaptive regulatory frameworks that can accommodate the dynamic and innovative nature of DIY biology[59].

One significant challenge is the need for regulatory bodies to stay abreast of technological advancements and emerging biohacking practices. Traditional regulatory frameworks may not be sufficiently agile to address the novel and rapidly evolving nature of DIY biology, necessitating the development of flexible and responsive regulations that can effectively oversee biohacking activities without stifling innovation[60]. Collaborative efforts between regulators, biohackers, and ethicists are essential to create regulatory guidelines that are both protective and permissive, allowing for safe experimentation while preventing misuse of biotechnological tools[61].

Another challenge is fostering a culture of accountability and ethical responsibility within the biohacking community. While regulatory frameworks provide a foundation for ethical biohacking, the voluntary nature of compliance within decentralized communities means that enforcement relies heavily on self-regulation and peer accountability[62].

Promoting ethical education, establishing clear codes of conduct, and encouraging community-driven oversight mechanisms are critical strategies to ensure that biohackers adhere to responsible practices and uphold the integrity of the movement[63].

Europe stands as a testament to the potential of biohacking to drive innovation and address societal challenges. The synergy between community initiatives and regulatory frameworks has created a dynamic environment for biohackers, fostering both technological advancements and

[56] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[57] Wyeth, K. 2020. "Community Labs and the Democratization of Biotechnology in Europe." *European Journal of Innovation Management* 865-880. https://doi.org/10.1108/EJIM-07-2019-0315

[58] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[59] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[60] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

[61] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[62] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[63] Peters, G, and P Gärdenfors. 2019. "democratizing Biotechnology: The Role of Open-Source Tools in Biohacking." *Journal of Open Science* 12-25. https://doi.org/10.3389/fbloc.2019.00012

ethical responsibility.[64] However, the ongoing evolution of biohacking necessitates continuous dialogue and collaboration to address regulatory challenges, ensuring that the benefits of DIY biology are realized without compromising safety or public trust. By navigating these complexities, European biohacking communities can continue to lead the way in responsible and impactful DIY biology.

SELF-EXPERIMENTATION AND PERSONAL AUTONOMY

Biohacking often operates outside traditional institutional oversight, empowering individuals to conduct self-experimentation and pursue personal autonomy in their biological enhancements. This grassroots approach allows biohackers to tailor interventions to their specific needs and goals without the constraints of institutional regulations. However, this autonomy comes with significant ethical responsibilities, as self-experimentation can carry unforeseen risks and consequences[65].

Personal autonomy in biohacking emphasizes the right of individuals to control their own bodies and biological data. This includes making informed decisions about genetic modifications, implanting devices, and other biotechnological interventions. While personal autonomy is a fundamental ethical principle, it must be balanced with considerations of safety, informed consent, and the potential societal impacts of individual biohacking practices[66].

BIOHACKING, BIOPIRACY, AND ORGANIZED CRIME

The unregulated nature of biohacking also raises concerns about its potential misuse in activities such as biopiracy and organized crime. Biopiracy involves the unauthorized use of biological materials and knowledge, often exploiting indigenous resources and intellectual property without fair compensation or acknowledgment[67]. Biohackers with access to advanced biotechnological tools could potentially engage in biopiracy by extracting and manipulating genetic information from natural organisms for commercial gain.

Moreover, the clandestine aspects of biohacking practices, especially those involving genetic modifications and synthetic biology, could be exploited by organized crime groups for illegal activities such as smuggling genetically modified organisms (GMOs) or trafficking in unauthorized biological materials. The ability to engineer organisms with specific traits or resistances poses significant biosecurity risks, as these organisms could be used in harmful ways if they fall into the wrong hands[68].

Addressing these concerns requires robust ethical guidelines, comprehensive regulatory frameworks, and effective oversight mechanisms to prevent the misuse of biohacking technologies. Collaborative efforts between biohackers, law enforcement agencies, and regulatory bodies are

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[64] *Biohacking: Technology, Development, Ethics by Prof. Anis H ...*, https://ovilehti.blogspot.com/2025/02/biohacking-technology-development.html .

[65] Kahn, J, R Mann, and K Moore. 2019. "Biohacking: DIY Biology and the Future of Genetic Engineering." *Nature Biotechnology* 904-907. https://doi.org/10.1038/s41587-019-0207-0

[66] Castelyn, J. 2020. "The ethics of DIY biology: Exploring the boundaries of biohacking." *Bioethics Journal* 123-135.

[67] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[68] Smith, A. 2021. "Regulating Biohacking: Balancing Innovation and Safety." *Regulatory Affairs Journal* 78-92. https://doi.org/10.1007/s11157-021-09639-5

essential to mitigate the risks associated with biopiracy and organized crime while preserving the innovative potential of biohacking[69].

COMMUNITY LABORATORIES AND COLLABORATIVE SPACES

Projects such as Open BioLabs in Germany and BioCurious in California exemplify Europe's commitment to fostering collaborative environments where biohackers can access resources and engage in innovative projects[70]. These laboratories provide essential infrastructure, including laboratory space, equipment, and technical expertise, enabling biohackers to conduct experiments that would otherwise be inaccessible due to high costs or regulatory barriers[71]. By offering a shared space for experimentation and collaboration, community laboratories facilitate the exchange of ideas and knowledge, driving collective advancements in biotechnology and DIY biology[72].

In addition to providing physical resources, European community laboratories often host workshops, seminars, and hackathons that promote continuous learning and skill development among biohackers[73]. These educational initiatives equip participants with the necessary technical skills and ethical awareness to conduct responsible and innovative research[74]. Furthermore, collaborative projects undertaken within these labs often address pressing societal issues, such as environmental monitoring, sustainable agriculture, and public health, demonstrating the practical impact of biohacking on community well-being[75].

The collaborative ethos of European biohacking communities extends beyond national borders, with networks like Hackteria fostering international partnerships and knowledge sharing[76]. These global connections enhance the exchange of diverse perspectives and expertise, promoting a more inclusive and comprehensive approach to biohacking[77]. By facilitating cross-cultural collaborations, European biohacking initiatives contribute to the global advancement of DIY biology, addressing universal challenges through localized and context-specific solutions[78].

GRASSROOTS INNOVATIONS IN PUBLIC HEALTH & INITIATIVES

In Brazil, the Morfogenesis project exemplifies how biohacking can contribute to public health by developing low-cost biotechnological solutions for agriculture and disease diagnostics[79]. By employing synthetic biology techniques, Morfogenesis aims to create crops that are more resistant

[69] Voigt, Paul, and Axel von dem Bussche. 2017. *The EU General Data Protection Regulation (GDPR): A Practical Guide.* Springer.

[70] Wyeth, K. 2020. "Community Labs and the Democratization of Biotechnology in Europe." *European Journal of Innovation Management* 865-880. https://doi.org/10.1108/EJIM-07-2019-0315

[71] Hackteria. 2021. "Biohacking for a Sustainable Future." *Hackteria Network.*

[72] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[73] Hackteria. 2021. "Biohacking for a Sustainable Future." *Hackteria Network.*

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[76] Hackteria. 2021. "Biohacking for a Sustainable Future." *Hackteria Network.*

[77] Hughes, J. 2020. "Biohacking and the future of personal health." *Journal of Bioethical Inquiry* 567-578.

[78] Peters, G, and P Gärdenfors. 2019. "democratizing Biotechnology: The Role of Open-Source Tools in Biohacking." *Journal of Open Science* 12-25. https://doi.org/10.3389/fbloc.2019.00012

[79] Mendes, A., J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Agriculture." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1590/0100-204X20220040

to climate change and pests, thereby enhancing food security and reducing dependency on chemical pesticides[80]. This project not only addresses critical agricultural challenges but also demonstrates the potential of biohacking to drive sustainable development and resilience in the face of environmental and economic pressures[81].

The Biohackers Club in Argentina has been pivotal in promoting DIY biology and community engagement, bringing together students, professionals, and enthusiasts to explore biotechnology applications in various fields, including medicine and agriculture[82]. One of their notable projects involved developing a low-cost diagnostic test for detecting Chagas disease, a significant public health concern in the region[83]. By utilizing local resources and knowledge, the club not only provides a practical solution to a widespread health issue but also fosters a sense of community and collaboration among participants, empowering them to take an active role in improving public health outcomes[84].

In Ecuador, biohacking initiatives are emerging as a means of addressing healthcare disparities by developing low-cost wearable devices that monitor vital signs, aimed at providing affordable healthcare solutions to underserved populations[85]. These devices enable real-time health monitoring and data collection, facilitating early detection and intervention for various health conditions[86]. By making healthcare more accessible and affordable, biohacking projects in Ecuador contribute to reducing healthcare inequities and improving overall population health[87].

Also in Ecuador, the government is integrating biohacking initiatives into public health strategies by supporting local biohackers developing diagnostic tools for rural healthcare[88]. This collaboration aims to enhance healthcare accessibility and reduce the burden on traditional health systems by leveraging low-cost and innovative biotechnological solutions[89]. By partnering with biohackers, the government can tap into community-driven innovations that address specific health challenges, such as the development of affordable diagnostic tests for prevalent diseases[90].

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[80] Mendes, A., J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Agriculture." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1590/0100-204X20220040

[81] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[82] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[83] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[84] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[85] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[86] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[87] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[88] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[89] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[90] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

Similarly, in Brazil, government support for biohacking projects like Morfogenesis underscores the role of DIY biology in addressing public health and agricultural issues[91]. By investing in biohacking initiatives, the Brazilian government aims to enhance food security, improve disease diagnostics, and foster sustainable agricultural practices, thereby contributing to broader public health and economic stability[92]. This integration of biohacking into public health initiatives demonstrates the potential for DIY biology to complement traditional healthcare systems and drive community health improvements[93].

BIOHACKING AND ITS INFLUENCE ON POLITICS AND GOVERNMENT

Biohacking's impact extends beyond individual and community levels, influencing political discourse and government policies. Governments in Latin America are increasingly recognizing the potential of biohacking to contribute to public health, environmental sustainability, and food security, leading to collaborative efforts and policy integrations[94]. This section examines how biohacking intersects with politics and government in Latin America, highlighting the opportunities and challenges of integrating grassroots biohacking initiatives into public policy.

ENVIRONMENTAL POLICIES AND CITIZEN SCIENCE

Colombian policymakers have engaged with biohacking groups to incorporate citizen science into environmental monitoring and policy formulation[95]. By leveraging community-driven biotechnology, the government aims to achieve sustainable development goals and improve environmental governance[96]. Biohackers developing biosensors for water quality monitoring provide valuable data that informs environmental policies and interventions, enhancing the government's capacity to manage natural resources and address environmental challenges[97].

The collaboration between biohackers and policymakers in Colombia exemplifies how citizen science can be integrated into formal environmental monitoring frameworks, fostering a more participatory and data-driven approach to environmental governance[98]. By incorporating community-generated data into policy decisions, the government can develop more effective and responsive environmental strategies, addressing issues such as water pollution, climate change, and

[91] Mendes, A., J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Agriculture." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1590/0100-204X20220040

[92] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[93] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[94] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

[95] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[96] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[97] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[98] Martinez, L, P Silva, and D Torres. 2023. "Community-Driven Biohacking Initiatives in Ecuador: Bridging Technology and Public Health." *Journal of Community Biotechnology* 45-60. https://doi.org/10.1007/s40997-022-00459-3

biodiversity conservation[99]. This partnership between biohackers and policymakers highlights the potential for DIY biology to contribute to sustainable development and environmental stewardship[100].

NEED FOR EVOLVING REGULATORY MECHANISMS (NORM SETTING)

As biohacking rapidly advances, it is imperative that regulatory mechanisms evolve to address the unique ethical and safety challenges posed by this decentralized and innovative movement. Traditional regulatory frameworks often fall short in accommodating the dynamic nature of biohacking, necessitating the development of adaptive regulations that can swiftly respond to technological advancements and emerging practices. Key recommendations include establishing clear legal definitions to distinguish between personal enhancements and high-risk activities, fostering international collaboration to harmonize standards across jurisdictions, and creating innovation sandboxes that allow biohackers to experiment within controlled environments. Additionally, implementing comprehensive ethical training programs and introducing certification systems can ensure that biohackers are well-versed in best practices and regulatory compliance.[101]

Enhanced oversight mechanisms, such as dedicated regulatory bodies and regular inspections, are essential to monitor activities and enforce ethical standards. Furthermore, promoting public engagement through stakeholder forums and educational campaigns will foster transparency and build trust, while stringent controls on biotechnological tools and robust legal frameworks are necessary to combat biopiracy and organized crime. By addressing these areas, regulatory bodies can support the innovative potential of biohacking while maintaining rigorous ethical and safety standards, ensuring that biohacking contributes positively to societal development and technological progress[102].

To effectively balance innovation with responsibility, regulatory frameworks must incorporate flexibility and proactive measures that anticipate future biohacking trends.[103] This includes period policy reviews, stakeholder involvement in regulatory processes but also the norm setting.

It surely calls for the international bodies like the United Nations (UN), the specialised segments of its Secretariat such as the Vienna-based Office on Drugs and Crimes (ODC) or programs (UN World Food Program) as well as the UN Specialised Agencies (SA) such as the World Health Organisation (WHO), the Food and Agricultural Organisation (FAO), the World Intellectual Property Organisation (WIPO), the UN Industrial Development Organisation (UNIDO), as the monitoring of compliance mechanisms but also as the supranational norm setting authorities.

Further on, involvement of all societal stakeholders is crucial: Clearly, an open dialogue between researchers (biohackers), policymakers, ethicists (social scientists), consumers, governments and private sector ensures that regulations reflect diverse perspectives, interests while preserving the societal values. Additionally, combating illicit activities through stricter controls,

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[99] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

[100] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[101] *Biohacking: Technology, Development, Ethics by Prof. Anis H ...*, https://ovilehti.blogspot.com/2025/02/biohacking-technology-development.html .

[102] Bajrektarevic, Anis, and Valentina Carvajal Caballero. 2024. "Navigating the Global Digital Economy." *GHIR geopolitics, History and International Relations. Biohacking: Technology, Development, Ethics by Prof. Anis H ..., https://ovilehti.blogspot.com/2025/02/biohacking-technology-development.html.*

[103] *Biohacking: Technology, Development, Ethics by Prof. Anis H ...*, https://ovilehti.blogspot.com/2025/02/biohacking-technology-development.html.

advanced surveillance, and enhanced legal measures will mitigate biosecurity risks and prevent the misuse of biotechnological advancements. By fostering a collaborative and informed regulatory environment, stakeholders can create a supportive infrastructure that not only safeguards public health and ethical integrity but also encourages responsible innovation.

This balanced approach will enable the biohacking community to thrive sustainably, driving meaningful advancements while protecting individual rights and societal well-being.[104]

CONCLUSION: ETHICS AS A MISSING LINK BETWEEN TECHNOLOGY AND HUMAN DEVELOPMENT

Biohacking stands at the intersection of technology, ethics, and personal empowerment, offering transformative potential for individuals and communities alike. The vibrant biohacking landscapes in Europe and Latin America illustrate the movement's capacity to drive innovation, address local and global challenges, and foster a culture of scientific engagement.[105] However, the rapid evolution of biohacking necessitates robust ethical frameworks and regulatory oversight to mitigate risks and ensure responsible practices.

In Europe – as the most multilaterals and supranational institutions covered part of the globe, the synergy between community initiatives and regulatory frameworks has created a dynamic environment for biohackers, fostering both technological advancements and ethical responsibility. European biohacking communities serve as exemplars of how DIY biology can thrive within a supportive and ethically conscious ecosystem, balancing innovation with public safety and trust[106]. The adherence to GDPR and the integration of ethical guidelines underscore the importance of responsible data management and ethical research practices in sustaining the credibility and impact of biohacking initiatives[107].

Conversely, Latin America's biohacking landscape is characterized by grassroots innovation and local solutions addressing region-specific challenges[108]. The movement's focus on public health, agricultural sustainability, and environmental monitoring demonstrates its potential to contribute to sustainable development and community resilience[109]. However, the absence of comprehensive regulatory frameworks in many Latin American countries highlights the need for ethical guidelines and responsible practices to ensure the safe and effective application of biohacking innovations[110].

By learning from each region's successes and challenges, stakeholders can develop frameworks that promote responsible practices and ensure that the benefits of biohacking are

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[104] *Biohacking: Technology, Development, Ethics by Prof. Anis H ...*, https://ovilehti.blogspot.com/2025/02/biohacking-technology-development.html.

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[109] Lopez, A, J Silva, and F Costa. 2022. "Biohacking in Brazil: Synthetic Biology for Public Health and Infrastructure." *Brazilian Journal of Biotechnology* 380-395. https://doi.org/10.1007/s11274-021-03017-6

[110] Rodriguez, and L Garcia. 2023. "Urban Agriculture and Biohacking in Venezuela: Enhancing Food Security Through Biotechnology." *Journal of Sustainable Agriculture* 134-150. https://doi.org/10.1007/s40010-023-00500-8

accessible to all. The implementation of GDPR serves as a guiding framework for ethical and responsible biohacking, emphasizing data protection and individual rights[111]. Moreover, governments' growing interest in supporting biohacking initiatives underscores the need for collaboration, regulation, and community engagement to ensure that biohacking fulfils its potential as a force for positive social change[112].

A balanced approach to biohacking regulation can empower innovators while safeguarding indigenous rights, biodiversity, and ethical integrity, ensuring that biohacking's transformative potential is harnessed for global good. This requires harmonized international frameworks, robust enforcement mechanisms, and inclusive collaborations that prioritize both innovation and sustainability.

As we navigate this evolving landscape, future research should focus on developing adaptive regulatory models, fostering international collaborations, and exploring the socio-economic impacts of biohacking to fully realize its potential as a transformative and ethical movement. By addressing the ethical and regulatory challenges inherent in biohacking, society can harness the innovative power of DIY biology to drive meaningful advancements in health, sustainability, and human empowerment, ultimately benefiting individuals and communities on a global scale.[113]

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CHAPTER 2
EU Digital Governance, Data Protection and Financial Regulation

The Impact of Data Protection Legislation on Fintech and Financial Inclusion

RALUCA ANICA ONUFREICIUC[1], PH.D. STUDENT
PARIS-PANTHÉON-ASSAS UNIVERSITY, FRANCE; TEACHING ASIST. "NICOLAE TITULESCU" UNIVERSITY OF BUCHAREST, ROMANIA,
DR RAUL FELIX HODOŞ[2], PH.D. STUDENT
THE BUCHAREST UNIVERSITY OF ECONOMIC STUDIES; ASSOCIATE PROFESSOR PHD, "1 DECEMBRIE 1918" UNIVERSITY, ALBA IULIA, ROMANIA
CRINA MALCOCI[3], PH.D. STUDENT
UMFST "GEORGE EMIL PALADE" TÂRGU MUREŞ, ROMANIA

Abstract: *This paper examines the relationship between fintech, data protection legislation, and financial inclusion, highlighting both the opportunities and systemic risks associated with the digital transformation of finance. Drawing on theoretical perspectives, regional case studies, and regulatory analysis, the study shows that fintech can expand access to financial services through digital payments, algorithmic credit, automated savings, and robo-advised investments. Yet these mechanisms also create risks of over-indebtedness, algorithmic discrimination, digital exclusion, and cybersecurity vulnerabilities. The paper argues that robust data protection frameworks, such as the EU's General Data Protection Regulation (GDPR) and the Artificial Intelligence Act (AI Act), are not barriers to innovation but preconditions for trust and sustainable inclusion. Comparative evidence from Africa, Asia, Latin America, the United States, and Europe demonstrates that the quality of data governance determines whether fintech becomes a tool for democratization or a vector of new inequalities. The conclusion emphasizes that data protection and financial inclusion are inseparable: without clear rights, transparency, and accountability in the use of artificial intelligence, digital finance risks producing superficial rather than genuine inclusion.*
Keywords: *artificial intelligence, data protection, financial inclusion, fintech, GDPR.*

1. INTRODUCTION

Over the past two decades, fintech has become one of the most dynamic phenomena transforming the global economy. Whereas in the past access to financial services depended on the proximity of a bank branch, the existence of collateral, or a credit history, today it can be reduced to owning a mobile phone with internet access and a few minutes required to download an application. This transformation is not only technological but also social and political. It brings to

[1] Raluca Anica Onufreiciuc, PhD candidate Paris-Panthéon-Assas University, France; Nicolae Titulescu University of Bucharest, Faculty of Law, Romania, Assistant Professor, Faculty of Law and Administrative Sciences, Stefan cel Mare University of Suceava, ORCID: https://orcid.org/0009-0007-2583-1766
Scopus ID: 58562295800; Onufreiciuc, Raluca Anica – Author details – Scopus Preview; Scopus preview – Scopus – Search for an author profile Web of Science Researcher ID: FQL-0191-2022
Google Scholar:https://scholar.google.com/citations?user=EC0-uN4AAAAJ&hl=ro; https://profesionisti.juridice.ro/raluca-onufreiciuc
[2] Dr Raul Felix Hodoş, Associate Professor, "1 Decembrie 1918" University, Alba Iulia, Romania and Ph.D. Student (his 2nd PhD) – The Bucharest University of Economic Studies Romania, and ORCID: 0000-0001-8500-135X, Scopus Author ID: 58563100400 , Web of Science Researcher ID ADG-7045-2022 Raul Felix Hodos – Google Scholar
[3] Crina Malcoci (Cucoara), PhD Student UMFST "George Emil Palade" Târgu Mureș -ORCID: https://orcid.org/0009-0006-3881-0190
SCOPUS ID: https://id.elsevier.com/settings/redirect?code=RZOQaMF6LyNoT3ZISFYpYa9Tsd-bK6ikoJIUUfCF
WEB OF SCIENCE RESEARCHER ID: OZD-5277-2025
GOOGLE SCHOLAR: https://scholar.google.ro/citations?view_op=list_works&hl=ro&user=xsLb_iYAAAAJ

the forefront the promise of a more democratic financial world, in which traditional barriers disappear, and inclusion becomes possible for groups that have been marginalized for decades.

Financial inclusion is now recognized as an essential component of sustainable development. Datasets published by the World Bank in the *Global Findex Database 2021* show that more than 1.4 billion adults did not have access to a formal bank account[4]. This exclusion is not only an economic issue but also a social one: without access to secure payments, savings, credit, or insurance, individuals remain vulnerable to financial shocks, deprived of entrepreneurial opportunities, and dependent on the informal economy. Consequently, financial exclusion amplifies poverty and inequality.

Fintech promises to change this reality through mechanisms such as digital payments, microcredit, automated savings, and the democratization of investment. There are numerous examples: *M-Pesa*[5] in Kenya enabled money transfers via SMS, Revolut[6] and Wise[7] reduced the costs of international remittances, Nubank[8] democratized access to credit cards in Brazil, and Robinhood[9] opened capital markets to millions of retail investors. However, these innovations cannot be understood without considering the role of data and its governance. Unlike traditional banks, fintechs rely on the intensive processing of massive volumes of data – from classic identifiers (name, address, bank account) to behavioural, biometric, and inferential data. In this sense, data protection is not a secondary element but one of the keys to the success or failure of fintech as an instrument of financial inclusion.

2. THEORETICAL FOUNDATIONS

The link between financial development and economic growth has been consistently documented in economic literature. Beck, Demirgüç-Kunt, and Levine[10] showed that financial deepening stimulates GDP growth and reduces social inequalities by facilitating access to capital for SMEs and households. However, access to financial services remains uneven. Women, rural populations, and people without stable incomes are often excluded from traditional banking services. Amartya Sen, through the capability approach, offered another dimension[11] to this analysis. He argued that development should not be measured solely by economic indicators but by the real freedoms individuals can exercise. Access to financial services is thus a condition for exercising economic and social freedom. Financial inclusion is not only about the number of accounts opened but about people's ability to plan for the future, protect their resources, and develop their potential.

Within this theoretical framework, fintech emerges as a disruptive innovation. Philippon shows that fintech reduces transaction costs and increases competition, bringing benefits to consumers and the economy[12]. Arner, Barberis, and Buckley describe fintech as the fourth financial

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[6] More about Revolut, in https://www.revolut.com/en-US/
[7] Further details about Wise, in https://wise.com/
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revolution, after the creation of modern banks, mass credit, and financial globalization[13]. The central element is how technology is used to reach segments ignored by traditional systems.

3. FINTECH, ARTIFICIAL INTELLIGENCE AND DATA PROTECTION

What differentiates fintech from banking institutions is not only the absence of costly physical infrastructure but the intensive use of emerging digital technologies, especially artificial intelligence (AI). Machine learning algorithms are used to assess credit risk, detect fraud, personalize offers, and manage portfolios through robo-advisors. These systems have the potential to expand access to finance for individuals without a banking history, using alternative data such as utility payments, mobile phone records, or even online browsing behaviour[14].

However, AI raises serious issues of fairness and transparency. Barocas and Selbst[15] showed that algorithmic models can generate indirect discrimination when they rely on proxy data that reflect structural inequalities. A relevant case is Apple Card[16], where the credit algorithm was accused of gender discrimination, with women receiving lower credit limits than men with similar profiles. This episode[17] demonstrated that, without legal safeguards, fintech can transform "inclusion" into a new form of exclusion. Here the impact of GDPR is crucial, providing a unique framework for user protection. Article 22 of GDPR[18] prohibits fully automated decisions producing legal effects without explicit consent or additional safeguards. Thus, when a fintech uses AI to refuse a loan, it must provide the possibility of human review and the right to contest the decision. In this way, European legislation[19] not only protects privacy but directly contributes to fairer financial inclusion.

In the long run, the integration of AI into fintech will make data protection even more central. Complex algorithmic models are difficult to explain and audit, which accentuates the need for transparency and accountability rules. The recently adopted AI Act[20] classifies financial scoring systems as high-risk applications, obliging operators to implement strict governance measures. This approach confirms that data and AI regulation is an integral part of financial inclusion strategies: without safeguards, public trust disappears, and fintech adoption stagnates.

3.1. Regional Case Studies: Fintech, Data Protection, and Financial Inclusion

The regional analysis shows that fintech has enormous inclusion potential, but its impact is determined by the quality of data protection legislation and the way AI is used. Africa and Asia have demonstrated that technology can bring millions of people into the system, but in the absence of clear rules, inclusion remains vulnerable to abuse. Latin America[21] democratized access, but cyber and

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[17] BBC News, "Apple's 'sexist' credit card investigated by US regulator," 2019, https://www.bbc.com/news/business-50365609.

[18] European Union, Regulation (EU) 2016/679 (General Data Protection Regulation), OJ L 119, 4 May 2016, art. 22.

[19] Finance Watch, "The Digital Fairness Act must ensure a safer, fairer retail finance marketplace," (04 November 2025),https://www.finance-watch.org/policy-portal/digital-finance/the-digital-fairness-act-must-ensure-a-safer-fairer-retail-finance-marketplace/

[20] European Union, Regulation (EU) 2024/1689 laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act), OJ L 202, 12 July 2024.

[21] World Bank, "Ciberseguridad en América Latina y el Caribe," World Bank Blogs, https://blogs.worldbank.org/en/latinamerica/seguridad-cibernetica-en-america-latina-y-el-caribe

data risks are high. The United States[22] exemplifies rapid innovation without adequate protection, while Europe confirms that data protection is the foundation of authentic and sustainable inclusion.

3.1.1. Sub-Saharan Africa – M-Pesa and the Data Protection Dilemma

Sub-Saharan Africa is often considered the global laboratory of financial inclusion through fintech. Launched in 2007, M-Pesa enabled money transfers via SMS, without the need for a classic bank account. Within a few years, the platform served over 20 million users in Kenya and Tanzania, most of them previously excluded from the formal financial system[23]. The impact on household welfare was significant: access to secure payments increased consumption and reduced vulnerability to economic shocks. Yet M-Pesa and similar solutions raised serious concerns about data protection. Users were required to provide identification information and accept that their transactions would be centrally stored. In the absence of a framework comparable to GDPR, such data could be used for commercial or political purposes. As fintechs become dominant players, the lack of clear data protection legislation undermines user trust and limits the sustainability of inclusion.

As AI begins to be used for credit scoring and fraud detection in Africa, risks multiply. If algorithmic models are applied without transparency obligations and without appeal guarantees, there is a danger that the same vulnerable groups included through mobile payments may be excluded through automated credit mechanisms[24]. The conclusion for Africa is that fintech has shown enormous potential, but the future of inclusion depends on creating a legal framework for data protection and AI governance.

3.1.2. Asia – India and China Between Inclusion and Control

In Asia, fintech has experienced spectacular growth. India has become emblematic through the combination of biometric identification via Aadhaar[25], digital payments through UPI, and the expansion of microcredit platforms. The *Global Findex Database* shows that the share of adults with a bank account rose from 53% in 2014 to 80% in 2021, largely due to digital payments[26].

However, this rapid inclusion also brought risks. Hundreds of microcredit apps offered instant loans, evaluated through algorithms relying on alternative data such as mobile phone history. IMF[27] (*International Monetary Fund*) documented cases of over-indebtedness and abusive collection practices. From a data protection perspective, the *Digital Personal Data Protection Act*[28] introduced modern rules, but its excessive reliance on consent has created the phenomenon of "consent fatigue"[29]. Users accept conditions without understanding their implications, undermining trust, and limiting the effectiveness of protection.

China, through Ant Group[30] and its integrated financial ecosystems, has included millions of people in the formal financial circuit. Yet the regulatory philosophy[31] is different: the *Personal Information Protection Law* (PIPL) offers protection similar in form to GDPR, but in practice data can be used for purposes of national. AI is widely used for social scoring and credit assessment,

[22] "EU General Court Upholds EU–U.S. Data Privacy Framework," Ethics & Compliance – Swiss Association, https://ethics-compliance.ch/eu-general-court-upholds-eu-u-s-data-privacy-framework/

[23] Jack, W. & Suri, T., Risk sharing and transaction costs: Evidence from Kenya's mobile money revolution, in *American Economic Review*, 104(1), 2014, pp.185–190.

[24] Advisense, "The EU AI Act and Its Implications for Credit Risk Models in Banking," 19 March 2025, https://advisense.com/2025/03/19/the-eu-ai-act-and-its-implications-for-credit-risk-models-in-banking/.

[25] More about *My Aadhaar*, in https://uidai.gov.in/en/

[26] Demirgüç-Kunt *et al.*, 2022, pp. 12–14

[27] IMF, *Fintech and Financial Inclusion*, 2023, Washington, pp.8–10.

[28] Republic of India, Digital Personal Data Protection Act, No. 22 of 2023, Gazette of India, 11 August 2023.

[29] Bhatia, G., The Digital Personal Data Protection Act in India: Promise and pitfalls, in *Juridical Tribune*, 13(2), 2023, p.89.

[30] More details about Ant Group, in https://www.antgroup.com/en

[31] Standing Committee of the National People's Congress, 2021. *Personal Information Protection Law (PIPL)*. Beijing: NPC.

raising fundamental issues of autonomy and inclusion. Here, data protection does not guarantee fairness but serves political control.

The conclusion for Asia is ambivalent: fintech has expanded inclusion dramatically, but without a robust and balanced data protection framework, this inclusion remains fragile and subject to manipulation.

3.1.3. Latin America – Democratizing Banking but Data Vulnerabilities

Latin America is notable for fintechs that democratized access to financial services. Nubank, founded in 2013 in Brazil, attracted over 70 million customers by offering fee-free credit cards and a simple digital interface[32]. Mercado Pago[33], part of the Mercado Libre ecosystem, provided digital payment and savings solutions, becoming a major regional player. However, data protection regulation remains fragmented. BIS[34] warns that the lack of GDPR-like standards exposes consumers to cyber risks and commercial misuse of data. Moreover, the adoption of AI for credit scoring or fraud detection often occurs without clear obligations for audits or transparency. In this context, inclusion generated by fintech is real but unstable, relying more on platform reputation than on legal guarantees.

Latin America thus offers a paradox: fintech reduced costs and expanded access, but the absence of strong data protection risks undermining trust and limiting long-term progress.

3.1.4. Europe – Regulation as the Foundation of Sustainable Inclusion

Europe provides the clearest example of the role of data protection in supporting inclusion. European fintechs operate in an environment regulated by GDPR, PSD2[35], and, more recently, the AI Act. PSD2 introduced open banking, allowing third-party providers to access bank account data, but only with explicit consent and under strict security standards[36]. GDPR obliges fintechs to respect principles such as minimization, transparency, and accountability. In addition, CJEU jurisprudence strengthens these rules. The *Schufa Holding AG* case (C-634/21)[37] established that credit scores generated by algorithms are automated decisions, requiring fintechs to provide the right to appeal and human review.

The integration of AI in European fintech is governed by the AI Act (2024), which classifies financial scoring systems as high-risk applications and requires strict auditability. The result is slower inclusion compared to Asia or Latin America, but also more sustainable: users adopt fintech services because they trust that their data is protected and that decisions are made fairly.

3.1.5. United States – Fast Innovation, Fragmented Protection

The United States has produced some of the world's most famous fintechs, from Robinhood to LendingClub[38]. These platforms democratized investment and credit but were also involved in major controversies. The Apple Card case, where women received lower credit limits than men, illustrated the risk of algorithmic discrimination in the absence of strict transparency rules[39]. Unlike the EU, the US lacks a unified federal data protection law. The California Consumer Privacy

[32] Dorfleitner, G., Hornuf, L. & Kreppmeier, J., 2023. Promise not fulfilled: FinTech, data privacy, and the GDPR. *Electronic Markets*, 33(4), pp.1189–1192.

[33] Further details about Mercado Pago, in https://www.mercadopago.com.ar/

[34] BIS, Fintech and financial inclusion: drivers and policy implications, in *BIS Quarterly Review*, March 2022, pp. 52–53.

[35] European Union, Directive (EU) 2015/2366 on payment services in the internal market (PSD2), OJ L 337, 23 December 2015.

[36] European Commission, "Questions and Answers: Commission confirms adequacy decision for EU–U.S. Data Privacy Framework," Press corner, 2024, https://ec.europa.eu/commission/presscorner/detail/en/qanda_19_5555

[37] Court of Justice of the European Union, Case C-634/21, *Schufa Holding AG v. Others*, judgment of 7 December 2023, ECLI:EU:C:2023:XXX.

[38] More about this platform. in https://www.lendingclub.com/

[39] Borges & Lutz, 2021, pp. 141–143.

Act[40](2018) offers rights similar to GDPR[41], but only at the state level. Elsewhere, regulation is sectoral: HIPAA[42] for health, GLBA[43] for financial data. This fragmentation leaves major gaps in user protection and undermines trust. Although innovation is rapid, the resulting inclusion is shallow and vulnerable. Users may be excluded or discriminated against by opaque models, with no effective mechanisms for appeal. The US thus exemplifies the limits of fintech when robust data protection is absent.

The regional analysis demonstrates that fintech has immense potential for inclusion, but its impact is shaped directly by the quality of data protection legislation and the use of artificial intelligence. Africa and Asia show that technology can bring millions into the system, but without clear rules inclusion remains fragile. Latin America democratized access, but data and cyber risks are high. The US illustrates what fast innovation without protection means, while Europe confirms that robust data governance is the cornerstone of authentic and sustainable inclusion.

4. FINTECH MECHANISMS AND THE ROLE OF DATA PROTECTION IN INCLUSION

4.1. Digital Payments – From the Remittance Revolution to Data Protection Challenges

Digital payments represent the most visible dimension of financial inclusion through fintech. In many emerging economies, the possibility of sending and receiving money through mobile phones has meant, for the first time, integration into the formal financial system. According to World Bank data[44], between 2010 and 2021 the global average cost of international remittances fell from 9.3% to under 6%, largely due to competition generated by fintech platforms such as Wise and Revolut. AI plays a crucial role in digital payments, particularly in fraud detection and user authentication. Machine learning algorithms analyse transaction patterns to identify suspicious activity in real time. While these technologies increase security, they also require the collection and processing of highly sensitive data, including geolocation and behavioural information.

Under GDPR, such processing is considered high-risk. Location data, for instance, qualify as personal data and may only be processed if there is a clear and proportionate legal basis[45]. This framework ensures that inclusion through digital payments does not compromise privacy. In regions where no equivalent rules exist, the same technology that facilitates inclusion can expose users to surveillance or commercial exploitation of their data. Thus, data protection becomes a decisive factor in whether digital payments are adopted and trusted by vulnerable populations.

4.2. Alternative Credit – Algorithms, Scoring, and the Risk of Discrimination

Credit is the most sensitive dimension of financial inclusion. Traditional banks often exclude individuals without collateral or formal credit histories. Fintechs introduced innovative credit models based on algorithmic scoring. Instead of relying solely on classical banking history, these systems use alternative data such as utility payments, mobile phone records, and even online behaviours. In this way, millions of previously excluded individuals gain access to credit. Machine learning models identify predictive risk patterns in vast datasets. Borges and Lutz[46] showed that this approach may

[40] State of California, California Consumer Privacy Act of 2018 (CCPA), Cal. Civ. Code § 1798.100–1798.199 (enacted 28 June 2018).
[41] IAPP, "GDPR matchup: The California Consumer Privacy Act 2018", 31 July 2018, https://iapp.org/news/a/gdpr-matchup-california-consumer-privacy-act
[42] United States Congress, Health Insurance Portability and Accountability Act of 1996 (HIPAA), Pub. L. No. 104-191, 110 Stat. 1936 (1996).
[43] United States Congress, Gramm–Leach–Bliley Act (GLBA), Pub. L. No. 106-102, 113 Stat. 1338 (1999).
[44] World Bank, 2022. *The Global Findex Database 2021*. Washington: World Bank, pp. 9–15.
[45] European Union, Regulation (EU) 2016/679 (General Data Protection Regulation), OJ L 119, 4 May 2016, art. 4.
[46] Borges & Lutz, 2021, pp. 142.

reduce exclusion but also risks reinforcing indirect discrimination when algorithms rely on proxies like postal codes, which correlate with socio-economic status or ethnicity.

In this sense, Article 22 of GDPR prohibits individuals from being subject to fully automated decisions with significant legal effects unless explicit consent or meaningful safeguards are provided. This rule protects inclusion by granting users the right to contest algorithmic decisions and request human review. In the US, the absence of an equivalent framework allowed cases like Apple Card[47], where women received lower credit limits than men with similar profiles, without clear explanations. China presents an even more controversial case: social scoring systems integrate financial behaviour with other aspects of civic life[48]. Without genuine guarantees of informational autonomy, algorithmic credit becomes a mechanism of control rather than inclusion. In Europe, by contrast, GDPR and the AI Act classify such scoring systems as high-risk and subject them to transparency and audit obligations, thus making inclusion both fairer and more sustainable.

4.3. Digital Savings and Financial Literacy – Profiling Users Responsibly

Digital savings solutions represent another way fintech contributes to inclusion. Applications known as "robo-savers" automatically round up payments and transfer the difference into savings accounts or investment funds. The World Economic Forum[49] shows that these mechanisms significantly increase savings among low-income users. Moreover, apps like Monzo[50] or Revolut integrate budgeting tools and personalized notifications, improving digital financial literacy. Often AI is used to analyse user transactions and build behavioural profiles, enabling personalized recommendations. Personalized features can indeed encourage higher savings, but they also bring significant concerns related to profiling. Under Article 22 GDPR, profiling is subject to explicit safeguards, requiring controllers to explain the underlying decision-making logic and to offer users the possibility to object.

This transforms data protection into a mechanism of inclusion: users who know their data are processed transparently, and who have control over personalization, are more likely to trust and adopt digital savings tools. Where these guarantees are absent, digital savings can become another arena of commercial manipulation rather than a path to empowerment.

4.4. Democratized Investments – Robo-Advisors and Algorithmic Auditability

Investments have traditionally been the preserve of wealthy individuals with advanced financial knowledge. Fintech has changed this paradigm. Platforms like Robinhood, eToro[51], and Betterment[52] allow small investors to access markets with minimal capital, while robo-advisors create customized portfolios based on risk profiles. Malverti, Bulgarelli, and Villa[53] showed that robo-advisors reduce costs and democratize market participation. However, these systems rely heavily on artificial intelligence, which processes user data to generate investment strategies. The risk lies in oversimplification: intuitive interfaces may obscure the complexity of financial markets and expose inexperienced users to significant losses.

The European Banking Authority[54] has warned that excessive simplification must be accompanied by transparency about risks. GDPR imposes explainability obligations, and the AI Act classifies robo-advisors as high-risk systems, subjecting them to strict audit requirements. These

[47] BBC News, 2019, https://www.bbc.com/news/business-50365609

[48] Liu, C., & Rona-Tas, A., Trusting by Numbers: An Analysis of a Chinese Social Credit System Governance Infrastructure, in Critical Sociology, 51(6), 2024, 1247-1265. https://doi.org/10.1177/08969205241246528

[49] World Economic Forum, The Future of Data-Driven Finance, 2022, Geneva, pp. 22–23.

[50] See also https://monzo.com/

[51] More about eToro, in https://www.etoro.com/ro/

[52] Further details in https://www.betterment.com/

[53] Malverti, R., Bulgarelli, D. & Villa, A., 2018. Robo-advisors and portfolio management. *Journal of Financial Transformation*, 47, pp.15–28, pp.16–19.

[54] EBA, *Report on the use of digital platforms in the EU banking and payments sector*, 2022, Paris, pp. 9–14.

rules protect users and ensure that democratized investments contribute to genuine inclusion. In the United States, where such obligations do not exist at the federal level, Robinhood[55] has been accused of encouraging speculative trading among young users without adequate disclosure of risks. This demonstrates that without clear regulation, investment democratization may lead to new forms of exclusion: those with knowledge and resilience benefit, while others bear the costs of hidden risks.

5. INTERMEDIATE SYNTHESIS

Across payments, credit, savings, and investments, the same lesson emerges: data protection and AI governance are indispensable for fintech to deliver authentic financial inclusion. Where GDPR, the AI Act, or similar frameworks apply, inclusion is sustainable because it is built on trust and fairness. Where regulation is absent or fragmented, inclusion risks being superficial, marred by exploitation, discrimination, and erosion of confidence.

A. Systemic Risks of Fintech and Implications for Inclusion

Although fintech is widely associated with reducing barriers to access and democratizing financial services, practice and scholarship demonstrate that innovation can generate systemic risks that undermine both inclusion and data protection. Four risks stand out: digital over-indebtedness, algorithmic discrimination, the digital divide, and cybersecurity vulnerabilities.

B. Digital Over-Indebtedness

The flexibility of fintech credit, while beneficial for access, can easily lead to over-indebtedness. Unlike traditional banks, which apply prudential requirements, fintech platforms often provide instant loans based on alternative data such as mobile phone records or utility payments. In India, the proliferation of microcredit apps led to widespread over-indebtedness and even social crises, with reports of extreme pressure from collectors[56]. In Kenya, following the success of M-Pesa, instant credit services created "debt traps" for vulnerable users[57]. In this case, data protection rules are meant to keep things from going wrong. The principle of minimisation in the GDPR says that you cannot collect too much user data and that processing must be clear. The AI Act goes even further by saying that AI-powered credit scoring is very risky and needs close supervision. These frameworks protect not only privacy but also the long-term viability of financial inclusion by making sure that credit decisions are fair and responsible.

C. Algorithmic Discrimination

Algorithmic scoring and decision-making create another critical risk: discrimination. Even when algorithms are designed to be neutral, they can reproduce existing social inequalities by relying on proxy data. Barocas and Selbst[58] showed that variables such as postal codes or device types may indirectly correlate with ethnicity or gender, leading to exclusionary outcomes. The Apple Card case remains emblematic. Women received lower credit limits than men with similar profiles, and in the absence of GDPR-like obligations, they lacked the right to explanation or appeal. By comparison, Article 22 GDPR[59] bars the imposition of fully automated decisions that produce legal or similarly significant effects unless appropriate human intervention or explicit consent is in place. The AI Act reinforces this protection by imposing mandatory audit and governance requirements on high-risk algorithmic systems, including those used in credit-scoring and other financial decision-making contexts.

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[55] More about this U.S.-based commission-free trading platform launched in 2013, in https://robinhood.com/eu/en/

[56] IMF, 2023, p. 9.

[57] BIS, 2022, p. 52.

[58] Barocas, S. & Selbst, A.D., Big data's disparate impact, in *California Law Review*, 104(3), 2016, p. 674.

[59] de Hert, P. & Lazcoz, G., "Radical rewriting of Article 22 GDPR on machine decisions in the AI era," European Law Blog (11 October 2021), https://www.europeanlawblog.eu/pub/radical-rewriting-of-article-22-gdpr-on-machine-decisions-in-the-ai-era/release/1.

Thus, in Europe, data protection law directly supports inclusion by ensuring that automated credit systems remain transparent, contestable, and fair. Where such frameworks are absent, fintech risks reproducing or even amplifying discrimination rather than overcoming it.

D. The Digital Divide

Fintech is often presented as a universal solution, but in reality it risks deepening the digital divide. In 2021, OECD[60] noted that access to digital services presupposes technological infrastructure, smartphones, and digital literacy. Rural populations, the elderly, and women in emerging economies are often left behind.

In Africa, while M-Pesa integrated millions into the financial system, the poorest communities lacking stable mobile networks or access to devices were excluded[61]. In India, limited digital literacy meant that formal access to fintech services often translated into precarious use, with users unable to understand contractual terms.

Here, data protection intersects with equity. GDPR requires that consent be informed and freely given, and obliges operators to provide clear, accessible information adapted to vulnerable users. This transforms data protection into a tool for inclusion: legislation ensures that services are not only available but also understandable and safe to use.

E. Cybersecurity Vulnerabilities

Fintech platforms process vast amounts of highly sensitive data – financial, biometric, and behavioural. Any breach undermines trust and jeopardizes inclusion. ENISA[62] (2022, pp. 12–18) highlights that fintechs are frequent targets of phishing, ransomware, and social engineering attacks.

GDPR requires operators to notify both authorities and users within 72 hours of a data breach. This obligation reinforces confidence, as users know they will be informed and protected. In jurisdictions without such requirements, users may remain unaware of data leaks for years, eroding trust and deterring participation in digital finance. Data protection thus becomes synonymous with resilience: without cybersecurity safeguards, inclusion collapses.

FINAL CONCLUSIONS AND POLICY RECOMMENDATIONS

The analysis conducted throughout this chapter demonstrates that fintech can truly transform financial inclusion, yet this promise can only be fulfilled within a strong framework of data protection and governance of artificial intelligence. The opportunities created by digital finance are clear: mobile payments lower remittance costs, algorithmic scoring extends credit to the unbanked, digital savings tools improve financial literacy, and robo-advisors democratize investments. But these innovations cannot be separated from the risks they generate. Digital over-indebtedness, algorithmic discrimination, the digital divide, and cybersecurity vulnerabilities are not marginal issues; they strike at the heart of financial inclusion.

Over-indebtedness illustrates the paradox of access without safeguards. "The rapid proliferation of instant microcredit applications in India and Kenya demonstrates that inclusion can become a debt trap when credit is extended irresponsibly." In this context, data protection rules are more than a privacy tool: they establish proportionality and transparency, limiting the misuse of user information for predatory offers. Similarly, algorithmic discrimination shows that artificial intelligence can replicate social inequalities. The Apple Card case revealed how opaque models can penalize women despite equivalent creditworthiness. European legislation, through Article 22 of GDPR and reinforced by the AI Act, responds by requiring human oversight and algorithmic audits.

[60] OECD, Financial Consumer Protection and Financial Inclusion in the Digital Age, 2021, Paris, pp.21–23.
[61] Jack, W. & Suri, T., Risk sharing and transaction costs: Evidence from Kenya's mobile money revolution. *American Economic Review*, 104(1), 2014, pp.185–190.
[62] ENISA, *Threat Landscape for Financial Services*, 2022, Athens, pp.12–18.

These legal mechanisms transform the right to data protection into a guarantee of equity in access to financial services.

The digital divide further illustrates the complexity of inclusion. Even when services are available, they cannot be used effectively if individuals lack devices, connectivity, or digital literacy. Here, data protection law interacts with social policy: by demanding that information be presented in clear and accessible language, GDPR creates a duty for fintechs to design services that are understandable and inclusive. In contrast, where such obligations are absent, access remains formal but fragile. Cybersecurity vulnerabilities add another layer. Without strong safeguards, breaches undermine user trust and discourage participation in digital finance. Europe's obligation to notify breaches within seventy-two hours under GDPR is an example of how regulation can maintain trust and preserve inclusion.

Comparative experience suggests that Europe, with its integrated framework of GDPR, PSD2, and the AI Act, provides the most coherent model. Inclusion here may progress more slowly, but it is underpinned by trust and sustainability. Asia and Africa show impressive expansion, but in the absence of robust frameworks, inclusion is vulnerable to exploitation. Latin America illustrates both the democratizing power of fintech and the risks of fragmented regulation, while the United States demonstrates that rapid innovation without unified protection produces shallow inclusion marked by repeated scandals.

Looking ahead, artificial intelligence will intensify these challenges. Algorithms are becoming increasingly complex and opaque, raising urgent questions of explainability and accountability. The European AI Act anticipates this reality by classifying financial scoring systems as high-risk, requiring transparency and auditability. Yet the debate is only beginning. In the near future, financial inclusion will not depend solely on the availability of fintech platforms but on how societies regulate AI and integrate data protection into broader economic and social governance.

The broader conclusion is that data protection and financial inclusion are inseparable. Far from being a barrier, legislation on data protection is the infrastructure of trust without which no digital financial service can thrive. Where rules are robust, users feel safe to participate, adoption increases, and inclusion becomes real. Where protection is weak or fragmented, inclusion is only apparent, leaving users exposed to debt, discrimination, and insecurity. In this light, the governance of data and AI is not only a legal necessity but a condition for equitable economic development. Fintech can fulfil its democratizing promise, but only if it is built on the solid foundation of respect for rights, transparency in technology, and a vision of finance as a public good that serves society as a whole.

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Perspectives on the Application of GDPR Rules Regarding the Protection of Sensitive Personal Data in Romanian and European Practice

DR RAUL FELIX HODOŞ[1],
BUCHAREST UNIVERSITY OF ECONOMIC STUDIES, PHD CANDIDATE;
"1 DECEMBRIE 1918" UNIVERSITY OF ALBA IULIA, ASSOCIATE PROFESSOR, PHD

Abstract: *This article explores the normative, legal, and institutional dimensions of sensitive personal data protection within the European Union, with a particular focus on the application of* ***Article 9 of the General Data Protection Regulation (GDPR)****. Anchored in the principles of human dignity, equality, and proportionality, Article 9 represents a pivotal expression of European digital constitutionalism. Sensitive data are framed not as neutral informational inputs but as* ***moral constructs****, carrying the weight of identity, personhood, and social equality. Through doctrinal analysis and jurisprudential interpretation, the study traces how the GDPR transforms ethical values into enforceable legal obligations, including the* ***reversal of the burden of justification*** *for processing sensitive data.*
Keywords: *EU, GDPR, human rights, ethics, law*

The research further evaluates the expanding relevance of Article 9 in the context of **artificial intelligence**, where inferred sensitive data blur traditional legal categories. The **EU Artificial Intelligence Act (2024)** and the Ethics Guidelines for Trustworthy AI are examined as regulatory instruments that extend the GDPR's ethical architecture into high-risk algorithmic systems. Romania is used as a national case study, with analysis of the ANSPDCP's evolving enforcement role, highlighting both promising developments and structural limitations.

A comparative perspective contrasts the EU's rights-based approach with the United States' **sectoral, market-driven model**, emphasizing the originality and global influence of the European paradigm. The article concludes with a set of **policy proposals** focused on ethical-by-design mechanisms, institutional strengthening, and civic education. It argues that sustainable digital governance requires not only technical safeguards but a **cultural commitment to law as a form of ethical constraint**. The protection of sensitive data thus emerges as a cornerstone of democratic resilience in an age of accelerating digital inference.

Keywords: GDPR, Article 9, Sensitive Personal Data, Human Dignity, AI Regulation, Data Ethics, EU & Romanian Law, Digital Constitutionalism

The protection of sensitive personal data occupies a distinctive position within the European Union's legal and ethical framework. It is not merely a matter of procedural compliance, but an expression of fundamental values embedded in the constitutional fabric of the Union. The General Data Protection Regulation (GDPR), adopted in 2016 and enforced since 2018, marks a paradigmatic shift in the regulation of personal data, particularly with respect to what it defines under Article 9 as "special categories" of data. These include information revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, genetic data, biometric data, data concerning health, sex life, or sexual orientation. The regulatory treatment of such data rests on a presumption of prohibition, subject to narrowly defined exceptions, which signals the seriousness with which the EU approaches informational harm and discrimination risks.[2]

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[1] Dr Raul Felix Hodoş, Associate Professor, "1 Decembrie 1918" University, Alba Iulia, Romania and Ph.D. Student (his 2nd PhD) – The Bucharest University of Economic Studies Romania, and ORCID: 0000-0001-8500-135X, Scopus Author ID: 58563100400 , Web of Science Researcher ID ADG-7045-2022 Raul Felix Hodos – Google Scholar

[2] European Parliament and Council, *Regulation (EU) 2016/679 (General Data Protection Regulation)*, Article 9, OJ L119/1, 4 May 2016.

This heightened protection stems from an underlying philosophical commitment to human dignity, as codified in Article 1 of the Charter of Fundamental Rights of the European Union, which asserts that human dignity is inviolable and must be respected and protected.[3] In this sense, the GDPR should be interpreted not only as a legislative instrument but also as a constitutional expression of European values. The linkage between data and dignity is particularly visible in the architecture of Article 9, where the obligation to justify any processing of sensitive data reverses the burden of proof. The data controller is no longer assumed to act lawfully by default; instead, they must demonstrate that processing is both necessary and proportionate in light of specific legal grounds.[4] This design choice reflects what scholars have described as "digital constitutionalism"—the embedding of ethical principles within the technological infrastructure of governance.[5]

The notion that data protection constitutes a form of moral boundary-setting is increasingly relevant in the age of algorithmic inference. With the growing capacity of artificial intelligence systems to extract sensitive attributes from seemingly benign data—such as predicting political orientation or health conditions from online behaviour—the traditional binary between sensitive and non-sensitive data has begun to collapse.[6] Such developments reinforce the importance of adopting a contextual and risk-based interpretation of sensitivity, as proposed by scholars such as Mantelero, who argues that the ethical justification for data regulation must now account for relational risks, not merely data categories.[7]

In response to these shifts, the European Union has introduced complementary regulatory tools, most notably the Artificial Intelligence Act, formally adopted in 2024. This instrument classifies AI systems that process biometric, genetic, or behavioural data as "high-risk," thereby triggering obligations of transparency, explainability, and human oversight.[8] The Act can be understood as extending the logic of Article 9 GDPR into the algorithmic domain, translating abstract human rights values into legally enforceable technical safeguards. This legislative direction has been reinforced by the "Ethics Guidelines for Trustworthy AI," published in 2019 by the High-Level Expert Group on Artificial Intelligence, which assert that AI must not only be lawful but also ethical and robust.[9]

Romania's implementation of Article 9 GDPR provides a concrete illustration of how these abstract commitments can be translated into national enforcement. The National Supervisory Authority for Personal Data Processing (ANSPDCP) has gradually evolved from a procedural enforcer to an ethical co-interpreter of EU values. Its decisions increasingly reference principles such as proportionality and dignity, and recent jurisprudence indicates a willingness to consider the broader social implications of sensitive data processing.[10] As such, Romania exemplifies what Hijmans describes as "polycentric governance" in EU data protection—a model in which national regulators act not as subordinates but as autonomous participants in a shared constitutional project.[11]

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[3] Charter of Fundamental Rights of the European Union, OJ C 326/391, 26 October 2012, Article 1.

[4] Christopher Kuner, Lee A. Bygrave, and Christopher Docksey, eds., ***The GDPR: A Commentary*** (Oxford: Oxford University Press, 2020), 295–312.

[5] Paul Nemitz, "Constitutional Democracy and Technology in the Age of Artificial Intelligence," *Philosophical Transactions of the Royal Society A* 376, no. 2133 (2018): 20180089. DOI: 10.1098/rsta.2018.0089. Natea Mihaela Daciana, Fabricating truth: from a hybrid war to political fake news. Study case on Romanian illiberal parties' discourse in the context of the Ukrainian war, Civil Szemle, Special Issues V/2023, pp. 155-168

[6] Giovanni Sartor, "A Risk-Based Approach to Data Protection," *Philosophical Transactions of the Royal Society A* 380, no. 2238 (2022): 20210192. DOI: 10.1098/rsta.2021.0192.

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[8] European Commission, ***Artificial Intelligence Act***, COM(2021) 206 final, 2024.

[9] European Commission, *Ethics Guidelines for Trustworthy Artificial Intelligence*, High-Level Expert Group on AI, 2019.

[10] ANSPDCP, *Annual Activity Report 2024* (Bucharest: ANSPDCP, 2024), https://www.dataprotection.ro.

[11] Hielke Hijmans, *The European Union as Guardian of Internet Privacy: The Story of Article 16 TFEU* (Cham: Springer, 2016), 301–306.

Nonetheless, the mere existence of ethical norms does not guarantee their internalisation within either public administration or private industry. There remains a gap between regulatory ambition and practical implementation, especially in sectors driven by rapid technological innovation. The OECD has noted that jurisdictions with robust data protection regimes tend to exhibit higher levels of digital trust and economic resilience, suggesting that ethical regulation may serve as a competitive asset rather than a constraint.[12] However, this depends on cultivating a culture of accountability, transparency, and risk anticipation—values that must be embedded into legal education, institutional practice, and technological design from the outset.

The legal architecture of Article 9 GDPR reflects a sophisticated balance between individual rights and collective interests, grounded in a deontological ethical tradition that defines the European regulatory approach. Unlike data protection laws in other jurisdictions, such as the United States, where privacy is often interpreted as a property or contractual right, the European conception views data protection as a matter of **human dignity and non-discrimination**. This distinction is pivotal: it informs not only the substantive content of the regulation but also the procedural mechanisms through which it is enforced. The enumeration of specific categories of sensitive data—race, religion, political opinion, health, and so on—mirrors the protected grounds in EU anti-discrimination law, particularly Articles 20 and 21 of the Charter of Fundamental Rights.[13] This alignment affirms that data protection serves not merely to avoid economic harm or reputational loss but to preserve the **moral and legal integrity of the person**.

The principle of proportionality, long established in European public law, serves as a mediating doctrine between competing rights and policy objectives.[14] When applied to data processing, it requires that any interference with sensitive data be **suitable**, **necessary**, and **proportionate in the strict sense** – i.e., that the benefits of processing outweigh the risks to individual rights and cannot be achieved by less intrusive means. This is not a formality but a substantive standard that obliges data controllers to engage in contextual risk assessment. Such evaluations are central to **data protection impact assessments (DPIAs)** mandated under Articles 35 and 36 GDPR, particularly where large-scale processing of sensitive data or the use of new technologies is involved.[15] In this sense, proportionality becomes both a **legal test** and an **ethical filter**, operationalising human dignity into decision-making processes.

This legal-philosophical framework gains even more complexity in light of the **emergent capabilities of artificial intelligence systems**, which are able to infer sensitive traits from data that is, on the surface, non-sensitive. Recent studies in computational social science demonstrate how machine learning algorithms can predict mental health conditions, sexual orientation, or political views based solely on metadata or behavioural patterns.[16] This raises profound concerns not only about privacy but about **informational autonomy** – the ability of individuals to control what others know about them. The collapse of the boundary between sensitive and non-sensitive data, as observed by Mantelero and others, compels regulators to adopt a more **contextual and dynamic understanding of sensitivity**.[17]

Indeed, Article 9 GDPR was not designed with these inferential capacities in mind. However, its moral logic remains highly applicable. The presumption of illegality that governs sensitive data

[12] OECD, *Digital Economy Outlook 2022* (Paris: OECD Publishing, 2022), 117–122. DOI: 10.1787/5b2e4f8a-en.
[13] Charter of Fundamental Rights of the European Union, Articles 20–21, OJ C 326/391, 2012.
[14] Armin von Bogdandy, "Proportionality in European Public Law," *Common Market Law Review* 47, no. 4 (2010): 1171–1210.
[15] European Data Protection Board, *Guidelines on Data Protection Impact Assessment*, WP248 rev.01, 2017.
[16] Sandra Wachter and Brent Mittelstadt, "A Right to Reasonable Inferences: Re-Thinking Data Protection Law in the Age of Big Data and AI," *Columbia Business Law Review* 2022, no. 1 (2022): 494–620.
[17] Alessandro Mantelero, "Beyond Data Ownership: Reinventing Privacy, Data Protection and Data Sovereignty," *Computer Law & Security Review* 34, no. 2 (2018): 222–229.

processing can be reinterpreted in the AI context as a **presumption of ethical caution**. Even if inferred data falls outside the strict categories of Article 9, the **risk-based approach** now advocated by European regulators encourages a functional, rather than formal, reading of sensitivity.[18] This approach has been partially codified in the AI Act, which mandates that high-risk AI systems undergo not only technical scrutiny but also ethical evaluations, including human oversight and transparency obligations.[19]

What emerges is a regulatory ecosystem where data protection, algorithmic governance, and fundamental rights intersect. Sensitive data, once seen as a fixed legal category, is now viewed as a relational construct—one that evolves depending on **technological affordances, social context, and regulatory interpretation**. This shift has significant implications for both compliance and innovation. It implies that ethical foresight must become a standard component of system design, especially in areas such as healthcare, education, employment, and public administration, where the stakes of incorrect or biased inferences are particularly high.

The adoption of the European Union's Artificial Intelligence Act in 2024 represents a pivotal step in the expansion of data protection principles into the algorithmic realm. Unlike earlier sectoral regulations, the AI Act adopts a **horizontal and risk-based approach**, classifying AI systems based on their potential to infringe upon fundamental rights. High-risk systems—defined to include those used in biometric identification, employment decisions, access to education, and health services—are subject to a comprehensive set of obligations, ranging from transparency to human oversight.[20] These obligations are not merely technical; they embody the ethical commitments already articulated in the GDPR, particularly through Article 9.

Crucially, the AI Act does not supersede the GDPR but complements it, creating a dual compliance structure in which both data governance and algorithmic governance intersect. Article 10 of the AI Act, which outlines data governance obligations for high-risk systems, requires that training, validation, and testing data be relevant, representative, and free of bias.[21] This indirectly reinforces the sensitivity logic of Article 9 GDPR by ensuring that data categories which may reveal protected attributes—such as health, race, or political opinions—are treated with elevated safeguards during system development and deployment.

This integration of ethical constraints into system design aligns with the normative vision laid out in the European Commission's ***Ethics Guidelines for Trustworthy AI***.[22] These guidelines explicitly link trustworthy AI to three core principles: **lawfulness, ethical soundness, and technical robustness**. Each of these principles can be mapped back to the GDPR's architecture, where lawfulness corresponds to Article 6 (legal basis), ethical soundness to Article 9 (sensitive data and moral boundaries), and robustness to Articles 25 and 32 (data protection by design and by default). The AI Act thereby extends the scope of data protection law from ex-post enforcement to ex-ante system configuration.

A further layer of coherence is visible in how both GDPR, and the AI Act embrace **human oversight** as a structural guarantee. Under Article 22 GDPR, individuals have the right not to be subject to a decision based solely on automated processing, including profiling, where such decisions produce legal or similarly significant effects.[23] The AI Act reinforces this by mandating that high-risk systems allow for meaningful human intervention, particularly where sensitive personal data is

[18] Giovanni Sartor, "A Risk-Based Approach to Data Protection," *Philosophical Transactions of the Royal Society A* 380, no. 2238 (2022): 20210192. DOI: 10.1098/rsta.2021.0192.
[19] European Commission, *Artificial Intelligence Act*, COM(2021) 206 final, Title III, Chapter 2, 2024.
[20] European Commission, *Artificial Intelligence Act*, COM(2021) 206 final, Title III, Chapter 1, Article 6, 2024.
[21] Ibid., Article 10.
[22] European Commission, *Ethics Guidelines for Trustworthy Artificial Intelligence*, High-Level Expert Group on AI, 2019.
[23] General Data Protection Regulation, Article 22, Regulation (EU) 2016/679.

involved. This duality reflects the broader ambition of the EU to constitutionalise AI through mechanisms of accountability that go beyond transparency.

Romania, like other Member States, is required to transpose and apply the AI Act in ways that maintain consistency with existing data protection frameworks. The ANSPDCP, in collaboration with national digital authorities, will likely play a key role in monitoring high-risk AI deployments, especially in the public health and biometric surveillance sectors.[24] Given Romania's prior engagement with ethical data interpretation under Article 9 GDPR, its regulatory ecosystem is relatively well-positioned to absorb these obligations. However, this will require capacity-building, interdisciplinary training, and coordination between legal, technical, and ethical experts.

The interweaving of the AI Act and GDPR sets a precedent for how **future European digital legislation** may be structured. As the Commission advances initiatives like the European Health Data Space and the Digital Services Act, it becomes increasingly clear that the EU is constructing a layered legal order in which **fundamental rights are embedded as design principles**.[25] Sensitive data, once treated as a legal exception, is now becoming the ethical core around which entire regulatory regimes are being built.

Romania's domestic experience with the implementation of Article 9 GDPR offers a compelling case study in the Europeanisation of data protection norms and the progressive internalisation of ethical standards into national administrative practices. The Autoritatea Națională de Supraveghere a Prelucrării Datelor cu Caracter Personal (ANSPDCP), Romania's supervisory authority, has gradually evolved beyond its initial formalistic role to embrace a more **value-driven interpretation of sensitive data regulation**. This development is evident in several enforcement decisions and public reports which explicitly invoke the principles of **proportionality**, **necessity**, and **human dignity** as foundational to lawful data processing.[26] Such references echo the jurisprudential language used by the Court of Justice of the European Union (CJEU), creating normative coherence between Union-level and national-level reasoning.

One significant area of Romanian enforcement has been in the **healthcare sector**, particularly during the COVID-19 pandemic and in the subsequent deployment of digital health systems. In 2021 and 2022, the ANSPDCP issued multiple opinions on the legality of processing health-related data for purposes such as vaccination records, patient triage systems, and epidemiological tracking. In these cases, the authority emphasized that even where Article 9(2)(i) of the GDPR provides a legal basis for processing in the context of public health, controllers must still comply with **data minimisation** and **purpose limitation** principles under Articles 5(1)(c) and 5(1)(b).[27] These opinions show a willingness to **operationalise ethical constraints** into sectoral practices and to condition the use of sensitive data on substantive risk assessments.

Moreover, the Romanian authority has demonstrated **alignment with evolving EU doctrine** in its treatment of biometric and behavioural data. In its 2024 activity report, the ANSPDCP analysed the use of facial recognition technologies in public schools and retail environments, concluding that such systems pose elevated risks to informational autonomy and may fall within the high-risk category under the EU AI Act.[28] This proactive interpretation mirrors the European Data Protection Supervisor's (EDPS) growing concern about biometric surveillance and underscores Romania's commitment to anticipatory governance.

However, the Romanian context also reveals institutional and structural challenges that may hinder effective enforcement. The authority operates with **limited financial and human resources**,

[24] ANSPDCP, *Guidelines on the Application of Article 9 GDPR in Health Services* (Bucharest: ANSPDCP, 2025).
[25] European Commission, ***European Strategy for Data***, COM(2020) 66 final, Brussels, 2020.
[26] ANSPDCP, *Annual Activity Report 2023* (Bucharest: ANSPDCP, 2023), https://www.dataprotection.ro.
[27] General Data Protection Regulation, Articles 5(1)(b)–(c), Regulation (EU) 2016/679.
[28] ANSPDCP, *Annual Activity Report 2024* (Bucharest: ANSPDCP, 2024), p. 18.

and the institutional independence required under Article 52 GDPR has occasionally been questioned in public debates.[29] Furthermore, coordination between ANSPDCP and other national bodies responsible for digital transformation, cybersecurity, and health informatics remains underdeveloped. This fragmentation undermines the holistic application of data ethics principles and suggests a need for integrated governance mechanisms capable of handling the **cross-sectoral complexity** of sensitive data regulation.

To address these issues, Romanian institutions must invest in **regulatory capacity-building**, including interdisciplinary training programs for staff, enhanced cooperation with civil society, and the adoption of internal ethical review protocols for AI and big data projects.[30] The implementation of such measures would not only improve compliance with EU law but also foster a **culture of ethical stewardship**—an essential condition for trustworthy innovation. By embedding fundamental rights into institutional routines and decision-making tools, Romania can strengthen its role within the **polycentric governance structure** of European data protection.[31]

The European Union's approach to the protection of sensitive personal data under Article 9 GDPR stands in stark contrast to the legal traditions of other major jurisdictions, most notably the United States. While the EU model is grounded in **human dignity and fundamental rights**, the American privacy landscape is characterized by a **sectoral and consumer-centric framework**, heavily reliant on contractual consent and tort-based remedies.[32] This divergence is not merely procedural but reflects **incompatible normative foundations**: whereas European law views data protection as an extension of personhood, U.S. law generally treats personal data as **property or commodity**, subject to market logics and private arrangements.

There is no federal equivalent in the United States to the GDPR or to Article 9's regime of heightened protection for sensitive data. Instead, privacy protections are scattered across industry-specific laws such as the Health Insurance Portability and Accountability Act (HIPAA), the Fair Credit Reporting Act (FCRA), and the Children's Online Privacy Protection Act (COPPA).[33] These laws are limited in scope and do not establish a unified rights-based framework. Importantly, none of these statutes contains a provision analogous to Article 9's **presumption of illegality** for processing sensitive data. As a result, American data controllers are not generally required to demonstrate necessity or proportionality in processing such information unless state law imposes stricter standards.

The absence of a **comprehensive federal privacy law** in the U.S. has led several states to enact their own regulations, such as the California Consumer Privacy Act (CCPA) and its successor, the California Privacy Rights Act (CPRA). These laws introduce some protections for sensitive data categories, including race, religion, and health, but they fall short of the **robust obligations and ethical constraints** imposed by the GDPR.[34] For example, while the CPRA requires businesses to provide opt-out options for the sale or sharing of sensitive data, it does not impose a **burden of justification** or mandate a DPIA for high-risk processing.

From a regulatory perspective, the EU model integrates **ex-ante safeguards** into system design, mandating data protection by default and by design (Articles 25–26 GDPR), while U.S. frameworks tend to emphasize **post-hoc accountability**, often through litigation or consumer

[29] European Union Agency for Fundamental Rights (FRA), *National Human Rights Institutions and Data Protection Authorities: Strengthening Synergies*, 2021.
[30] European Commission, *Better Regulation Guidelines*, SWD(2021) 305 final, Brussels, 2021.
[31] Hielke Hijmans, *The European Union as Guardian of Internet Privacy: The Story of Article 16 TFEU* (Cham: Springer, 2016), 304–306.
[32] Paul Schwartz and Daniel Solove, "Reconciling Personal Information in the United States and European Union," *California Law Review* 102, no. 4 (2014): 877–916.
[33] Daniel J. Solove, "The Limits of Privacy," *Stanford Law Review* 94, no. 5 (2000): 1121–1168.
[34] California Privacy Rights Act, Cal. Civ. Code § 1798.100 et seq.

complaints.[35] Furthermore, the European emphasis on proportionality and necessity makes it possible to challenge data processing even in the absence of harm, whereas American law typically requires demonstrable injury to establish standing in court.[36] This difference has significant implications for **AI governance**, as systems trained on sensitive inferences may be lawful in the U.S. but illegal under EU law if they lack sufficient justification or oversight.

Notably, the **"Brussels Effect"**, as coined by Anu Bradford, has resulted in GDPR-inspired principles influencing non-European jurisdictions and multinational corporations.[37] Tech companies operating globally often adopt GDPR standards as a baseline for data handling practices, particularly when it comes to consent management, user transparency, and data minimisation. While this extraterritorial impact has partially raised standards worldwide, it has also highlighted the **normative gap** between the EU's rights-based approach and the **market-centric rationality** that continues to shape American privacy discourse.

These contrasts underline the originality and ambition of the EU's regulatory vision. By placing the **human person** at the centre of data governance, the GDPR and its interpretative culture challenge dominant techno-economic paradigms and assert a model of **ethical restraint over technical possibility**. As innovation accelerates in fields such as biometrics, neurotechnology, and predictive analytics, the divergence between these models may deepen, raising difficult questions about **interoperability, global standards, and cross-border enforcement**.

Building on the doctrinal and practical challenges outlined in the previous sections, it becomes essential to articulate a set of **concrete policy proposals** aimed at enhancing the enforceability and ethical robustness of Article 9 GDPR in both European and national contexts. These proposals respond to the increasing complexity of the data environment, the rise of AI-powered inference systems, and the pressing need to align innovation with fundamental rights.

First, it is necessary to **update the interpretative guidance of Article 9 GDPR** at the European level to explicitly account for **inferred sensitive data**. While the current text lists exhaustively the categories of sensitive personal data, it does not explicitly address the situation where non-sensitive inputs are used to predict sensitive attributes. Regulators should clarify through **European Data Protection Board (EDPB)** guidelines that inferred sensitive data falls within the scope of Article 9 when such inferences create significant risks of discrimination or identity exposure.[38] This clarification would help close an emerging gap between legal categories and technological realities.

Second, **risk-based enforcement** should be strengthened through a new generation of **sector-specific DPIA templates**, particularly in areas such as education, healthcare, public security, and insurance.[39] These templates should be co-developed by data protection authorities, industry bodies, and civil society, and incorporate ethical criteria such as distributive impact, power asymmetry, and group privacy concerns. A DPIA should not be a procedural checkbox but a tool for **ethical anticipation**, capable of detecting systemic harms before they materialise.

Third, **national data protection authorities** such as Romania's ANSPDCP should be institutionally reinforced through increased **budgetary allocations**, digital forensics capabilities, and legal staffing.[40] In addition, a **mandatory internal ethics officer** should be appointed in all public

[35] General Data Protection Regulation, Articles 25–26, Regulation (EU) 2016/679.
[36] Clapper v. Amnesty International USA, 568 U.S. 398 (2013).
[37] Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (Oxford: Oxford University Press, 2020), 212–218.
[38] European Data Protection Board, *Guidelines 4/2022 on the Calculation of Administrative Fines under the GDPR*, EDPB, Brussels, 2022.
[39] European Data Protection Supervisor (EDPS), *Opinion on the Interplay between the AI Act and the GDPR*, Brussels, 2022.
[40] FRA, *Data Protection Authorities in the EU: Mapping Their Powers and Resources*, 2021.

institutions and private entities processing sensitive data at scale. This officer would liaise with DPOs and ensure that ethical principles—such as dignity, necessity, and non-discrimination—are embedded into data governance routines.

Fourth, the **AI Act's implementation phase** must include robust **horizontal coordination** between supervisory authorities responsible for GDPR, AI, cybersecurity, and anti-discrimination. At the EU level, this could be realised through the establishment of a **Joint Ethics and Risk Assessment Board**, which would evaluate high-risk digital systems across multiple domains.[41] At the national level, Romania could pilot such inter-agency coordination by creating a **Digital Ethics Task Force** combining the ANSPDCP, the Digitalization Authority (ADR), and the Romanian National Council for Combating Discrimination (CNCD).

Fifth, **data literacy and civic education** programs should be embedded in school curricula and professional training schemes. These programs must go beyond basic digital hygiene and explain the **ethical significance of sensitive data**, the limits of consent in power-imbalanced settings, and the rights guaranteed by the GDPR.[42] A democratic data culture depends not only on laws and regulators but also on **informed and empowered individuals** capable of asserting their rights.

Finally, **academic institutions and research funders** must be encouraged to integrate GDPR and Article 9 considerations into **research ethics review protocols**, especially in medical, behavioural, and AI-driven studies. The European Commission should require all Horizon Europe projects dealing with personal data to include a dedicated **"sensitive data ethics appendix"** as part of their ethics assessment.[43]

Together, these proposals sketch a **multi-level governance model** for the future of sensitive data protection—one that combines legal authority, ethical foresight, institutional capacity, and public participation. Such a model would not only strengthen compliance with GDPR norms but also ensure that **data-driven societies remain anchored in shared values of dignity, fairness, and democratic accountability**.

In conclusion, the European Union's regulatory approach to the protection of sensitive personal data—anchored in Article 9 GDPR—represents not only a legal innovation but a profound **moral response to the challenges of the digital age**. By explicitly grounding data protection in the principles of **human dignity, equality, and proportionality**, the GDPR redefines the relationship between individual autonomy and technological power. Sensitive data are no longer treated as neutral or value-free informational elements; they are viewed as **symbolic extensions of personhood**, and their misuse constitutes a violation of fundamental rights rather than a mere breach of privacy.

The evolution of complementary legal instruments, including the **Artificial Intelligence Act**, confirms that the EU is consolidating a coherent model of **rights-based digital constitutionalism**. Within this model, data protection does not operate in isolation but interacts dynamically with principles of algorithmic transparency, ethical oversight, and systemic accountability. The **reversal of the burden of justification**—a core feature of Article 9—serves as a counterweight to the inherent asymmetries of power between data subjects and data controllers, especially in high-risk AI contexts.

Romania's implementation of Article 9, as evidenced by the growing sophistication of ANSPDCP enforcement and jurisprudential alignment with CJEU case law, illustrates how national actors can act as **ethical co-guardians** of Union values. Yet, enforcement alone is insufficient. As

[41] AlgorithmWatch, *Regulatory Cooperation in Europe: A Comparative Overview*, 2023.
[42] European Commission, *Digital Education Action Plan 2021–2027*, COM(2020) 624 final.
[43] European Commission, *Horizon Europe Ethics Appraisal Procedure Guidelines*, 2021, Natea Mihaela Daciana, The European Knowledge-Security Nexus: Science Diplomacy as a Policy Tool Against Hybrid Threats, Europolity-Continuity and Change in European Governance, nr6/2025

the analysis has shown, legal norms must be **internalised through institutional routines, civic education, and interdisciplinary capacity**. Without a supportive ecosystem of governance, Article 9 risks remaining a symbolic provision rather than a practical shield.

The comparative perspective reveals that the EU model is not universally shared, particularly when contrasted with **market-centric regulatory frameworks** such as that of the United States. Nevertheless, the global diffusion of GDPR principles—the so-called **Brussels Effect**—indicates that Europe's normative leadership in data ethics is already shaping international standards.[44] This leadership is not based on coercion but on **moral coherence and regulatory sophistication**, which have made GDPR a reference point for trust in digital infrastructure.

Ultimately, the future of sensitive data protection will depend on our collective ability to **embed moral constraints into digital design**. As technologies become more invasive and capable of inferring intimate aspects of human identity, the ethical architecture of data protection must evolve accordingly. The GDPR, and Article 9 in particular, provide a valuable foundation for this evolution. But it is through sustained policy commitment, institutional learning, and cultural change that the European ambition to **civilise digital modernity** will be realised.[45] The lesson is not only legal—it is philosophical: that in a data-driven society, freedom requires law, and law requires ethics.

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[44] Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (Oxford: Oxford University Press, 2020), 215.
[45] Alain Supiot, *Homo Juridicus: On the Anthropological Function of the Law* (London: Verso, 2007), 149–150.

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Indicators, Perceptions and Financial Education: Aligning Evidence with EU and OECD Policies

ADJUNCT LECTURER DR. RALUCA ŞANDRU
FACULTY OF BUSINESS, BABEŞ-BOLYAI UNIVERSITY CLUJ-NAPOCA
ADJUNCT LECTURER SILVIA MIŞU
FACULTY OF SOCIOLOGY AND SOCIAL WORK, UNIVERSITY OF BUCHAREST

Abstract: *The present study examines the determinants of perceived financial stability among participants in a financial education programme in Romania, situating the analysis within the broader framework of European and OECD policy priorities. Utilising a dataset comprising 118 respondents and implementing multiple linear regression, the research explores the impact of demographic, attitudinal, perceptual, and behavioural factors. The findings of the study indicate that income, financial goals, initial financial perceptions, and saving practices are significant predictors of perceived financial stability. In contrast, professional status, motivation, and payment deferral demonstrate weaker or ambiguous effects. The findings underscore the pivotal role of subjective perceptions and goal-setting in influencing financial outcomes, thereby suggesting that efficacious financial education should integrate cognitive, attitudinal, and behavioural dimensions. The present study contributes empirical evidence in support of the strategies employed by the EU and OECD to promote financial resilience, inclusion, and sustainable financial behaviours.*
Keywords: *financial indicators; financial literacy, OECD; European Union policy; saving behavior; financial goals; cognitive anchoring.*

1. INTRODUCTION

It is evident that the European Union has experienced a series of economic and social crises over the past two decades. These include the global financial crisis of 2008, the pandemic of 2020, and the economic consequences of the conflict in Ukraine. These crises have served to accentuate the financial vulnerabilities of European households and demonstrated that macroeconomic stability alone is insufficient to ensure citizens' well-being, highlighting the need for direct interventions aimed at strengthening individuals' capacity to manage their financial resources. In this context, financial education has emerged as an essential instrument for building economic resilience at the micro level and for reducing the risk of social exclusion.

Financial education has gained prominence in both European and international policy frameworks. At EU level, the European Pillar of Social Rights[46] recognises access to education and lifelong learning as fundamental to participation in economic and social, while the EU Consumer Agenda 2020–2025 underscores the role of financial competences in responsible consumption and preventing over-indebtedness[47]. the OECD has consistently shown that limited financial competence increases vulnerability to economic shocks, reduces access to adequate financial products, and heightens the risk of persistent poverty[48]. These converging priorities materialised in the Financial Competence Framework for Adults in the EU, developed jointly by the European Commission and OECD/INFE in 2022[49], which delineates essential competencies such as setting financial goals, saving regularly, budgeting, and realistically assessing one's financial situation[50].

The extant academic literature demonstrates that financial education exerts a measurable influence on both knowledge and individuals' perceptions and behaviours[51]. According to the Special

[46] (Tajani, Ratas, & Juncker, 2017)
[47] (European Comission, 2020)
[48] (OECD, 2016)
[49] (European Commisssion; OECD, 2022)
[50] (Atkinson & Messy, 2013)
[51] (Demertzis, Mejino-López, & Moffat, 2024)

Eurobarometer on Financial Literacy (2023), fewer than half of EU citizens possess a satisfactory level of financial literacy, underscoring the need for continued policy action[52]. These findings have strengthened the argument for aligning financial education with the EU's broader strategic objectives, including the 2030 Agenda for Sustainable Development[53] and Sustainable Development Goal 1 – No Poverty[54].

The present research, situated within this theoretical framework, explores the manner in which demographic, attitudinal, and behavioural factors influence the financial situation as perceived by participants enrolled in a financial education programme. The study makes an innovative contribution through the integration of a control variable reflecting the initial perception of one's financial situation (T0) and the analysis of its impact on the perceived situation at a later stage (T1), subsequent to the setting of financial objectives and the application of financial management techniques.

In Romania, this context is of particular relevance given the relatively low level of financial literacy in comparison to the European average (OECD, 2020). The Banometru programme, initiated as a personal financial education initiative, constitutes an innovative intervention that combines individual counselling with support in formulating and monitoring concrete financial goals. The present study aims to assess the programme's impact on participants' perceived financial situation, emphasising the interplay between objective, perceptive, attitudinal, and behavioural factors. The findings indicate that participants' perceptions and self-defined goals may have as much of an impact on perceived financial stability as objective resources. In this sense, the results are relevant not only for Romania but also for European policy debates, offering empirical evidence that supports the OECD's and EU's orientation toward a holistic approach to financial education.

2. LITERATURE REVIEW

Financial education is widely recognised as a key element of individual economic resilience and social inclusion. The Organisation for Economic Co-operation and Development (OECD), through its International Network on Financial Education (INFE), developed a conceptual framework for financial literacy as early as the 2010s. Within this theoretical framework, financial education is defined not merely as the accumulation of basic economic knowledge, but also as the development of attitudes and behaviours that enable individuals to make informed decisions in managing their resources[55]. As demonstrated by the OECD (2016), the majority of European states have instigated national financial education strategies. However, the implementation levels of these strategies vary considerably, reflecting the disparities between Northern and Southern Europe[56].

At the European level, these directions have been consolidated. The European Pillar of Social Rights[57] acknowledges access to education and training as a fundamental right, while the New Consumer Agenda 2020–2025 explicitly underscores the significance of financial skills in preventing over-indebtedness and safeguarding consumers[58]. The culmination of EU–OECD cooperation was the development of the Financial Competence Framework for Adults in the EU, which provides a detailed list of competences including: the ability to set financial goals; the capacity to save regularly; the capability of budgeting; and the capacity to realistically assess one's economic

[52] (Ipsos European Public Affairs at the request of the European Commission, 2023)
[53] (United Nations, 2015)
[54] (Statistics Division (UNSD) of the United Nations Department of Economic and Social Affairs, 2025)
[55] (Atkinson & Messy, 2013)
[56] (OECD, 2016)
[57] (Tajani, Ratas, & Juncker, 2017)
[58] (European Comission, 2020)

situation[59]. This framework lends further credence to the variables analyzed in our study, including financial goals, saving behaviour, and the perception of one's initial financial situation.

Recent data demonstrate that financial literacy levels remain low across the EU. According to Flash Eurobarometer 525 (European Commission, 2023), only 18% of Europeans demonstrate high financial literacy, 64% fall into the medium category, and 18% are at a low level. The most significant disparities are evident between Northern and Western European countries, which consistently demonstrate superior outcomes, and Eastern and Southern member states, notably Romania. The Eurobarometer also reveals demographic differences: young people and the elderly display lower levels of financial literacy, while individuals with higher income and education levels perform better.

The validity of these findings is further substantiated by the research conducted by Demertzis, Mejino-López, and Moffat in 2024, which revealed that only half of European citizens can correctly answer fundamental questions on inflation, interest rates, and diversification. That study hypothesised that financial knowledge is negatively correlated with self-reported financial fragility and positively associated with the likelihood of saving and avoiding wasteful spending[60]. Thus, empirical literature corroborates the significance of examining income, education, and financial behaviours collectively, as these variables influence perceptions of individual financial circumstances.

A growing body of research is examining the correlation between financial knowledge and healthy financial behaviours. Mireku, in a 2023 study, posits that individuals with higher literacy levels exhibit a greater propensity to engage in financial management practices such as saving, budgeting, and avoiding impulsive expenditures[61]. Rodríguez (2024) further extends this argument, demonstrating that behaviours mediate the relationship between knowledge and outcomes. That is to say, financial education does not directly influence financial well-being, but rather operates through practices such as saving, spending and timely debt repayment[62].

This perspective is further substantiated by Tohar's proposal of a cognitive model, which establishes a linkage between knowledge, attitude, and awareness and optimal financial behaviour[63]. From this standpoint, the variables included in our study – such as motivation and the perception of one's financial situation – can be considered mediating factors between declarative knowledge and actual actions.

In addition to knowledge and behaviour, recent scholarship highlights the role of perceptions. Puelz demonstrates that financial literacy influences how individuals perceive their economic outcomes, even when objective resources are comparable[64]. This finding provides a robust rationale for the incorporation of the REALITATEA_EFN variable in our analysis, serving as an indicator of initial financial perception. Such baseline variables can be interpreted as strong predictors for later assessments, consistent with cognitive anchoring mechanisms.

Another consistent line of research addresses the effects of financial education programmes. As demonstrated in the 2020 meta-analysis by Kaiser, Lusardi, Menkhoff, and Urban of 76 randomised experiments, the provision of financial education has been shown to engender moderate yet significant enhancements in both knowledge and behaviour[65]. The findings of this study lend

[59] (European Commisssion; OECD, 2022)
[60] (Demertzis, Mejino-López, & Moffat, 2024)
[61] (Mireku, 2023)
[62] (Rodriguez, Labong, & Palallos, 2024)
[63] (Tohar & Akron, 2025)
[64] (Puelz & Puelz, 2022)
[65] (Kaiser, Lusardi, Menkhoff, & Urban, 2021)

support to the proposition that educational programmes, such as Banometru, are capable of engendering quantifiable alterations in the objectives and conduct of the participants.

A less explored dimension in the traditional literature concerns the temporal aspect of financial education. In a study from 2022, Sorgente posits that intensive longitudinal studies are imperative in order to capture the dynamics between initial perception and subsequent outcomes[66]. This approach validates the design of our research, which compares perceived financial situations at T0 and T1, while integrating both financial goals and adopted behaviours.

As demonstrated in Flash Eurobarometer 525, there is a persistent discrepancy in financial literacy and resilience across EU member states. Romania has been found to consistently demonstrate lower rankings in comparison to the European average. A mere 23% of Romanians report having sufficient emergency savings to cover at least six months of living expenses, compared to 33% at the EU level. Meanwhile, 25% of Romanians declare having no savings at all. Moreover, retirement preparedness remains limited, with over 60% of respondents expressing little or no confidence in their financial security for old age. Despite the increasing adoption of digital financial services (44% of Romanians report high levels of comfort with their use, exceeding the EU average of 36%), ownership of diverse financial products, including mortgages and investment instruments, remains comparatively low[67]. These findings corroborate earlier OECD (2016, 2020) evaluations of substandard financial literacy levels in Romania, emphasising the necessity for targeted financial education initiatives that align with EU and OECD policy directives[68].

The literature dedicated to Romania confirms that financial literacy levels remain among the lowest in Europe, making this case particularly relevant for analyzing educational policies. A nationally representative study dated in 2022 showed that 92% of respondents can be considered financially illiterate according to OECD/INFE criteria. Furthermore, 53% report that they do not save or invest, citing lack of resources, while 27% prefer to save in cash, reflecting low trust in financial institutions. Approximately 39% state that they are not interested in receiving financial information, pointing to an attitudinal reluctance toward financial education programs[69].

Recent Romanian research has also addressed the interaction between fiscal policy and financial outcomes. Some authors analyzed the impact of taxation on foreign direct investment, showing how macroeconomic and institutional frameworks shape capital flows and financial stability. Although their focus lies at the intersection of taxation and investment, their findings resonate with broader debates on financial literacy and resilience, as they emphasize the extent to which external policy environments condition both corporate and individual financial decisions[70].

Beckmann's (2013) results, though older, remain relevant for comparison: fewer than 5% of Romanians could correctly answer the three fundamental questions on compound interest, inflation, and diversification, while only 20% answered correctly on compound interest and inflation. The study highlights major discrepancies between rural and urban areas, as well as across generations, suggesting that financial education in Romania is unevenly distributed and strongly influenced by general education levels and socio-economic context[71].

In the study conducted by Şimandan (2022), a historical perspective on the challenges of financial education in Romania is provided, with the author noting that the post-socialist transition generated considerable gaps in this regard. During the communist period, the absence of financial markets rendered financial literacy unnecessary. Following the transition to a market economy in

[66] (Sorgente, Totenhagen, & Lanz, 2022)
[67] (Ipsos European Public Affairs at the request of the European Commission, 2023)
[68] (OECD, 2016)
[69] (Nițoi, Clichici, Zeldea, Pochea, & Ciocîrlea, 2022)
[70] (Nistor & Păun, 2022)
[71] (Beckmann, 2013)

1990, educational programmes were found to be inadequately supported. The historical context of Romania's transition from a socialist to a capitalist economy has contributed to the country's ongoing challenges in accumulating financial cultural capital. The prevailing perceptions of financial situations are influenced by the collective experiences of economic instability and distrust that have characterised the post-communist era[72].

Recent surveys have corroborated these findings. According to a study conducted by iSense Solutions in 2024, Romanians assessed their financial education level with an average rating of 6.6 out of 10. Concurrently, family, school, and self-learning are identified as the primary sources of financial knowledge, with discernible disparities between generations and socio-economic groups[73]. The findings suggest that formal education plays a minimal role, while alternative programmes, such as Banometru, are imperative in addressing this deficit.

Despite compelling evidence that financial education matters, several gaps remain. First, few European studies investigate the impact of initial perception on subsequent outcomes, although international research suggests it can be a critical predictor. Second, integrated analyses that simultaneously include socio-demographic, attitudinal, and behavioral variables within a single model are scarce. In this sense, the present study makes an original contribution by adopting an integrated approach and by incorporating underexplored variables, such as waste-listing or payment deferral, which may signal financial vulnerability.

In conclusion, an analysis of the extant literature on Romania reveals both objective deficiencies – such as consistently low performance on financial literacy assessments – and subjective characteristics, including limited self-perceptions of financial capability and a low interest in financial education. These insights provide a robust rationale for the incorporation of variables such as initial financial perception (REALITATEA_EFN), motivation, and key financial behaviours (e.g., saving, payment deferral, waste avoidance) within our analytical models. The present study seeks to integrate these dimensions in order to capture how Romanian participants evaluate and adjust their financial situation in the aftermath of targeted educational interventions. Therefore, the next section outlines the methodological approach adopted to empirically test these relationships.

3. THEORETICAL FRAMEWORK AND METHODOLOGY

3.1. Theoretical Framework

Financial education is widely acknowledged at both European and international levels as a key determinant of social inclusion and economic resilience[74]. According to the Financial Competence Framework for Adults in the EU, financial competences are defined multidimensionally, encompassing not only declarative knowledge but also practical skills, attitudes, and behaviours[75]. Recent empirical studies have confirmed that the effects of financial education programmes are mediated through the adoption of concrete behaviours, such as regular saving, budgeting, and the avoidance of impulsive spending[76].

Concurrently, research emphasises the importance of subjective perceptions. Initial financial self-assessments have been demonstrated to function as robust predictors of subsequent evaluations, operating through cognitive mechanisms analogous to the anchoring effect[77]. In Romania, where

[72] (Șimandan, Leuștean, & Dobrescu, 2022)
[73] (iSense Solutions The modern consumer company, 2024)
[74] (OECD, 2016) (European Commisssion; OECD, 2022)
[75] (European Commisssion; OECD, 2022)
[76] (Kaiser, Lusardi, Menkhoff, & Urban, 2021)
[77] (Puelz & Puelz, 2022)

financial literacy levels remain among the lowest in Europe[78], these perceptual and attitudinal dimensions gain particular relevance. It has been demonstrated that individuals have a tendency to utilise their preliminary financial experiences, in conjunction with the limitations imposed by their financial resources, as a foundation for the subsequent evaluation of their financial situation. This phenomenon serves to accentuate the role of subjective baselines in the assessment of financial progress.

More recently, some authors applied a combined statistical and machine-learning approach to explore how external shocks, such as geopolitical conflicts, reshape financial behaviours and market synergies. Their work offers methodological insights that are highly relevant for research focused on individual financial perceptions and behaviours[79]. This perspective supports the analytical strategy adopted in the present study, which integrates socio-demographic, behavioural, and perceptual variables to assess perceived financial stability.

The present study conceptualises the perceived financial situation at T1 as the outcome of complex interactions between demographic, attitudinal, perceptual, and behavioural factors, building on this framework. The implementation of multiple linear regression models is indicative of the analytical necessity to disaggregate the relative contribution of each dimension. Specifically, the incorporation of REALITATEA_EFN as a baseline control variable facilitates an evaluation of the influence of initial perceptions on subsequent outcomes, while financial objectives and motivation encompass the cognitive and intentional dimensions of financial transformation. Behavioral variables, such as the deferral of saving and payment, illustrate the translation of intentions into concrete practices. Within this theoretical framework, regression analysis is not merely a statistical technique, but rather an appropriate methodological strategy with which to test the extent to which both objective and subjective determinants jointly shape perceived financial stability.

3.2. Research Type and Epistemological Foundations

The present study is situated within the quantitative paradigm, with the objective of investigating the relationships between demographic, attitudinal, perceptual, and behavioural factors and how they influence the financial situation perceived by participants in the Banometru programme. The approach is grounded in the principles of scientific positivism, according to which social phenomena can be explained through systematic empirical observation and the testing of hypotheses derived from theoretical frameworks.

The research methodology is founded on a deductive logic, whereby the initial framework is established through a comprehensive review of the extant literature and the conceptual frameworks developed by the OECD and the European Commission. Subsequently, hypotheses are formulated and then subjected to rigorous statistical analysis to test their validity. This methodological approach facilitates the derivation of generalisable conclusions and enables the contextualisation of the findings within the broader context of European policies promoting financial education and inclusion.

3.3. Research Design and Instrument

The adopted design is a simplified longitudinal one, based on the administration of a single questionnaire consisting of 20 items. The instrument was developed on the basis of the relevant literature and the objectives of the Banometru programme, with standardized responses and ordinal scales. Its particularity lies in the simultaneous measurement of:

- the initial perception of the financial situation (REALITATEA_EFN, T0);
- the perceived financial situation at the end of the program, after three months of participation (SF, T1).

[78] (Nițoi, Clichici, Zeldea, Pochea, & Ciocîrlea, 2022) (Șimandan, Leuștean, & Dobrescu, 2022)
[79] (Dănescu, Stejerean, & Șandru, 2024)

In addition to these core variables, the questionnaire included items referring to professional status, income level, the formulation and evaluation of financial objectives, the motivation for adopting them, and the application of financial behaviours (saving, payment deferral, budgeting, and waste control).

The design enables a comparative evaluation of the influence of demographic, attitudinal, and behavioural variables on subsequent financial perception, as well as for the identification of the role of initial perception as a cognitive anchor.

3.4. Sample

The analysed sample consisted of 118 participants in the Banometru financial education programme, a national initiative aimed at enhancing financial competences through free, personalised counselling. From a socio-demographic perspective, the majority of respondents were female (n = 88), while male respondents accounted for 30 cases. Regarding marital status, 81 participants (68.6%) were married or in a relationship, while 37 (31.4%) were single, unmarried, or divorced.

In terms of occupational status, the distribution was relatively diverse: Thirteen individuals (11.0%) identified as entrepreneurs, 19 (16.1%) as freelancers, and 12 (10.2%) reported being unemployed at the time of the survey. The remaining 74 participants (62.7%) were employees, either full-time or part-time, indicating that the majority of the sample belonged to the active workforce.

Figure 1 Gender distribution

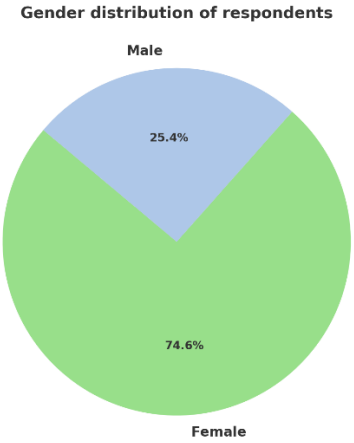
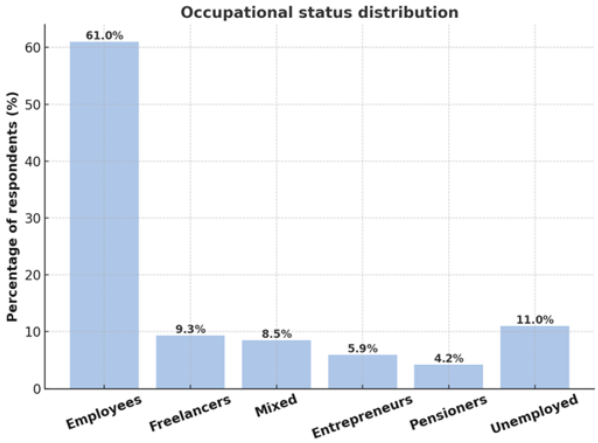


Figure 2 Occupational status



Income was reported by the subjects within predefined brackets. A significant proportion of the respondents, 56 individuals (47.5%), declared monthly net incomes in excess of 5,000 lei. Furthermore, 30 respondents (25.4%) indicated that their income fell between the national average wage (approximately 3,500 lei) and 5,000 lei, while 18 respondents (15.3%) reported incomes between the minimum and average wage. A mere 14 respondents (11.9%) indicated that they received the minimum wage (1,350 lei).

The age distribution indicates a concentration within the active working population: The demographic composition of the sample is as follows: 34.7% of respondents fall into the 35–44 age category, 28.8% into the 45–54 category, 23.7% into the 25–34 category, 4.2% into the 18–24 category, and 8.5% into the over-55 category. This structure underscores the predominance of individuals in mid-adulthood within the sample, a factor that is particularly pertinent for the analysis of financial behaviours and perceptions.

Figure 3 Personal income distribution

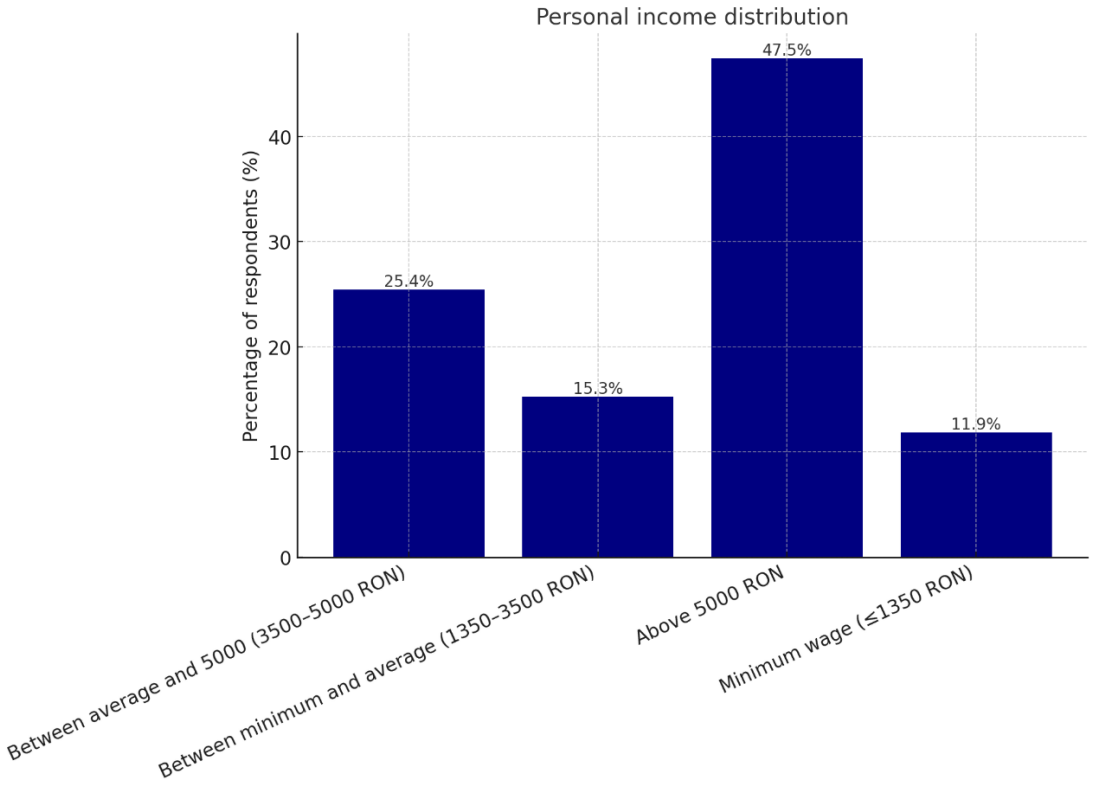
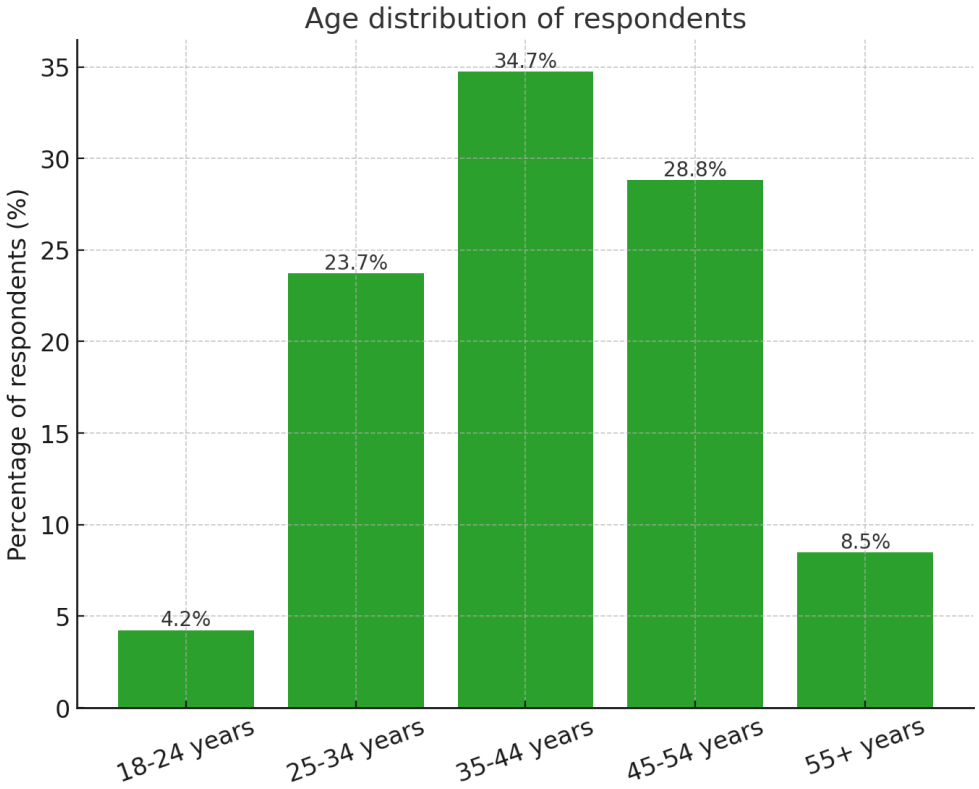


Figure 4 Age distribution of respondents



3.5. Variables

The dependent variable of the study is the perceived financial situation (SF), measured at T1 following the educational intervention of the Banometru programme. It has been demonstrated that this method captures how participants evaluate their financial condition, serving as a subjective measure of perceived progress. The assessment was conducted on an ordinal scale ranging from 1 to 4, with 1 representing a "difficult situation" and 4 denoting a "very good situation."

Concurrently, the variable REALITATEA_EFN (T0) was utilised to ascertain baseline conditions, thereby quantifying the initial perception of financial circumstances on a scale ranging from –1 ("very difficult") to 2 ("very good").

The set of independent variables included socio-demographic, perceptual, attitudinal, and behavioural factors. Among the socio-demographic indicators, professional status was coded on a scale from 0 (unemployed) to 6 (entrepreneur), while income was measured on a scale from 1 (minimum wage) to 4 (above 5,000 lei), both serving as proxies for objective economic position.

The attitudinal and perceptual dimension was represented by the financial objective variable, defined based on the question regarding the most important goal set after the first Banometru session and the degree to which it was achieved, with a scale from –1 (failure) to 3 (outcomes exceeding expectations). The measurement of motivation was conducted on a scale ranging from 1 to 7, with the highest score denoting the articulation of a singular, robust rationale. Both variables are indicative of the participants' intentionality and level of personal engagement in the process of financial change.

The behavioural dimension incorporated variables that encapsulated the practical implementation of financial management techniques. The behaviours of saving (eco) and payment deferral (amanat_plata) were measured on a scale from 0 to 4, where 0 indicated the absence of the behaviour and 4 reflected high frequency, perceived as easy to perform. Saving was measured through the frequency with which respondents set money aside, while payment deferral was defined as the act of postponing obligations or borrowing to cover current expenses.

The study also incorporated additional behavioural aspects, including budgetary management, the deliberation of the necessity of acquisitions, the substitution of costly items with more economical alternatives, the evaluation of expenditures in terms of working hours, and the monitoring of waste by means of a recordkeeping exercise. The measurement of these outcomes was conducted on ordinal frequency scales ranging from 0 to 4, thereby facilitating a more comprehensive understanding of the behavioural mechanisms that were activated during the programme.

In order to verify the robustness of the results, two regression models were estimated: a compact model and an extended model, the latter of which included additional behavioural variables. While both models were statistically validated, the main analysis relies on the compact model, which proved to be more robust and parsimonious, while the extended model is mentioned only for comparison.

3.6. Research Hypotheses

The following hypotheses were formulated on the basis of the extant literature and the conceptual frameworks promoted by the OECD and the European Commission:

H1. The perceived financial situation at T1 is positively influenced by personal income and professional status, as objective indicators of economic position.

H2. Setting a clear financial objective and reporting high levels of motivation significantly contribute to improvements in the perceived financial situation.

H3. The initial perception of financial circumstances (REALITATEA_EFN, T0) has a positive effect on the subsequent evaluation of the financial situation (T1), functioning as a cognitive anchor for progress assessment.

H4. Adopted financial behaviours influence the perceived financial situation: saving is positively associated with improved perceptions, while frequent payment deferral is negatively associated, reflecting financial vulnerability.

H5. The compact model, built on three main axes (demographic, perceptual/attitudinal, and behavioural), demonstrates stronger explanatory power than the extended model, which includes additional variables.

3.7. Procedure and Statistical Analysis

The statistical analysis was conducted using PSPP, an open-source software replicating SPSS functions for quantitative data processing. First, descriptive statistics were generated to characterize the sample and the distribution of variables. Next, bivariate correlations were computed to explore preliminary associations between variables.

The core stage involved the application of multiple linear regression, with the perceived financial situation at T1 as the dependent variable. Two model specifications were tested: a compact model (MODEL 1) including the main demographic, perceptual, attitudinal, and behavioural variables, and an extended model (MODEL 2) incorporating additional behavioural measures. Although both models were statistically significant, the central analysis focuses on the compact model, which displayed more robust explanatory capacity.

Interpretation of coefficients relied on unstandardized estimates, with t-values reported significance levels indicated as follows: $p < 0.1$, $p < 0.05$, $p < 0.01$. Results were further contextualized through unstandardized coefficients (Beta), the coefficient of determination (R^2), and ANOVA tests.

4. RESULTS

4.1. The Compact Model (Model 1)

The results of the multiple linear regression indicate that the compact model is statistically significant ($F(7,110) = 11.43$, $p < 0.001$) and explains a substantial proportion of the variance in the perceived financial situation ($R^2 = 0.42$, adjusted $R^2 = 0.38$). Thus, approximately 38% of the variation in respondents' perceptions of their own financial situation after three months in the program can be attributed to the set of variables included in the analysis.

Table 1 presents the full results of the model, including unstandardized coefficients, standard errors, and t-values.

Tabel 1. Regression results – Model 1 (Dependent variable: Financial Situation)

Independent variables	Estimated coefficients
Constant	1.53 (0.000)***
Professional status	–0.06 (0.182)
Personal income	0.12 (0.049)**
Financial objective	0.04 (0.000)***
Motivation	0.04 (0.278)
REALITATEA EFN (Initial financial reality)	0.31 (0.000)***
Saving behaviour	0.10 (0.020)**
Postponed payment	0.04 (0.162)
F-statistic:	11.43 (7,110) p < 0.001
Adjusted R^2	0.38
Number of respondents	118

Note: p-values are reported in parentheses. Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

The model constant is positive and statistically significant ($B = 1.53$, $t = 4.65$, $p < 0.01$). Methodologically, this represents the expected value of the perceived financial situation when all explanatory variables are set to zero, i.e., under conditions of absent objective resources (minimum income, inactive professional status), no financial goals or behaviours, and a neutral initial perception. Its substantive interpretation suggests that even in the absence of favourable factors included in the model, participants tend to position themselves at a baseline level of financial self-evaluation of approximately 1.5 on the 1–4 scale. This corresponds to an intermediate perception between "difficult situation" and "I do not manage well, but I have a plan to improve my situation." This finding underscores the existence of a cognitive baseline for financial self-assessment that functions as a reference point from which other predictors exert additional influence.

The interpretation of results indicates that four predictors emerged as statistically significant. First, personal income exerts a positive and marginally significant influence ($B = 0.12$, $t = 1.99$, $p < 0.05$), confirming the hypothesis that objective economic resources contribute to a more favourable perception of financial stability. Second, the financial goal set after the first Banometru session and the degree of its achievement represent a strong predictor ($B = 0.04$, $t = 4.01$, $p < 0.01$), indicating that intentionality and the perception of success play an essential role in financial improvement.

Likewise, REALITATEA_EFN (T0), which reflects the initial perception of one's financial situation, has a consistent and significant effect ($B = 0.31$, $t = 4.77$, $p < 0.01$). This confirms the hypothesis that the initial evaluation functions as a cognitive anchor for later perceptions and suggests that participants who initially perceived themselves in a better position were more likely to provide positive evaluations at a later stage. Finally, saving behaviour has a positive and significant effect ($B = 0.10$, $t = 2.36$, $p < 0.05$), which supports the role of proactive and healthy practices in consolidating financial stability.

Conversely, three variables did not reach statistical significance. Motivation ($B = 0.04$, $t = 1.09$, n.s.) was not a meaningful predictor, indicating that declared intention alone is insufficient without concrete, monitorable objectives. Payment deferral ($B = 0.04$, $t = 1.41$, n.s.), used as an indicator of financial vulnerability, likewise showed no consistent effect on final perception, although its positive coefficient suggests short-term relief that does not translate into genuine

improvement. The negative coefficient for professional status (B = –0.06, t = –1.34, n.s.) indicates that occupational category, on its own, does not foster a more positive financial perception; in some cases, roles such as entrepreneur or self-employed may even entail income volatility and higher pressure, which helps explain this result.

4.2. The Extended Model (Model 2)

To verify the robustness of the model, an extended specification was also tested, which included additional financial behaviours such as budgeting, reflecting on expenditures in terms of working hours, replacing costly products with cheaper alternatives, monitoring waste by making a list, and assessing the necessity of purchases.

Tabel 2. Regression results – Model 2 (Dependent variable: Financial Situation

Independent variables	Estimated coefficients
Constant	1.42 (0.001)***
Professional status	–0.03 (0.576)
Personal income	0.10 (0.142)
Financial objective	0.05 (0.000)***
Motivation	0.07 (0.065)*
REALITATEA EFN (Initial financial reality)	0.31 (0.000)***
Saving behaviour	0.13 (0.008)**
Postponed payment	0.06 (0.099)*
Budgeting	0.02 (0.811)
Hours-of-life calculation	0.02 (0.789)
Cheaper substitutes	–0.06 (0.309)
Reflecting before buying	–0.06 (0.399)
Waste list	–0.09 (0.043)**
F-statistic	7.18 (12,93) p = 0.001
Adjusted R^2	Adjusted R^2: 0.41
Number of respondents	106

Note: p-values are reported in parentheses. Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

It is worth noting that the number of respondents considered in Model 2 is lower than in Model 1 (106 vs. 118). This difference is due to missing data, as not all participants provided complete answers to the additional behavioural variables included in the extended specification. Consequently, the statistical software (PSPP) applied listwise deletion, reducing the valid sample size. Such discrepancies are common in survey-based research and justify why the extended model does not necessarily provide superior explanatory power despite the higher number of predictors.

This model displayed a higher explanatory capacity ($R^2 = 0.48$, adjusted $R^2 = 0.41$, $F(12,93) = 7.18$, $p < 0.001$), accounting for approximately 41% of the variance in the perceived financial situation.

The constant in the extended model is positive and statistically significant (B = 1.42, t = 3.56, p < 0.01). This indicates that, regardless of the inclusion of additional behavioural variables (budgeting, waste monitoring, reflection before purchases, etc.), participants begin from a baseline financial self-assessment of around 1.4 on the 1–4 scale. In interpretative terms, this level suggests that most respondents do not perceive themselves in an extremely negative situation, but rather at a minimal threshold of stability, even when objective resources or healthy financial behaviours are absent. The constant thus confirms the existence of a perceptual reference framework that transcends the influence of the analysed variables and may be associated either with cognitive optimism effects or with a tendency of respondents to avoid extreme self-assessments.

The extended model, which incorporates additional behavioural variables, explains a slightly greater proportion of the variance in the perceived financial situation (adjusted $R^2 = 0.41$) compared

with the compact model (adjusted $R^2 = 0.38$). However, this increase in explanatory power is modest and does not justify its adoption as the central model, given the loss of parsimony and the emergence of counterintuitive effects.

Among the new variables, only the waste list is significant ($B = –0.09$, $t = –2.05$, $p < 0.05$), indicating greater awareness of financial pressure rather than improved perceived stability. The other added behaviours show no significant effects. Payment deferral becomes marginally significant in the extended model ($B = 0.06$, $t = 1.67$, $p < 0.1$), likely reflecting temporary relief rather than real improvement. Overall, the compact model remains more robust and parsimonious, with the extended model adding nuance but little explanatory gain.

4.3. Synthesis

Overall, the results partially confirm the formulated hypotheses. H1 is validated for income but not for professional status. H2 is supported by the effect of the financial objective, though not by motivation. H3 is fully confirmed through the robust effect of the initial financial perception. H4 is partially supported, with saving showing a positive effect, while payment deferral does not reach significance. Finally, H5 is confirmed: the compact model proves to be more robust and parsimonious, serving as the central interpretative framework, whereas the extended model is mentioned only as a comparative element.

5. DISCUSSION

The findings of this study demonstrate that perceived financial situation is not solely dependent on objective factors such as income; rather, it is shaped by a combination of cognitive, attitudinal, and behavioural elements. A significant finding of this study is the identification of the initial perception (REALITATEA_EFN, T0) as a reliable predictor. This finding supports the cognitive anchoring theory and demonstrates that subjective financial progress must be understood in relation to each individual's personal reference point. This finding is of particular interest to the European financial education literature, as it highlights the importance of contextualising interventions: individuals do not start from the same reference point, and policies must therefore be adapted to different levels of financial vulnerability.

Another salient aspect pertains to the pivotal function of concrete financial objectives, which have been demonstrated to function as superior predictors in comparison to self-reported motivation alone. This finding carries practical implications for the design of European financial education programmes, suggesting that strategies centred on clearly defined and monitorable objectives are more likely to generate sustainable outcomes.

The results pertaining to professional status and payment deferral also introduce meaningful nuances. The negative coefficient associated with professional status suggests that self-employment may be linked to perceptions of financial vulnerability due to income volatility. This observation is particularly relevant in the European context, where entrepreneurship and self-employment are often promoted as drivers of competitiveness and innovation, yet their implications for personal financial security are rarely considered. With regard to the issue of payment deferral, the ambiguity of its effect suggests a tension between subjective perception (temporary relief) and structural vulnerability. This is an issue that merits further examination in relation to European consumer protection strategies.

From a policy standpoint, the compact model offers clearer interpretive advantages because it concentrates on the most stable and directly actionable predictors—income, saving behaviour, initial perception, and clearly defined financial goals. By excluding variables with limited explanatory value, the model preserves analytical coherence and avoids diffusing attention across marginal effects. This focus aligns with EU and OECD guidance, which emphasises the importance of

interventions that rely on well-defined and behaviourally relevant levers. Consequently, the compact specification provides a more reliable foundation for shaping financial education policies and for designing targeted and effective programmes.

The present study introduces a novel perspective by underscoring the dynamic interplay between perceptions and behaviours within the domain of financial education. This contribution is made to the broader European discourse on the potential of public policies to foster not only financial knowledge but also the capacity of individuals to anchor their decisions in realistic and sustainable objectives.

The findings align with the objectives formulated by the European Commission and the OECD in the realm of financial education. The European Commission, via its Capital Markets Union 2020 Action Plan – Action 7: Empowering citizens through financial literacy[80], together with the EU/OECD-INFE Financial Competence Framework for Adults[81], emphasize that the success of financial education programmes should not be measured solely through objective indicators such as income or asset accumulation. Rather, it should be evaluated in terms of individuals' capacity to set clear goals, adopt healthy financial behaviours, and ground their decisions upon realistic perceptions of their situation. The results of this study, highlighting the central role of financial goals, initial perceptions, and saving behaviour, lend empirical support to this European and OECD-oriented holistic approach to financial education.

A frequently disregarded outcome in statistical interpretations is the positive and significant constant, which is evident in both models. This finding suggests that participants commence from a baseline level of perceived stability (approximately 1.5 on a 1–4 scale), even in the absence of favourable factors incorporated into the analysis. From a cognitive perspective, the intercept may be interpreted as a threshold of financial self-assessment, reflecting either a baseline optimism or respondents' tendency to avoid extremely negative evaluations. Interpretatively, this result suggests that individuals who choose to participate in the Banometru program already display a level of awareness of their vulnerabilities without adopting extremely negative assessments. This finding can be regarded as a significant psychological resource that facilitates the internalisation of educational interventions.

The relevance of perceived financial stability extends into the domain of long-term resilience, a core priority within the Sustainable Development Goals, particularly SDG 1 (No Poverty) and SDG 10 (Reduced Inequalities). Enhancing individuals' self-assessment, confidence, and behavioural consistency strengthens their capacity to anticipate and cope with future financial disruptions. Improvements in perceived stability can therefore be seen as early indicators of progress toward broader objectives of inclusion and protection promoted by EU and OECD frameworks. In this sense, perception-based outcomes are not merely subjective impressions but form part of the resilience-building process encouraged in contemporary financial education policies.

In summary, the findings of this study are consistent with recent European evidence on financial literacy gaps. According to Flash Eurobarometer 525 (European Commission, 2023), Romania continues to exhibit a significant disparity between its own performance and the EU average. A mere 23% of respondents report having sufficient resources to cover six months of living expenses, while while comfort with digital financial services is comparatively high (44% vs. 36% EU average), this does not translate into broader ownership of complex financial products. These patterns corroborate earlier OECD (2016, 2020) assessments and underscore the structural vulnerabilities of Romanian households. In this context, the empirical results presented here -which demonstrate the significance of initial financial perception, concrete goals, and saving behaviours –

[80] (European Commission, 2020)
[81] (European Commisssion; OECD, 2022)

are of particular relevance. It is evident that these initiatives not only align with the policy priorities of the European Union and the OECD, but also underscore the necessity for effective financial education in contexts such as Romania to incorporate both cognitive anchoring mechanisms and behavioural support. This integration is crucial in order to cultivate resilience in the face of constrained objective resources.

6. CONCLUSIONS

The study confirms that the perceived financial situation results from a complex combination of factors: personal income, clearly defined financial objectives, initial perceptions, and saving behaviors. At the same time, merely declared motivation or professional status do not emerge as significant determinants of perceived financial stability.

These findings carry direct implications for European policy. As highlighted in the strategies of the European Commission and the OECD, financial education should operate not only as a channel for knowledge transfer but also as a mechanism for strengthening individuals' capacity to set clear objectives and adopt healthy financial behaviours. The Banometru programme exemplifies this approach at national level and may serve as a scalable model for similar initiatives across Europe.

The study's central contribution is to demonstrate that subjective perceptions and self-defined goals can weigh as heavily as objective resources in shaping perceived financial stability. This supports the need for holistic EU and OECD policies that integrate cognitive, attitudinal, and behavioural dimensions of financial education.

In conclusion, this study not only validates the role of income and healthy financial behaviours in shaping perceptions of economic stability, but also highlights the importance of clear objectives and initial perceptions as predictors of subjective financial progress. These findings are in alignment with the orientations of the European Commission and OECD, which advocate a holistic approach to financial education that transcends the strictly economic dimension and incorporates cognitive, attitudinal, and behavioural aspects. In this sense, the Banometru programme can be regarded as a commendable practice aligned with European policies, demonstrating that interventions tailored to individuals' real needs can contribute to strengthening financial resilience and reducing social vulnerabilities.

A notable observation is the positive and significant value of the constant, which indicates that participants initiate the process with an intermediate self-assessment of their financial situation (approximately 1.5 on a 1–4 scale), even in the absence of explanatory factors incorporated into the model. This result can be interpreted as evidence of a basic level of awareness regarding financial vulnerabilities, which may explain participants' openness to the Banometru program and their willingness to integrate new objectives and behaviours.

Explicit Policy Recommendations:

- EU and OECD programmes should prioritise the development of tools that support goal-setting and behaviour change, not just knowledge acquisition.
- Financial education initiatives should incorporate components that address subjective perceptions, given their strong predictive value.
- Member States could adopt models such as Banometru, which combine counselling with actionable financial objectives, as part of national strategies for financial resilience.
- Policies should target both cognitive and attitudinal dimensions, recognising that improved perception and behavioural change are essential complements to objective income-based support.

7. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The present study is subject to several limitations. The relatively modest sample size (118 respondents) and its demographic composition may limit the generalisability of the results. The utilisation of self-reported data may also give rise to cognitive or recall biases. Furthermore, the three-month interval between measurements captures only short-term effects, thereby limiting the ability to assess the sustainability of changes over time.

It is recommended that future research extend the analysis to larger and more diverse samples across EU member states. Furthermore, the combination of self-reported perceptions with objective financial indicators (e.g. debt levels, savings rates) is advised, as is the adoption of longer time horizons to capture persistent effects. Further elucidation of the role of policy in reducing vulnerabilities and promoting sustainable financial behaviours would be facilitated by comparative evaluations of national programmes within the EU-OECD framework.

The findings also highlight the importance of participants' baseline awareness: respondents began from an intermediate level of self-assessment, which facilitated the integration of goals and behaviours. This suggests a promising direction for European financial education policy — namely, to design public interventions that enhance individuals' capacity for realistic self-reflection as a foundation for behavioural change.

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CHAPTER 3
European Democracy, Geopolitics, and History of Russian Power Projection

Russian interference in democratic processes – lessons from history

ILIE FLORIN CEUSAN[1]
PHD STUDENT, "GEORGE EMIL PALADE" UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE, AND TECHNOLOGY

Abstract: *The analysis of Russian electoral interference from a historical perspective provides an essential framework for understanding the strategic continuity, tactical adaptability and limits of democratic responses in the face of recurrent hybrid threats. A chronological approach makes it possible to identify the patterns of action used by the USSR and, subsequently, the Russian Federation, as well as how these methods were reconfigured to exploit the vulnerabilities of the contemporary digital environment. At the same time, the evaluation of past experiences – including the documentation of active measures by US congressional committees in the 1980s – contributes to understanding the lessons learned (or ignored) by democratic states. This historical analysis helps to formulate more coherent and informed ways of responding, given that influence operations are not new phenomena, but the expression of a long-term geopolitical strategy, in which perception, not just territory, becomes the main stake of the conflict.*
The article aims to analyse the evolution of Russian interference in democratic processes, following its continuity and adaptability from the Soviet period to the present. The research is based on a mixed methodology: historical analysis, international security studies and documented case studies.
Keywords: *Russian disinformation, active measures, Russian interference, influence operation, hybrid war*

1. INTRODUCTION

The Russian Federation has distinguished itself through a coherent and long-lasting strategy of influencing electoral processes in Western democracies, with the aim of expanding its geopolitical influence and weakening the cohesion of democratic states, as part of an "information war" or a hybrid conflict, in which electoral interference serves as a political weapon of destabilization.[2]

Foreign electoral interference is understood in the literature as *"intentional, hidden or overt attempts by state or non-state actors to influence electoral processes or public perceptions in order to advantage or disadvantage electoral competitors in another sovereign country*".[3] The goal pursued may not only be regime change but also the erosion of trust in democratic mechanisms, the propagation of societal polarization and the instigation of disorder, being an insidious form of undermining democratic sovereignty in the contemporary era. Although the phenomenon is not new, the scale, frequency and level of sophistication of these interventions have increased considerably in recent decades, in particular as a result of technological progress and digital interconnectivity.[4]

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[1] Ilie Florin CEUSAN is a PhD student/candidate in History, and Teaching assistant, "George Emil Palade" University of Medicine, Pharmacy, Science, and Technology, ORCID number 0009-0008-0194-3445;
Web of Science Researcher ID NDT-3116-2025; ilie ceusan – Web of Science Researcher Profile;
Ilie Florin Ceusan – Google Academic;
RESEARCHGATE Ilie Florin Ceusan;
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[2] Thomas Timothy, "Russia's Information Warfare Strategy: Can the Nation Cope in Future Conflicts?", *The Journal of Slavic Military Studies*, 27 (1), 2014, p. 104, DOI:10.1080/13518046.2014.874845 available at https://www.researchgate.net/publication/263194964_Russia's_Information_Warfare_Strategy_Can_the_Nation_Cope_in_Future_Conflicts;

[3] Vasu Mohan, Allan Wall, "Foreign Electoral Interference: Past, Present, and Future", *Georgetown Journal of International Affairs*, 20 (1), 2019, p.110, DOI:10.1353/gia.2019.0019, available at https://www.researchgate.net/publication/337484180_Foreign_Electoral_Interference_Past_Present_and_Future;

[4] Timothy Thomas, *op.cit*., p.102.

II. ACTIVE MEASURES AND STRATEGIC SUBVERSION: THE SOVIET ROOTS OF RUSSIAN INTERFERENCE IN DEMOCRATIC PROCESSES (1945–1991)

The tactic of interference in foreign democratic processes is not a recent instrument of Russian foreign policy, but has its roots in the Cold War period, when the Soviet Union, through the KGB, carried out systematic operations to influence public opinion and elections in Western states[5], suggestively called active measures.

The concept of "active measures" (*Aktivnye meropriyatiya)* reflects not only a specific technique of political subversion, but also a profound expression of Russia's strategic culture, anchored in the persistent perception of a hostile world, dominated by Western conspiracies and latent "Russophobia". As early as the 1950s, the Soviet Union systematized these practices into an operational framework that included organizing front structures, supporting friendly political movements, orchestrating internal unrest, and deliberately disseminating disinformation, all under the umbrella of plausible deniability[6].

Active measures have exploited pre-existing cracks in democratic societies to further polarize the West. Colonel Rolf Wagenbreth, head of active measures operations in the STASI, declares that "A strong adversary can only be defeated through sophisticated, methodical, careful and cunning efforts to exploit even the smallest 'cracks' among our enemies (...) and within their elites."[7]

The testimonies of Soviet defectors, specialized in active measures, who contributed substantially to revealing the architecture of the political war waged by the KGB against Western democracies, converge on the idea that Soviet interference in the internal politics of democratic states was not accidental or occasional, but part of a coherent, long-term strategy with clear geopolitical objectives.

Thus, Ladislav Bittman revealed that the active measures were not only aimed at manipulating public opinion, but also at directly influencing political decisions, being seen as sophisticated ideological weapons meant to undermine the democratic institutions from within, being planned for periods of 5-7 years.[8]

This perspective is reinforced by Yuri Bezmenov (aka Tomas Schuman), [9]a former KGB agent specializing in propaganda, who described in detail the process of "ideological subversion" in four stages: demoralization, destabilization, crisis, and normalization[10]. Bezmenov stated that during the period of demoralization, the KGB's goal was not only to weaken the institutions of a democratic society (media, education, religion, culture), but to do so in a profound and irreversible way, by influencing the mentality of the younger generations. The KGB did not need to convince all citizens, but only to influence the cultural elites (teachers, journalists, artists, clergy), who, in turn, educated

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[5] Timothy Thomas, *op.cit.*, p.105.

[6] Mark Galeotti, "Active Measures: Russia's Covert Geopolitical Operations", *Marshall Center Security Insight*, no. 31, June 2019, https://www.marshallcenter.org/en/publications/security-insights/active-measures-russias-covert-geopolitical-operations-0;

[7] Statement of Thomas Rid, Professor, Department of War Studies, King's College London, U.S. Senate Select Committee on Intelligence, *Disinformation: A Primer in Russian Active Measures and Influence Campaigns,* Panel II, Hearing Before the Select Committee on Intelligence of the United States Senate, One Hundred Fifteenth Congress, First Session, March 30, 2017, U.S. Government Publishing Office, Serial no. 115-40, Washington, 2017, p.19 available at www.govinfo.gov/content/pkg/CHRG-115shrg25998/pdf/CHRG-115shrg25998.pdf;

[8] Ladislav Bittman, *The KGB and Soviet Disinformation: An Insider's View*, Pergamon Brassey's International Defense Publishers, Washington, 1985, pp. 45-46

[9]He worked from 1960 to 1970 as a journalist at the Novosti Press Agency, a state news agency that also served as a legend for KGB influence and disinformation officers. In 1970 he defected and settled in Canada, then in the USA under the name Tomas Schuman.

[10] Tomas Schuman, *Love Letter to America*, W.I.N. Almanac Panorama, 1984, pp.22, available at https://ia800209.us.archive.org/4/items/BezmenovLoveLetterToAmerica/YuriBezmenov-LoveLetterToAmerica.pdf.

and formed public opinion. Thus, after 15–20 years, we reached an entire generation educated in the spirit of erroneous ideas about their own society, but who considered these ideas to be true, moral and modern[11].

Anatoliy Mikhaylovich Golitsyn also[12] stated that the entire strategy of apparent reform of the USSR in the 1980s was part of a broad plan to mislead the West, in which systemic disinformation and the KGB played a key role. He stressed that the influence operations were not undertaken in isolation, but were part of a strategic doctrine of "deception planning", approved at the highest levels of the Communist Party.[13]

Stanislav Levchenko[14], a former KGB agent active in Japan, revealed how agents were trained to co-opt journalists, intellectuals and left-wing activists to amplify pro-Moscow messages and discredit democratic institutions, and described in detail the role of "front organizations" in this mechanism of indirect but effective influence, including friendship societies and cultural councils, used to legitimize and channel Soviet propaganda.[15] In a 1982 testimony before the U.S. Congress, he argued[16] that one of the most effective long-term tactics is to create a group of media personalities—journalists, editors, academics—who could be counted on to introduce the narratives developed by the KGB into mainstream discussions and for their ability to influence the opinions of others without raising suspicions of an outside affiliation.

In a similar vein, Oleg Kalugin[17], a former KGB major general, described influence missions as "the essence of KGB activity in the West – not espionage, but subversion." He argued that the goal was to influence political elites, the media, and educational institutions to manipulate public opinion and create internal dissension in liberal democracies.[18]tag. In an interview with the Wilson Center, Kalugin stressed that "the goal was not military conquest, but influencing thinking: disinformation, manipulation, the promotion of dissension – that was our battlefield."[19]

The Soviet Union, through the KGB and the GRU, systematically carried out influence operations in Western Europe with the aim of manipulating public opinion and influencing the results of democratic elections. In Italy and France, local communist parties have benefited from clandestine

[11] Tomas Schuman, *op.cit.,* pp.24.

[12] He was a senior officer in the KGB between 1948 and 1961 in the First Directorate (external), specializing in coercion and disinformation operations, he was seconded (1958-1961) under diplomatic cover (vice-consul) to Finland from where he defected in 1961 requesting asylum from the US Embassy in Helsinki. (See Anatoliy Golitsyn, *New Lies for Old: The Communist Strategy of Deception and Disinformation*. Dodd, Mead & Company, New York, 1984, pp. xiii-xv; Andrew & Mitrokhin, op. cit., pp. 225-229).

[13]Anatoliy Golitsyn*, Perestroika Deception: Memoranda to the Central Intelligence Agency – The World's Slide Towards the Second October Revolution,* London: Edward Harle, 1995, pp. 12–14, 18, 27, 119–120, and 124.

[14] He was active in the KGB between 1971 and 1979 in the First Directorate (External). Between 1975 and 1979 he worked undercover as a journalist for the Soviet publication "Novosti" in Tokyo, Japan, but he served as a KGB liaison officer for influence and recruitment operations in the Japanese environment (press, universities, left-wing political circles). He defected in 1979 seeking political asylum in the United States.

[15] Herbert Romerstein, Stanislav Levchenko, *The KGB Against the "Main Enemy",* Lexington Books, 1989, pp.72-74.

[16] Statement quoted in *American Bar Association, Standing Committee on Law and National Security*, vol. 5, no. 1, January 1983 available at www.reaganlibrary.gov/public/digitallibrary/smof/nscintelligence/degraffenreid/r26/40-139-39149351-R26-060-2018.pdf.

[17] He served in the KGB from 1958 to 1990, from 1960 to 1967, under diplomatic cover at the USSR Embassy in Washington, D.C., with the official position of press secretary. In fact, he was a deputy resident officer of the KGB responsible for supervising contacts with political and academic elites, managing networks of influence, evaluating potential American collaborators. (For further details see Oleg Kalughin, *The First Directorate: My 32 Years in Intelligence and Espionage Against the West*. New York: St. Martin's Press, 1994, pp.48-71).

[18] Oleg Kalughin, *The First Directorate: My 32 Years in Intelligence and Espionage Against the West*, New York: St. Martin's Press, 1994, pp.48-71.

[19] Woodrow Wilson International Center for Scholars. (1995–2000). *Cold War Files – Interview: Oleg Kalugin*. Available at: https://digitalarchive.wilsoncenter.org.

financial support directed by Moscow, through networks of intermediaries[20]. Between 1969 and 1972, the Italian Communist Party received more than $6 million for electoral and propaganda activities, funds designed to strengthen the party press and mobilize the left-wing electorate against American influence. In [21] West Germany, in the 1953 elections, the Soviets distributed fabricated documents to discredit the government of Konrad Adenauer, accusing it of Nazi complicity. An operation that directly targeted the perception of voters[22].

Disinformation campaigns were not limited to public opinion, but actively targeted academic, political and trade union elites. manipulating the media, organizing "spontaneous" protests and conducting kompromat campaigns against Western diplomats and politicians. In the 1970s, the KGB documented the personal lives of Western officials in Moscow, using sex traps and wiretaps to blackmail or compromise them.[23]

One of the most sophisticated tools of Soviet influence in Western democracies was the extensive network of front organizations, designed to disseminate pro-Moscow messages among peace movements, trade unions, youth, and intellectual elites. Organizations such as the World Peace Council, the World Federation of Democratic Youth, and the World Council of Trade Unions served not only as propaganda channels, but also as logistical infrastructure for financial transfers, the recruitment of agents of influence, and the promotion of Soviet narratives in Western media and academia[24]. These structures presented an appearance of pluralism and civic activism, but in reality, they were controlled by the KGB apparatus and functioned as platforms for identifying and co-opting cultural, academic or trade union influencers, who later became vectors of Soviet influence.

Moscow aimed to create an "echo effect" in the West, launching narratives that were then picked up, voluntarily or unconsciously, by the Western press and intellectual elites, validating them in the eyes of the public as products of genuine and pluralistic public opinion, without knowing their connection to Soviet propaganda. The information initially fabricated or manipulated in Moscow-affiliated publications (such as *The Patriot* or *the Peace Courier*) was later taken up by international news agencies, including TASS, which attributed it as a source to the original publication, thus concealing the Soviet origin of the material[25].

This process, the equivalent of what we now call "information *laundering*", reflects a sophisticated strategy of multiplying the message and infiltrating it into democratic information spaces, by exploiting the freedom of the press and the diversity of opinions in democratic societies in order to disseminate and legitimize narratives favourable to Soviet interests.

Unlike the post-Soviet period, Soviet interference was mainly carried out clandestinely, through human networks and physical logistical channels, in the absence of digital technological support. However, these actions were based on a solid ideological and operational foundation, in which the undermining of Western democracies was perceived as a legitimate tool of geopolitical confrontation.[26]

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[20] Andrew Christopher, Mitrokhin Vasili, *The Sword and the Shield: The Mitrokhin Archive and the Secret History of the KGB*, Basic Books, 2000, pp.724-725.
[21] Christopher Andrew, Vasili Mitrokhin, *op.cit.,* pp.741-743.
[22] *Ibid*., p. 1082.
[23] *Ibid*., pp. 1060, 1095, 1171.
[24] Herbert Romerstein, Stanislav Levchenko, *The KGB Against the "Main Enemy",* Lexington Books, 1989, pp.72-74.
[25] U.S. Department of State*, Active Measures: A Report on the Substance and Process of Anti-U.S. Disinformation and Propaganda Campaigns*, Washington, D.C.: United States Information Agency, 1986, pp.37-38, available at https://www.cia.gov/readingroom/docs/CIA-RDP89-01070R000100150001-2.pdf;
[26] Thomas Timothy., *op. cit*., p. 107.

III. FROM THE USSR TO THE RUSSIAN FEDERATION. RECONFIGURING STRATEGIES (1990-2000)

The collapse of the Soviet Union in 1991 did not mean an interruption of foreign political influence practices, but rather a reconfiguration of them. Although the power structures have undergone significant mutations, a substantial part of the security apparatus has been taken over by the Russian Federation, in particular through the FSB (Federal Security Service) and the SVR (Foreign Intelligence Service), the direct heir of the PGU/KGB. These structures adapted traditional methods of influence to the new international context marked by economic instability and democratic transition in the former Soviet republics and in Central and Eastern Europe.

The period 1991–2000 was dominated by a strategy of "disguised withdrawal" and preservation of geopolitical influence, through indirect methods, especially in the post-Soviet space[27]. This approach is in line with the theory of "strategic continuity" formulated by Anatoliy Golitsyn, a former KGB officer, who argued that the liberalization of the USSR and the emergence of a new democratic Russia were part of a long-standing strategic disinformation plan aimed at disorienting the West and opening new avenues of infiltration.[28]

In support of this perspective come the data from the Mitrokhin Archive, which claim that in the 1990s there was an informal and semi-official reconfiguration of the former Soviet security apparatus, which survived and adapted, maintaining control over strategic channels of influence – media, religion, politics, culture. They show that the "democratic transition" was largely superficial, while opaque power structures were deeply perpetuated, loyal to the interests of the former KGB elites.[29]

Emerging oligarchic networks have played a decisive role in preserving and redirecting the influence of former security structures. Many of Russia's early oligarchs – such as Boris Berezovsky, Vladimir Gusinsky or Mikhail Khodorkovsky – amassed huge fortunes in the 1990s through controversial privatizations and privileged relationships with political elites and former KGB officers operating in the new FSB and SVR services. This symbiosis generated an informal ecosystem of power, where the boundaries between business, political influence, and intelligence activities became increasingly blurred. The oligarchs of the first wave were not only economic actors, but "unofficial instruments of external Russian influence", as they controlled media trusts, sponsored pro-Russian parties in the post-Soviet space and maintained lobbying networks in the West.[30]

Later, starting in the 2000s, this relationship underwent a radical change, by subordinating the oligarchs to the presidential power vertical, but in the 1990s, their partnership with the services contributed to the active maintenance of an unofficial infrastructure for the external projection of Russian interests.

IV. KGB UPGRADE – PUTIN ERA

With the accession to power of Vladimir Putin in 2000 – former KGB officer (1975-1991) and FSB director (1998-1999) – the tools of active measures were reconceptualized as a legitimate response to an alleged Western campaign of subversion, and active measures became an organic component of the regime's operational code, in which the offensive became the most effective defensive mechanism. The strategy thus formulated capitalizes on Russia's strengths – decision-making centralization, operational flexibility and narrative cohesion – to exploit the West's

[27] Edward Lucas, *The New Cold War: Putin's Russia and the Threat to the West*. Palgrave Macmillan, 2009, pp.62-65.
[28] Anatoliy Golitsyn, *Perestroika Deception: Memoranda to the Central Intelligence Agency – The World's Slide Towards the Second October Revolution,* London: Edward Harle, 1995, pp.17-19.
[29] Christopher Andrew, Vasili Mitrokhin, *op.cit.,* pp.1363-1364.
[30] Edward Lucas, *op.cit*., pp. 83–89.

democratic weaknesses, such as freedom of expression, transparency and media pluralism. In this context, active measures must be understood not only as mere tactics, but as expressions of an antagonistic and enduring geopolitical paradigm, in which the destabilization of the democratic order is a strategic objective, not a side effect.[31] A defining element of the geopolitical strategy promoted by Vladimir Putin is the assumption and instrumentalization of the concept of *Russkiy mir* ("The Russian World"), transformed into an ideological and identity framework that justifies the actions of external influence of the Russian Federation.[32]

In his February 2007 speech at the Munich Security Conference, Vladimir Putin denounced the global hegemony of the US and NATO's expansion to the East and accused the West of undermining collective security and the international balance of power[33], thus marking a clear discursive break with the rhetoric of the 1990s, anticipating the intensification of the information conflict between Russia and the West.

Russia was entering a new doctrinal stage, characterized by the articulation of the concept of "information warfare" as an integral part of the national security strategy, which aimed not only at the information protection of the state, but also at the deliberate use of information as an offensive weapon against geopolitical adversaries, giving central importance to information warfare, describing modern conflicts as "determined more by control over information and public perception than by armed forces".[34]

Built around a KGB-specific security culture that perceives the outside world as a hostile space to be managed through control, infiltration, and manipulation, the Putin regime has also developed a complex architecture of malign influence, using both state and non-state resources, in a coordinated effort to undermine democratic institutions and expand geopolitical influence.

This network includes security services (FSB, SVR, GRU), state-controlled media outlets (Russia Today) and pseudo-journalistic agencies (Sputnik), online disinformation platforms, public and private companies, organized crime groups, think tanks, foundations, and religious or cultural organizations. (...) the Kremlin's propaganda is directly aimed at certain journalists, politicians (...)".[35]

The Kremlin has "militarized" four strategic areas: traditional and digital media, ideology and culture, corruption and organized crime, as well as the energy sector.[36]

After 2000, the Putin regime invested heavily in building a global propaganda infrastructure that would support the international projection of the Kremlin's official narratives and counter the influence of Western democratic values. Thus, the *Russia Today (RT) channel was launched* in 2005, followed by *Sputnik* in 2014, both being fully financed from the federal budget and having the declared mission of offering "an alternative perspective" on international realities. In fact, their goal was to flood the information space with so much disinformation that fact-based dialogue became

[31] Mark Galeotti, "Active Measures: Russia's Covert Geopolitical Operations," *Marshall Center Security Insight*, no. 31, June 2019, https://www.marshallcenter.org/en/publications/security-insights/active-measures-russias-covert-geopolitical-operations-0;

[32] Marlene Laruelle, *The "Russian World": Russia's Soft Power and Geopolitical Imagination*, Center on Global Interests, 2015 p.5 available at https://www.researchgate.net/publication/344222398_The_'Russian_World'_Russia's_Soft_Power_and_Geopolitical_Imagination_Center_for_Global_Interests_Papers_May;

[33] Vladimir Putin, *Speech and Discussions at the Munich Security Conference*, 10.02.2007, available at kremlin.ru available at http://kremlin.ru/events/president/transcripts/24034.

[34] NATO Strategic Communications Centre of Excellence, *Russia's Strategy in Cyberspace*. Riga, Latvia: NATO StratCom COE, pp.5-7, 11 available at https://stratcomcoe.org/publications/russias-strategy-in-cyberspace/210;

[35] European Parliament, *European Parliament resolution of 23 November 2016 on EU strategic communication to counteract propaganda against it by third parties (2016/2030(INI))*, p.4 available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016IP0441;

[36] Mark Galeotti, *Controlling Chaos: How Russia Manages its Political War in Europe,* European Council on Foreign Relations, pp.5-6 available at https://ecfr.eu/wp-content/uploads/ECFR228_-_CONTROLLING_CHAOS1.pdf

impossible, undermining not only information, but the very possibility of rational debate and destroying public trust – the foundation of democracy.[37]

In parallel, a number of soft power institutions have been established,[38] such as Rossotrudnicestvo (2008) – the federal agency responsible for coordinating foreign cultural relations and humanitarian cooperation – and Russkiy Mir (2007), a foundation with a central role in promoting the Russian language and culture abroad, the Russian International Affairs Council (2010), the Gorchakov Fund (2010), the Valdai Club (2004), the International Analytical Center "Rethinking Russia" (2015), Dialogue of Civilizations Research Institute (2016, Berlin), Institute of Democracy and Cooperation (2008, Paris) According to the analysis carried out by the Swedish Defense Institute (FOI), they function not only as instruments of cultural influence, but also as platforms for the discursive normalization of the Russian authoritarian regime in the Western space.[39]

V. INTERFERENCE IN EUROPEAN DEMOCRACIES

The Kremlin's efforts remain largely focused on Europe, where it is said to have been involved in 20 elections and seven referendums, in 16 European states of which 12 are members of the European Union and 13 are NATO members, using cyber means and online information operations.[40] The main forms of manifestation identified are financial incentives offered by malicious foreign state and non-state actors, information manipulation and cyber operations in elections.[41]

The Russian network of influence was directly correlated with the penetration of political, media and religious elites in Central and South-Eastern Europe, the link being strengthened especially in the period 2009–2015, when the economic crisis and internal tensions created a favourable context for Russian infiltration.

In Central and Eastern Europe, Russian influence has followed a clear but adaptable pattern: economic penetration into strategic sectors coupled with political support for local actors willing to advance the Kremlin's interests. This strategy generated a "vicious circle" of state capture, in which corruption became the main mechanism for expanding influence and against the background of the weakness of democratic institutions, Russia capitalized on the opportunities offered by the lack of transparency, lax legislation and poorly institutionalized control mechanisms and the result was the

[37] Statement by PETER POMERANTSEV, SENIOR FELLOW, THE LEGATUM INSTITUTE in front of the United States. Congress. House. Committee on Foreign Affairs, *Confronting Russia's Weaponization of Information: Hearing Before the Committee on Foreign Affairs*, House of Representatives, One Hundred Fourteenth Congress, First Session April 15, 2015. Washington: U.S., pp.6-7 vailable at www.govinfo.gov/content/pkg/CHRG-114hhrg94186/pdf/CHRG-114hhrg94186.pdf.

[38] Orysia Lutsevych, *Agents of the Russian World: Proxy Groups in the Contested Neighbourhood,* Chatham House, 2016, p.10 available at https://www.chathamhouse.org/sites/default/files/publications/research/2016-04-14-agents-russian-world-lutsevych.pdf.

[39] Carolina Pallin Vendil, Susanne Oxenstierna, *Russian Think Tanks and Soft Power*, FOI-R reports, Swedish Defence Research Institute (FOI), 2017, p. 4, 13, 27, 31, p. available at https://www.foi.se/rest-api/report/foi-r--4451--se;

[40] Sarah O'Connor, Fergus Hanson, Emilia Currey and Tracy Beattie, *Cyber-Enabled Foreign Interference in Elections and Referendums*, The Australian Strategic Policy Institute, October 2020, p.13 available at https://www.aspi.org.au/report/cyber-enabled-foreign-interference-elections-and-referendums;

[41] Authority for European Political Parties and European Political Foundations, *Foreign Electoral Interference Affecting EU Democratic Processes,* 2023, p.60 available at www.appf.europa.eu/cmsdata/277388/Foreign%20electoral%20interference%20affecting%20EU%20democratic%20processes.pdf;

undermining of the decision-making sovereignty of states and the establishment of networks of economic and political loyalty, often disguised in seemingly democratic structures[42].

By infiltrating media networks, political parties and executive institutions (Delyan Peevski/Bulgaria[43]), supporting populist and anti-Western parties (Jobbik/Hungary[44] and SNS/Slovakia[45]), and using "sovereign democracy" as an alternative, the Kremlin aimed not only at influence in the former Soviet space, but also at redefining the European democratic order from within.

In EU and NATO member states with consolidated democracies, the Kremlin has sought to undermine support for sanctions imposed on Russia, influence elections through direct or indirect support for sympathetic parties, and spread disinformation. The dominant method has been to exploit existing political and social divisions, through online campaigns, ideological and financial support for populist and extremist parties (both right and left), but also by cultivating networks of "useful idiots" who propagate the Kremlin's messages without explicit links to the Moscow regime[46].

In France, the Kremlin has provided explicit financial support to the National Front (including a €9 million loan in 2014) and capitalized on ideological convergences on sovereignty, opposition to immigration and rejection of NATO[47], and in 2017 ran cyber operations and disinformation campaigns against Emanuel Macron, while Germany was targeted by attempts to influence the 2017 elections through subtle means, such as the sale of gold at undervalued prices to the AfD party, in order to finance the campaign[48]. In the UK, Russian influence has manifested itself through manipulation on social media and indirect support for the Brexit campaign, including possible opaque financial flows and the infiltration of pro-Moscow think-tanks and politicians.[49] In Italy, between 2014 and 2017, the 5-Star Movement (M5S) and Lega Nord positioned themselves as vehicles of Russian influence, supporting the lifting of EU sanctions and promoting messages favourable to Moscow; The Northern League signed a formal cooperation agreement with the United Russia party in 2017.[50]

In the Baltic space, Russian interference has manifested itself through a wide spectrum of hybrid instruments, reflecting both the geographical proximity and the geostrategic importance of the region in the Euro-Atlantic architecture. Russia has deployed a full set of active measures in Estonia, Latvia, and Lithuania, including systematic disinformation, cultural-identity propaganda,

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[42] Center for Strategic and International Studies & Center for the Study of Democracy, *The Kremlin Playbook: Understanding Russian Influence in Central and Eastern Europe*, p. 18 available at https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/1601017_Conley_KremlinPlaybook_Web.pdf;

[43] *Ibid*., pp. 19-20.

[44] *Ibid.*, pp. 6, 38.

[45] *Ibid*., p.55.

[46] Senate, Congress, *Putin's Asymmetric Assault on Democracy in Russia and Europe: Implications for U.S. National Security,* A Minority Staff Report prepared for the use of The Committee on Foreign Relations, United States Senate, One Hundred Fifteenth Congress, Second Session January 10, 2018, U.S. Government Publishing Office, Washington, 2019, p.99 available at https://www.govinfo.gov/content/pkg/CPRT-115SPRT28110/pdf/CPRT-115SPRT28110.pdf;

[47] Alina Polyakova, et al., *THE KREMLIN'S TROJAN HORSES: Russian Influence in France, Germany, and the United Kingdom*. Atlantic Council, 2016. pp.6-7, available at, http://www.jstor.org/stable/resrep03685;

[48] *Ibid.*, pp.18-20.

[49] Senate, Congress, *Putin's Asymmetric Assault on Democracy in Russia and Europe: Implications for U.S. National Security,* pp.50-51, available at https://www.govinfo.gov/content/pkg/CPRT-115SPRT28110/pdf/CPRT-115SPRT 28110.pdf;

[50] Alina Polyakova, et al. *THE KREMLIN'S TROJAN HORSES 2: Russian Influence in Greece, Italy, and Spain*. Atlantic Council, 2017, pp.3-4, available at http://www.jstor.org/stable/resrep16776;

support for pro-Kremlin organizations, and recurrent cyberattacks, all aimed at eroding trust in democratic institutions and exploiting ethnic tensions. [51]

In the Western Balkans, Russia intervened in the 2016 parliamentary elections in Montenegro, through an attempted coup d'état involving the GRU[52] and the assassination of the prime minister, as well as in the constitutional referendum in Macedonia in 2018[53], where it combined disinformation with logistical support for protest movements and the infiltration of Orthodox religious structures, Russia thus aimed to block the accession of the two states to NATO and prevent the rapprochement with the European Union.[54]

A comparative analysis by the International Centre for Counter-Terrorism on how the Russian Federation interacted with the far right in ten European states[55] highlighted a flexible framework, combining recurring elements with contextual adaptations to national specificity, but after the Ukrainian crisis in 2014, Moscow adopted a clear line of support for conservative and nationalist forces in Europe, seen as allies in challenging the Western liberal order. [56] A common element identified in most cases is the exploitation of ideological convergences: opposition to the EU, NATO, multiculturalism, migration and cultural liberalism, amplified themes amplified by pro-Kremlin media rhetoric, joint conferences or cultural collaborations starting in the 2010s and intensified after 2014[57].

There have also been contextual adaptations to the national specificity, for example in France (especially after 2014), and Italy (in the period 2014–2019), the emphasis has been on formal political cooperation, especially with parties such as *Rassemblement National* and *Lega Nord*, including through media and ideological support. In contrast, in Slovakia (2015–2022) or Bulgaria (2010–2020), informal, paramilitary networks or alternative media platforms, which disseminated messages favourable to the Kremlin, were preferred. In Hungary, Russian influence has been consolidated since Fidesz's return to power (2010), but in a special way: the Orbán regime was not instrumentalized, but rather positioned itself as Russia's symbiotic ideological partner, within a common geopolitical vision, especially after 2014.[58]

VI. INFLUENCE OPERATIONS IN THE DIGITAL ENVIRONMENT

Russia successfully adapted the concept of "working through others" – characteristic of Soviet propaganda – to the decentralized logic of the Internet.

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[51] Senate, Congress, *Putin's Asymmetric Assault on Democracy in Russia and Europe: Implications for U.S. National Security,* pp.100-102, available at https://www.govinfo.gov/content/pkg/CPRT-115SPRT28110/pdf/CPRT-115SPRT28110.pdf;

[52] United States. Congress. House. Committee on Foreign Affairs. Subcommittee on Europe, Eurasia, Energy, and the Environment, *Undermining Democracy*: *Kremlin Tools of Malign Political Influence,* Hearing Before the Subcommittee on Europe, Eurasia, Energy, and the Environment of the Committee on Foreign Affairs House of Representatives, One Hundred Sixteenth Congress, First Session, May 29, 2019, Serial No. 116-41, U.S. Government Publishing Office, Washington, 2019, p.6, available at https://www.govinfo.gov/content/pkg/CHRG-116hhrg36426/pdf/CHRG-116hhrg36426.pdf;

[53] @DFRLab, '#ElectionWatch: Sputnik misleading in Macedonia', Medium, 23 September 2018, available at https://medium.com/dfrlab/electionwatch-sputnik-misleading-in-macedonia-bc8294aeebe2;

[54] Sarah O'Connor, Fergus Hanson, Emilia Currey and Tracy Beattie, *op.cit*, p.13, available at https://www.aspi.org.au/report/cyber-enabled-foreign-interference-elections-and-referendums

[55] Austria, Germany, Serbia, Hungary, Italy, France, Slovakia, Czech Republic, Sweden, Poland.

[56] International Centre for Counter-Terrorism, *Russia and the Far-Right: Insights from Ten European CountriesRussia and the Far-Right: Insights from Ten European Countries*, 2024, available at https://icct.nl/russia-and-far-right-insights-ten-european-countries

[57] *Ibid.,* pp. 335

[58] *Ibid.*, pp. 334-336

Interference in the U.S. electoral process in 2016 prompted a global reassessment of the risks associated with foreign election interference and strengthened the international community's attention to the Russian Federation's hybrid tactics. The moment 2016 marked a stage of revival and revival of the American official interest in Russian interference, being for the first time in the digital age that such an operation was extensively documented in a formal legislative framework, by the *US Senate Special Committee on Intelligence* detailing a broad campaign of active measures carried out by Russia, which included cyberattacks, disinformation on social media, and the infiltration of American political discourse.[59]

Historian Thomas Rid, in a March 30, 2017, testimony before the U.S. Senate, argued that understanding current cyber operations requires a solid knowledge of Russian intelligence methods in the twentieth century. *Active measures* continue to follow the logic of exploiting the internal cracks of Western democracies, but benefit from technological tools that offer speed, responsiveness, anonymity and global coverage. He points out that the WikiLeaks platform, Twitter and journalists who aggressively promote political leaks without verifying their origin are used by Russian intelligence services similar to the "unwitting agents" (people who, without knowing it, become pawns of Russia's strategy) used in the Soviet period by KBG, quoting Czech defector Ladislau Bittman "The press should be more cautious with anonymous leaks. Anonymity is a signal that the Great Russian Bear could be involved." [60]

According to a study by Graphika, Russia carried out a long-term influence campaign in the digital environment between 2014 and 2020, on 300 platforms, especially blogs, which targeted countries in Europe and North America, covering 9 main themes, in order of importance of exposure: Ukraine as a failed state or an insecure partner; The United States and NATO are aggressive and interfering in other countries; Europe is divided and weakened; critics of the Russian government as morally corrupt, alcoholic, or mentally unstable; Muslims as aggressive invaders; The Russian government as a victim of Western hypocrisy or plots; Western elections as rigged, and candidates who criticized the Kremlin as ineligible; Turkey as an aggressive and destabilizing state; world sports bodies and competitions as unfair, unprofessional and Russophobic. The operation used fake accounts and falsified documents to create dissent between states and launched smear campaigns against Kremlin critics and by targeting presidential candidates in 2016 in the US, in 2017 in France, in Germany, Sweden.[61]

Recent (2022-2024) complex and persistent digital information manipulation campaigns by Russian-affiliated actors aimed at covering the Russian-Ukrainian conflict through the positive presentation of the "special military operation" and the denigration of Ukraine and its leaders, have been extensively documented by DisinfoLab, respectively by the Service for Vigilance and Protection against Foreign Digital Interference (VIGINIUM) of the French National Secretariat for Defense and Security. According to reports, the main techniques used were to impersonate European media sites (including 20 Minutes, Le Monde, Le Parisien et Le Figaro, Bild, Spigel, Ansa, The

[59] U.S. Senate Select Committee on Intelligence**,** *Report on Russian Active Measures Campaigns and Interference in the 2016 U.S. Election*, Volume 1. Washington, D.C.: United States Senate, 2019, p. III-IV, available at https://www.intelligence.senate.gov/sites/default/files/documents/Report_Volume1.pdf.

[60] U.S. Senate Select Committee on Intelligence, *Disinformation: A Primer in Russian Active Measures and Influence Campaigns,* Panel II, Hearing Before the Select Committee on Intelligence of the United States Senate, One Hundred Fifteenth Congress, First Session, March 30, 2017, U.S. Government Publishing Office, Serial no. 115-40, Washington, 2019, pp.19-20, available at www.govinfo.gov/content/pkg/CHRG-115shrg25998/pdf/CHRG-115shrg25998.pdf;

[61] Ben Nimmo, Camille François, C. Shawn Eib, Lea Ronzaud, Rodrigo Ferreira, Chris Hernon, and Tim Kostelancik. *Secondary Infektion,* Graphika 2020, pp.4-5, available at https://secondaryinfektion.org/downloads/secondary-infektion-report.pdf;

Guardian or RBC Ukraine) but also government ones (the French Ministry of Foreign Affairs[62], the German Ministry of the Interior and NATO[63]), respectively, the creation of videos falsely attributed to legitimate media outlets and clever techniques such as redirects or geo-blocking users based on location[64].

In 2024, VIGINUM documented 224 digital "information portals" with similar characteristics, disseminating pro-Russian content and targeting all European countries except Malta and Luxembourg. These sites did not produce any original content, but massively retransmitted publications from three types of sources: social media accounts of Russian or pro-Russian actors, Russian news agencies, and official websites of local institutions or actors. ("PORTAL KOMBAT – SGDSN")65

An analysis by the European External Action Service on the presidential elections in Moldova (September 2024) reveals Russia's tendency to exploit key events in order to build opportunities to strengthen long-term interference strategies in regions of geostrategic importance and strengthen its digital infrastructure, thus ensuring an active presence in the Republic of Moldova beyond 2024 — especially in the run-up to the 2025 parliamentary elections.[66]

VII. CONCLUSIONS

The Russian Federation's electoral interference strategy is based on a clear set of elements of operational and ideological continuity, which transcend historical periods and political regimes. One of these is the use of information manipulation as a strategic weapon. During Soviet times, the KGB carried out so-called "active measures," including infiltrating the media, supporting radical Western movements, and disseminating disinformation to undermine trust in democratic institutions. In the post-Soviet era, these tactics have been reconfigured for the digital environment, but the goal has remained unchanged: to weaken the internal cohesion of Western states. Thus, social networks, alternative news platforms and microtargeting technologies have become the new channels for replicating the classic model of destabilization.

Another element of continuity is the centralization of strategic decision-making at the level of the political leadership. If in the Soviet period, "active measures" were integrated into the state apparatus and carried out by the KGB, the same logic can be found today in the close collaboration between the GRU, the FSB and the Russian presidential administration, which directly manages influence operations. The case studies show that Russia applies the same strategic model: the exploitation of social divisions, the delegitimization of democratic mechanisms by supporting political actors willing to challenge the Euro-Atlantic orientation, but also a strategic commitment of

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[62] VIGINIUM, *NRN: A Complex and Persistent Digital Information Manipulation Campaign,* June 13, 2023, p. 1, available at https://www.sgdsn.gouv.fr/files/files/13062023_RRN_une%20campagne%20num%C3%A9rique%20de%20manipulation%20de%20l%27information%20complexe%20et%20persistante.pdf;

[63] Léa Ronzaud, Joseph A. Carter and Tyler Williams, *Summit Old, Summit New Russia-Linked Actors Leverage New and Old Tactics in Influence Operations Targeting Online Conversations About NATO Summit,* available at https://public-assets.graphika.com/reports/graphika_report_summit_old_summit_new.pdf.

[64] Alexandre Alaphilippe, Gary Machado, Raquel Miguel and Francesco Poldi, *Dopelganger.Media clones serving Russian* propaganda,27 September 2022, EU DisinfoLab, p.2, available at .www.disinfo.eu/wp-content/uploads/2022/09/Doppelganger-1.pdf.

[65] VIGINUM, *KOMBAT PORTAL Extension of the Pro-Russian Propaganda Network: New Domain Names*, pp.3, available at https://www.sgdsn.gouv.fr/files/files/Publications/20240428_NP_SGDSN_VIGINUM_RAPPORT-RESEAU-PORTAL-KOMBAT_NVX%20NDD_%28PARTIE3%29_VF.pdf.

[66] EU External Action Service, *The 3rd EEAS Report on Foreign Information Manipulation and Interference (FIMI) Threats*, march, 2025, available at https://euneighbourseast.eu/news/publications/third-eeas-report-on-foreign-information-manipulation-and-interference-threats/;

the Russian Federation to use information and cyberspace to generate internal instability in Western states.

The Kremlin's actions to influence democratic processes remain part of a systematic and long-standing geopolitical strategy, aimed at the functional erosion of democracy as a universal model – characterized by political pluralism, the rule of law, the separation of powers within the state, free elections and respect for fundamental human rights – and the reconfiguration of power relations in favour of a multipolar system, in which Russia claims a status as a leader and alternative model of government.

The historical approach to these interferences allows them to be understood not as mere recent episodes, but as part of a coherent doctrinal and operational tradition, and by contextualizing current actions in relation to their Soviet predecessors, it becomes clear that Russia did not invent a new tool, but refined an old one, adapting it to the contemporary technological environment.

Building and strengthening a system resilient to democratic resilience cannot be fully achieved without learning from the historical past and capitalizing on the lessons learned.

In 1988, the former Russian defector Stanislav Levchenko recommended[67], as a means of combating Soviet interreferences, that Western societies develop their knowledge of Soviet disinformation and its nature in order to become aware of it and understand how it works, and the work (1981-1992) of the Active Measures Working Group[68] coordinated by the U.S. State Department and later the U.S. Information Agency has demonstrated the value of rapidly exposing and attributing state-sponsored false information, having a single entity coordinating responses, and close international cooperation in this regard.

Recent lessons show us that successful models approached by some states through a systemic, integrated and anticipatory approach can significantly reduce the effectiveness of external interference even if there is no single or universal response. If the purpose of Russian influence operations is to manipulate society's perception, then, in a digital environment characterized by post-truth, the informed citizen is as important as the digital infrastructure that must be protected.

Combating Russian disinformation through media literacy is one of the solutions identified in Finland, Estonia, Latvia and Sweden, countries that have developed an educational system centred on critical thinking and media literacy, using an integrated curriculum involving schools, parents and social platforms, through a whole-of-society approach. At the same time, assuming a unitary and coordinated political response (Finland, Sweden, Estonia) by adopting a policy of public exposure of the risks of interference and warning citizens increases the political cost of manipulation and strengthens citizens' trust in state institutions. Last but not least, state support for NGOs, independent media and universities, as internal vectors to counter Russian disinformation.

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[67] Calder Walton, "Spies, Election Meddling, and Disinformation: Past and Present", *The Brown Journal of World Affairs*, 26(1), 2019, pp. 121, available at https://www.jstor.org/stable/26954159;

[68] Christopher J. Lamb, Fletcher Schoen, "Deception, Disinformation, and Strategic Communications: How One Interagency Group Made a Major Difference," *Strategic Perspectives, No. 11,* Institute for National Strategic Studies, National Defense University Press Washington, D.C. June 2012, available at https://ndupress.ndu.edu/Portals/68/Documents/stratperspective/inss/Strategic-Perspectives-11.pdf.

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The SOE Redux: The 2024 European Parliament Elections in the Romanian Context

DR. LUIZA-MARIA FILIMON, *TEACHING ASSISTANT*[*] AND
DR. MIHAELA IVĂNESCU, ASSOC. PROFESSOR[**]
"OVIDIUS" UNIVERSITY OF CONSTANTA, ROMANIA

Abstract: *The present article analyses the 2024 European Parliament (EP) election from the perspective of the Romanian political parties and their approach to the electoral campaign preceding the elections from June 2024. For this purpose, the analysis reassesses the Second Order Election (SOE) model in light of the Romanian electoral patterns emerging across five cycles of EP elections (2007-2024), noting that while in the last two cycles turnout exceeded 50%, the second order dynamic remained an electoral constant since the parties failed to centre their agenda on European themes and on the role that the prospective candidates will play in their capacity as members of the European Parliament. The article finds that what accounts for the turnout outlier is influenced by domestic issues both in 2019 and in 2024, since parallel electoral contests were organised at the same time with the European elections on both occasions, namely, the referendum on the issue of corruption in 2019 and the local elections in 2024.*
Keywords: *2024 European elections, Europeanisation, European Parliament, Romanian political parties, politicisation, second order elections (SOE) model, party manifestos*

INTRODUCTION

In Romania, 2024 was what can be referred to as a super-electoral year, since all types of elections – local, European, parliamentary and presidential – converged to take place throughout the year. The coalition government comprised of the social-democrat and liberal parties (PSD-PNL) decided to merge the local elections with those for the European Parliament (EP) which would take place on June 9th, 2024, while the parliamentary elections were to be interspersed between the two rounds of the presidential election. The latter decision, combined with the unexpected results of the first round, will prove to have a significant impact for the stability of the Romanian political system[1]. On the topic of European elections, the merge could have provided an opportunity to rise the salience of EU affairs – imbuing them with first order supranational potential, however, the parties' overwhelming focus on the local elections proved to be detrimental and, as such, maintained the former solidly in the Second Order Election (SOE) register. In this sense, Carp and Matiuță observe that, as a general rule, the electoral campaign "has been devoid of European themes", remarking that all parties preferred to focus on issues of national importance to the point that there was an overlap in messaging, while no consideration was afforded to EU themes[2]. In the authors' view, this electoral overlap confuses the voters and estranges them from current European topics and debates happening in the EU[3].

In the aftermath of the elections, we have seen that political centre received the backing of a majority of voters (PSD-PNL coalition obtained 48.55% of the votes). However, this would prove to be double-edged,

[*] Luiza-Maria FILIMON, PhD, Teaching Assistant, Department of History and Political Science, "Ovidius" University of Constanta, Romania; email: luiza.filimon@365.univ-ovidius.ro. *ORCID: https://orcid. org/0000-0001-811/91-3303; Scopus Author ID: 57218564019 (https://www.scopus.com/authid/detail.uri?authorId= 57218564019); WOS: ResearcherID: F-6679-2011 (https://www.webofscience.com/wos/author/record/F-6679-2011); Google Scholar: https://scholar.google.com/citations?user=-8D_yCkAAAAJ&hl=en&oi=ao*

[**] Mihaela IVĂNESCU, PhD, Associate Professor, Department of History and Political Science, "Ovidius" University of Constanta, Romania; email: mihaela.ivanescu@365.univ-ovidius.ro. *ORCID: https://orcid.org/0000-0001-811/91-3303 Scopus Author ID: 57212842480 (https://www.scopus.com/authid/detail.uri?authorId=57212842480) WOS: Researcher ID: AAP-9550-2021 (https://www.webofscience.com/wos/author/record/AAP-9550-2021); Google Scholar: https:// scholar.google.com/citations?user=CWn0gucAAAAJ&hl=ro*

[1] George Arun, „Analiză: Valul extremist și nevoia de reformă a partidelor", *DW*, 11.12.2024, https://www.dw.com/ro/valul-extremist-%C8%99i-nevoia-de-reform%C4%83-a-partidelor/a-71019603.

[2] Radu Carp, Cristina Matiuță, „Cinci runde de alegei pentru Parlamentul European în România: scurtă privire retrospectivă", în Radu Carp, Cristina Matiuță (ed.), *Alegerile europene din România 2024. Clivaje, coaliții, consecințe*, Institutul European, Iași, 2024, p. 26.

[3] *Ibidem*.

on the one hand, because it was a by-product of the ruling coalition, whose candidates ran on shared party-lists, on the other, because the support would collapse come November 2024. Notably, for the first time in the five European elections in which Romanians voted, protest votes cast for radical right parties totalled nearly 20% (AUR obtained 14.93% of the votes, while SOS crossed the electoral threshold with 5.03%). Meanwhile, though the turnout was higher than the European average (52.40% compared to 50.74%), this was influenced, as mentioned, by the local elections that were organised at the same time with the European ones.

Based on these preliminary observations, though the focus on domestic topics is not isolated to the Romanian case, the persistent intrusion of unrelated national issues during a period where the focus should be on the state of Romania's Europeanisation process, coupled with the quasi-general misunderstanding or misapplication of European policy-making[4], is indicative of a broader holding pattern in the country's integration process[5]. This situation has several implications for both the national and European electoral frameworks. Firstly, as concerns Romania, the dynamic identified has corrosive outcomes for the democratic process, in general and for the electoral one, in particular, leading to electoral passivity and a lack of trust in political institutions, which should not be confused with docility and non-participation. Secondly, traditional parties' disengagement from European affairs opens the field for radical alternatives[6] to make inroads with critical sectors of the voting pool. Until 2024, Romania had only sparse encounters with such actors – parties that would cross the electoral threshold for a cycle and afterwards fade into insignificance or independent politicians who were dismissed as political oddities – but after 2024, neither these new radical right-wing parties (AUR, SOS, POT) nor candidates (Călin Georgescu) can be disregarded by the political establishment. Lastly, due to their SOE handicap, EP elections act as a canary in the coalmine, as illustrated by the multiple right-wing surges witnessed by various Members States between 2014-2024, that spill over in the national elections to various degrees of success.

Building on previous research[7], the present analysis revisits the persistence of the SOE model in the Romanian electoral context, by developing a comparative framework that juxtaposes the 2024 European political parties' manifestos for the EP elections with those of the Romanian parties. The article comprises of the following sections: typology of European elections (SOE versus EU issue voting model versus salience, etc.); methodology (qualitative document analysis); comparative framework (European versus national political parties' manifestos); discussion and conclusions.

EUROPEAN ELECTIONS: A TYPOLOGY

To support the claim that the 2024 Romanian elections for the EP fall under the SOE model, we classify European elections according to several factors: (1) supply-demand (party-voters) trends; (2) electoral cycles

[4] Michel Labori, Simion Costea, *Le management des politiques de l'Union Européenne*, Editions Prodimultimedia, Paris, 2011.

[5] Maria Costea, Simion Costea, (coord.), *Integrarea României în Uniunea Europeană: provocări și perspective*, Institutul European, Iași, 2007; Aliona Balan "European integration as a historical desideratum of the elites in the Central and Eastern European states", *L'Europe Unie / United Europe*, no. 16, 2020, pp. 50-59.

[6] On the challenges posed by the trends of radicalisation in the EU, see: Mihaela Ivănescu, Luiza-Maria Filimon, "Mainstream Fringes or Fringe Mainstream? An Assessment of Radical Right (Re) Alignments in the European Parliament after the 2014 and 2019 Elections", *European Review*, Vol. 30, No. 1, February 2022, pp. 96-114, https://doi.org/10.1017/S1062798720000976; Mihaela Natea, Simion Costea (coord.), *L'Europe Unie. Special Issue: EU Law and Politics at the Crossroads: Navigating the Complexities of AI, Digitalization, Data Protection, Security, and Radicalization,* No. 20, 2023.

[7] We have covered the SOE theorisation in: Mihaela Ivănescu, Luiza-Maria Filimon, "What Do National Parties Campaign on during European Elections? Trends from Romania", *L'Europe Unie / United Europe*, vol. 20, 2023, pp. 119-135; Mihaela Ivănescu, "An Electoral Outlier or Second Order Business as Usual? A Decade of European Elections in Romania (2009-2019)", *Revista de Științe Politice. Revue des Sciences Politiques*, No. 70, 2021, pp. 153-166; Luiza-Maria Filimon, "Beneficiaries of the Second Order Election Model: Radical Right Parties in the European Parliament", *Europolity*, Vol. 9, No. 2, 2015, pp. 193-223. Mihaela Ivănescu, Luiza-Maria Filimon, „Între irelevanță politică și indiferență electorală: impactul partidelor mici și al candidaților independenți din România asupra alegerilor europene din 2024", in Radu Carp and Cristina Matiuță (eds.), *Alegerile europene din România 2024. Clivaje, coaliții, consecințe*, Institutul European, Iași, 2024, pp. 193-230.

trends; (3) European governance trends. In the first group, we find *the second-order election (SOE) framework* – arguably, the most entrenched perspective in the literature – and, at the opposite end, *the EU issue voting model*, along with *the Europe Salient Theory.* In the second category, we place *the critical election variant* – a more recent, yet increasingly dominant approach. Finally, in the third case, we consider *the first-order supranational hypothesis*. These trends are interconnected and there are points of commonality between them, especially as it concerns the SOE framework and the resulting particularities of electoral supply-demand trends. As Weber notes, the SOE framework operates on two core elements: *the general 'multi-level' argument* (where EP elections are tied to national politics) and *the specific 'protest argument'* (which highlights the importance of the national factor on EP election results)[8]. Furthermore, we can also account for geographical differences in voting patterns, between Western and Central-Eastern European member states, between North and South, as well as between different regions of the same country[9].

Two paradigms have dominated the literature on European elections: the SOE framework and the Europe Salience model[10]. For the purpose of this paper, we will focus on the more recent key findings in the literature on European elections. In the case of SOE, the traditional account states that European elections are theorised as second-order relative to the national elections, which are regarded in first-order terms, since, as Reif and Schmitt hypothesize, "there is less at stake" in these contests[11]. Where first-order elections are symptomatic of democratic functioning[12], SOE are characterised by: (1) depressed turnout; (2) improved electoral results for new or smaller parties; (3) higher rates of spoilt votes; and (4) a loss of support for the national government parties[13]. Additionally, Hobolt and Wittrock found that voters tend to prioritize national preferences, specific to first-order elections, at the European level as well[14], meaning that the "national preference" is the one that determines the result of the (second order) European elections.

Clark and Rohrschneider argue that a process of transference occurs whereby "individuals presumably apply their evaluations of national-level phenomena to the EU level when voting in EU elections"[15]. According to Donatella Viola, a fifth characteristic that must be accounted for involves a temporal determinant and refers to the period when EP elections are held, relative to the national electoral cycle: immediately after the completion of a parliamentary election, the ruling party would still have a considerable hold on the electorate ("the honeymoon period"), mid-point through the electoral cycle or towards the end of it, the party in power would register a drop in approval, which, in turn, would impact the degree of support received by the party in the EP elections[16]. This approach tends to focus to on the demand side of the electoral process, shedding light on the European voter, dissecting its voting attitudes and behaviour, in search of an ever-elusive electoral profile. Viola distinguishes three types of voting behaviour drawing from studies conducted over the last forty years:

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[8] Till Weber, "Campaign Effects and Second-Order Cycles. A Top-Down Approach to European Parliament Elections", *European Union Politics*, 8, No. 4, 2007, p. 510.

[9] Christian Vandermotten, Pablo Medina Lockhart, "An electoral geography of Western Europe", *GeoJournal*, 52, 2000, pp. 93-105; Lech Haydukiewicz, "Historical and geographic regionalization versus electoral geography", *Procedia Social and Behavioral Sciences*, 19, 2011, pp. 98–111; Eveline S. van Leeuwen, Solmaria Halleck Vega, "Voting and the rise of populism: Spatial perspectives and applications across Europe", *Policy & Practice*, 13, no. 2, April 2021, pp. 209-219.

[10] Donatella M. Viola, "European Parliament Election Theories", in Donatella M. Viola (ed.), *Routledge Handbook of European Elections*, New York, Routledge, 2016, pp. 39-48.

[11] Karlheinz Reif, Hermann Schmitt, "Nine Second-Order National Elections – A Conceptual Framework for the Analysis of European Election Results", *European Journal of Political Research*, 8, No. 1, March 1980, p. 9.

[12] Jonas Lefere, Peter Van Aelst, "First-order, second-order or third-rate? A comparison of turnout in European, local and national elections in the Netherlands", *Electoral Studies*, 35, September 2014, p 159.

[13] *Ibidem*; John Hajner, "Understanding European voting behavior: An examination of ticket splitting in European elections", prepared for delivery at the European Community Studies Association Seventh Biennial International Conference, Madison, Wisconsin, May 31 – June 2, 2001, p. 1, http://aei.pitt.edu/2096/1/002237_1.PDF.

[14] Sara Binzer Hobolt, Jill Wittrock, "The second-order election model revisited: An experimental test of vote choices in European Parliament elections", *Electoral Studies*, 30, No. 1, March 2011, p. 30.

[15] Nick Clark, Robert Rohrschneider, "Second-Order Elections versus First-Order Thinking: How Voters Perceive the Representation Process in a Multi-Layered System of Governance", *Journal of European Integration*, 31, No. 5, 2009, p. 645.

[16] D.M. Viola, *op. cit*., p. 42.

(a) "Voting with the head" – these are the *strategic* voters that instead of opting for their personal preferences, support candidates with compatible political views that have better winning odds.

(b) "Voting with the heart" – these are the *sincere* voters who cast their votes in support of the party advancing "their own ideological preference".

(c) "Voting with the boot" – the *protest* voters, most visibly associated with the SOE elections, who sanction the ruling party without endangering the national status quo[17].

If the citizens display a certain disinterest in European elections, are the political parties exhibiting a similar electoral *ennui*? Are they also treating these elections on second-order considerations? According to Brunsbach, John, and Werner, three factors are indicative of whether this process of depreciation occurs: candidates, campaigns, and election manifestos[18]. In analysing the German case, the authors found that the parties do exhibit second-order tendencies: "a second-order nature of European manifestos can be found in all German parties in varying degrees from weak to strong"[19]. Weber posits that the voters are not the ones who shape European outcomes single-handedly – that they "do not produce second-order cycles at their discretion" – but that their choices are driven by "first-order campaign effects", since parties are less invested in these elections[20]. At the supply end, we can reframe the electoral dynamic that creates seconder-order effects by focusing on party behaviours. Weber distils the proposed theorisation into three elements:

(a) Campaign mobilisation in first-order contests shapes the electoral cycle.

(b) Parties need to develop well-defined policy positions to generate effective mobilisation.

(c) These positions are difficult to articulate by government parties midway in the electoral cycle, since "policy outcomes are subject to retrospective evaluation"[21].

What about the mobilisation and policy positions of smaller parties? In an article from 2023, Jan-Eric Bartels assessed whether smaller and marginal parties approached European elections from a first-order imperative, since they might have more at stake compared to the main parties: they can gain exposure, win a ticket (or more) to the EP, and from there have a pulpit from where they can reach a wider audience[22]. Bartels looked at Germany to test this hypothesis, since the absence of an electoral threshold in the 2019 EP German elections could have provided an extra incentive. He found that even in such favourable circumstances, small parties still regarded European elections as second-order, both in terms of participation and party manifestos – noticeably shorter compared to those on which they campaigned in federal elections[23].

Schakel and Romanova problematise the SOE model by providing an in-depth review of the literature that distinguishes between three generations of regional election studies, to arrive at a comprehensive frame of reference for understanding the mechanics underpinning European elections. This research allows us to move beyond the traditional second-order trappings in which one might be tempted to use data in service of preconceived notions. As the authors remark, "finding SOE-effects may support a SOE-model interpretation but does not exclude the possibility that these effects are (co-)produced by other causal mechanisms"[24].

The Europe Salience (ES) theory stems from the repoliticisation trend that has latched on European integration in the last twenty years. Netjes and Binnema define salience as "the extent to

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[17] *Ibidem*.

[18] Sandra Brunsbach, Stefanie John, Annika Werner, "The Supply Side of Second-Order Elections: Comparing German National and European Election Manifestos", *German Politics*, 21, No. 1, 2012, p. 91.

[19] *Ibidem*, p. 109.

[20] T. Weber, *op. cit.*, p. 510.

[21] *Ibidem*, p. 513.

[22] Jan-Eric Bartels, "Are European Elections Second-Order Elections for Everyone", *Swiss Political Science Review*, 29, No. 3, September 2023, pp. 290-309.

[23] *Ibidem*, p. 306.

[24] Arjan H. Schakel, Valentyna Romanova, "Moving beyond the second-order election model? Three generations of regional election research", *Regional and Federal Studies*, 33, No. 4, 2023, p. 402.

which the party leadership considers an issue as vital for electoral appeal", being a good indicator of how parties interact with each other in electoral contests[25]. In the EU, the topic of European integration tended to increase its salience with parties by way of depoliticisation[26], which used to be the trend in EU-15. Moreover, at the national level, EU issues were considered to have a low salience since prior to the 2004 enlargement and the unfolding of several global crises, the overall party consensus supported the integration process[27].

Not a rebuke of SOE-centred studies, approaches drawing on ES theory highlight how voting behaviour can be shaped by citizens' views on the EU. Viola explains this development by arguing that parties have started to invest more in electoral campaigns for the EP once voters became more attentive to the European elections. In other words, this meant that the EU elections were becoming more salient[28]. In the early studies on the EU issue voting model, Catherine de Vries looked at the outcome of British, Danish, Dutch, and German general elections and found that European issues were able to disrupt their outcomes, "conditional upon the salience of the issue for voters and the extent of partisan conflict"[29]. If the SOE framework favours the demand side of the electoral equation more, ES theory builds on the supply counterpart – mapping the parties' key policies at a given time. According to Maria Mendrinou, it does so by instrumentalising a set of five variables concerning: (1) the position of a party towards the EU; (2) the degree of intensity of a party's positioning towards the EU; (3) the positioning of the political parties in the left/right scale; (4) left/right intensity; (5) the impact of EP elections on new political parties, particularly if these elections are the first ones in which they compete[30].

An ES-based approach would focus on tracing the presence of EU-related topics in party agendas and talking points, to determine the parties' relation to the EU. Are they Euro-enthusiasts, advocating for policies that advance integration? Or do they profess to be Eurosceptic? If so, what type of Eurosceptic? After all, in the last decade, the articulation of a Euro-critical agenda has led to radical and anti-European electoral breakthroughs that can be used as an indicator to predict future electoral trends.

In support of this assessment, three hypotheses accompany the ES theory:

(a) Green parties perform better in EP elections, when compared to the last national cycle.
(b) Radical parties from both ends of the political spectrum register gains.
(c) Anti-European parties obtain favourable results[31].

Citing the work of Ferrara and Weishaupt, Viola stresses that voters are drawn to parties that have a clear stance on the EU, regardless of whether this position is pro-EU or against it, noting that parties exhibiting "Euro-divisions" will be sanctioned at the ballot: "any ambivalence or ambiguity on European integration may well lead to significant vote losses"[32]. However, there is an additional

[25] Catherine E. Netjes, Harmen A. Binnema, "The salience of the European integration issue: Three data sources compared", *Electoral Studies*, 26, 2007, p. 40.
[26] *Ibidem*. See also: Peter Mair, "The limited impact of Europe on national party systems", *West European Politics*, 23, No. 4, 2000, pp. 52-72.
[27] *Ibidem*.
[28] D.M. Viola, *op. cit*., pp. 43-44.
[29] Catherine E. de Vries, "Sleeping Giant: Fact or Fairytale? How European integration affects national elections", *European Union Politics*, 8, No. 3, 2007, p. 379. For other relevant discussions on issue voting model, see also Catherine E. de Vries and Sara B. Hobolt, "EU Issue Voting in National and European Parliamentary Election", in Wouter van der Brug, Claes H. de Vreese (eds.), *(Un)intended Consequences of EU Parliamentary Elections Get access Arrow*, Oxford, Oxford University Press, 2016, pp. 101-124.
[30] Maria M. Mendrinou, "Greece", in Donatella M. Viola (ed.), *Routledge Handbook of European Elections*, New York, Routledge, 2016, p. 317.
[31] D.M. Viola, *op. cit*., pp. 43-44.
[32] *Ibidem*, pp. 44-45. See also: Federico Ferrara, J. Timo Weishaupt, "Get your Act Together: Party Performance in European Parliament Elections", *European Union Politics* 5, No. 3, 2004, pp. 283-306.

element that needs to be considered in an ES framework and that is "[the] correlation between citizens' propensity to go to the polls, their personal knowledge of EU institutions, and their country's attitude towards European integration"[33]. In other words, voters will participate in EP elections if they have positive views of the EU, a strong connection to the European project, or if they regard themselves to some degree as European citizens.

If there is a *build-up* of salience around the idea of Europeanness, so it becomes more than an abstract construction or idealised condition, then EP elections can be assessed from a first-order supranational perspective. This would entail that *Europeanness* has been internalised by European citizens, and European institutions have furthered their institutionalisation in search of greater democratic consolidation (see the failed *spitzenkandidat* endeavour). According to Fabian Willermain, for the first-order supranational hypothesis to become reality, certain aspects would need to be addressed first, like the formalisation of European parties that need to liaison between citizens and European institutions, the existence of a European electoral law, or the implementation of a European communication campaign[34]. If in practice the viability of a transnational European party might be open to debate, let alone the existence of multiple such parties, one can control for *first-orderness* at the European level by considering the following: higher levels of turnout (similar to national ones), the presence of concrete EU policy proposals in the party platforms, seats gained by pro-EU parties campaigning on EU issues, and minimal mentions of topics pertaining to domestic debates.

On the Critical Election front, Schmitt and Teperoglou find that in the aftermath of the 2014 EP election, while the SOE framework reconfirms its priors in the six countries analysed across Southern Europe, a critical dimension of the election emerges when considering the electoral behaviour on display[35]. Coming on the backend of the economic crisis and of a period of austerity measures cutting into social spending and other public expenditures, the voters used these elections as a sounding board to vent their negative views of national and European institutions[36]. The Critical Election model posits that the SOE framework is becoming inadequate, failing to capture the fluctuations in public attitudes stemming from a volatile socio-political landscape that carries potentially dire economic implications. This gives rise to *abrasive* electoral behaviours that are more than a passing fade, instead they become reflective of "lasting political change and durable political realignments", as the examples from Southern Europe illustrate[37]. If voters feel that their representatives no longer properly represent their interests – regardless of whether this perception is real or imagined – they will be drawn to *partisan alternatives* that project themselves as being the better, more reliable electoral choice[38]. With regard to the 2019 EP elections, Plescia, Wilhelm and Kritzinger found that while prior to the election period, a higher percentage of citizens engaged in discussions about European issues, from the monetary union to the refugee policy, the campaign did not conduce to an increase in such discussions, the focus, at best, being redirected towards the

[33] *Ibidem*, p. 45.
[34] Fabian Willermain, "European elections: from 'second-order' elections to 'first-order supranational' elections. How can a 'first-order supranational' European election be created?", European Policy Brief, No. 34, April 2014, Egmont – Royal Institute for International Relations, http://aei.pitt.edu/63566/1/EPB34.pdf.
[35] Hermann Schmitt, Eftichia Teperoglou, "The 2014 European Parliament Elections in Southern Europe: Second-Order or Critical Elections?", in Hermann Schmitt, Eftichia Teperoglou (eds.), *The 2014 European Parliament Elections in Southern Europe. Still second-order or critical contests?*, Routledge, Oxon and New York, 2016, pp. 1-23.
[36] *Ibidem*, p. 6. See also: Felix Roth, Felicitas Nowak-Lehmann D., Thomas Otter, "Crisis and trust in national and European Union institutions: panel evidence for the EU, 1999 to 2012", Working Paper, EUI RSCAS, 2013/31, EUDO – European Union Democracy Observatory, https://cadmus.eui.eu/handle/1814/26975.
[37] *Ibidem*.
[38] *Ibidem*.

election itself[39]. Underwhelming engagement also resulted from "elite-level discussion about structural reform of the EU" – with the authors characterising the impact of the campaign as being "rather shallow" and the 2019 EP elections as "clearly not first-order breakthrough contests"[40].

In the 2024 elections, multiple issues straddled the threshold between the national and the European spheres, and though, once more, the national lead the agenda, this time, the reasons laid with the impact of global crises on the EU. This is remarked by Laurie Beaudonnet et al. who state that "in the 2024 EP election campaigns, issues specifically linked to the EU came to the forefront: the war in Ukraine and defence and security[41] in general, the Pact on Migration and Asylum and migration issues, and finally the Green Deal and the environment"[42]. When coupled with higher turnouts on average, the SOE model would appear to no longer be the primary explanatory vector for electoral behaviours in the European elections[43]. We would argue that despite this crossover, the parties and voters' preoccupation with the national remained dominant since the ties to the EU issues – to the various degrees they were present – mattered in so far as they were perceived to have a negative impact on the Member States.

Examining the case of Spain and Portugal, Arribas, Outeda and Cacheda point to further fracture in the SOE analytical framework since it failed to adequately account for "contexts of change and recomposition in the party systems"[44] – particularly as concerns cases with strong ties to the EU. In the case analysed, the voters are aware that European elections represent an opportunity to influence the direction of the EU, therefore overcoming the traditional SOE behaviour where the vote reflects the citizens' degree of "satisfaction (reward) or dissatisfaction (punishment) with national governments, a central feature of their classification as second-order elections"[45]. By comparison, in the Romanian case, we also find parties (REPER) and voters that exhibit a non-SOE behaviour, that, arguably, could fall under the incidence of the ES framework, however, due to a combination of electoral rules (5% threshold) and poor electoral strategies, they were unable to derive sufficient electoral support. Consequently, as seen in the 2024 elections, the over 300.000 votes that went to REPER were scrapped when the party failed to cross the electoral threshold, and in turn, this cancelled out the intent of the party's supporters.

METHODOLOGY

In adopting a methodological approach based on qualitative document analysis, we are interested in whether national parties affiliated to the European families integrated the themes in their national electoral manifestos, addressed them during the election campaign or rather failed to do so altogether. Research on manifestos concerning the EU represents a valuable resource in

[39] Carolina Plescia, James Wilhelm, Sylvia Kritzinger, "First-order breakthrough or still second-order? An assessment of the 2019 EP elections?", in Sylvia Kritzinger, Carolina Plescia, Kolja Raube, James Wilhelm, Jan Wouters (eds.), *Assessing the 2019 European Parliament Elections (eBook version)*, Routledge, Oxon and New York, 2020, https://www.taylorfrancis.com/chapters/edit/10.4324/9780367816926-9/first-order-breakthrough-still-second-order-carolina-plescia-james-wilhelm-sylvia-kritzinger?context=ubx&refId=f2457f62-a960-4c83-a717-b3cebd2190b7.
[40] *Ibidem*.
[41] On developments regarding the EU security policy, see the coordinated volume by: Mihaela Natea, Simion Costea (coord.), *L'Europe Unie. Special Issue: The EU Foreign Policy and Security Dilemmas in a Challenging World*, No. 19, 2023, https://leuropeunie.com/wp-content/uploads/2023/09/Nr-19-SPECIAL-1.pdf.
[42] Laurie Beaudonnet et al., "The Second-Order Model Revisited: Lessons from the 2024 European Elections in the 27 Member States", *Politique européenne*, 2025, p. 12, https://shs.hal.science/halshs-04837978v1/file/SI_ResearchNotes_Introduction_FINAL.pdf.
[43] *Ibidem*.
[44] Fernando Martínez Arribas, Celso Cancela Outeda, Bruno González Cacheda, "Are European Elections Still Second-Order? A Study of Spain and Portugal", *População e Sociedade*, Vol. 42, December 2024, p. 16.
[45] *Ibidem*, p. 17.

identifying party and voter trends, for the purpose of better understanding electoral outcomes. Hackermann's study on the congruence of national and Euro-party manifestos assessed the programmatic rapports between the two categories of parties, in relation to three perspectives on integration:

(a) the maximalist model – federal democracy – involving top-down policy "downloading";

(b) the medium model – delegated democracy – characterised by "uploading" national interests at the European level; and

(c) the minimalist model – regional democracy – which involves a process of "crossloading", where the Euro-party has limited impact on the policy direction of national parties[46]. Our analysis will show that the minimalist model applies to the Romanian case.

At a national level, Kiratly proposed an approach that corresponds to these three models, through a textual analysis of party manifestos from three countries (Germany, UK, the Netherlands). The author examined how views on integration (more integration, intergovernmentalism, supranational cooperation) impacted the national political culture. If parties contribute to the construction of political identity, then their views on the EU are not a mere affectation, but a fundamental indicator for "the construction and reproduction of political discourse towards European integration […] embedded in a given polity"[47].

On the topic of Euro-manifestos, Jadot and Kelbel's analysis of the European debate with the occasion of the 2014 EP elections used a lexicometric approach to compare the positions of Euro-parties in search of commonalities and divergencies. They used textual statistics to recreate "the discursive universe shared by Europarties", grouping relevant segments of text based on their semantic proximity, and found that "the discourses of Europarties both represent the aggregation of national parties' priorities – reflecting domestic cleavages, and Euro-parties' own discursive universes"[48].

According to Hani Morgan, qualitative document analysis presupposes the selection of documents based on four factors: authenticity, credibility, representativeness and meaning[49]. For the purposes of this research, the documents selected consist of party manifestos at both the European and Romanian levels, that meet in our assessment three of the four criteria enumerated:

(a) They are authentic because they are genuine.

(b) They are representative because they are typical for the situation analysed.

(c) They have meaning because the significance of the documents is relevant to electoral analysis.

(d) As concerns the credibility criteria, given the context and purpose for which they are created, the presence of errors – premeditated or inadvertent – is something that we can control for, but do not reject out of hand.

In analysing the documents, we account for Bowen's observation of identifying themes in the electoral manifestos that act as stimuli for "pattern recognition within the data", hence the need for the attentive re-reading of the data in the pursuit of unearthing themes relevant to the analysis[50].

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[46] Phil Hackermann, "Congruence of national and Europarty manifestos in the EU elections 2019", *Comparative European Politics*, 21, 2023, pp. 379-399.

[47] Osman Sabri Kiratli, "Political discourses on Europe and European integration in national election manifestos and party programmes", *Cambridge Review of International Affairs*, 29, No. 2, 2016, p. 638.

[48] Clément Jadot and Camille Kelbel, "*Same, same, but different*: Assessing the politicisation of the European debate using a lexicometric study of the 2014 Euromanifestos", *Politique Européenne*, No. 65, 2017/1, pp. 67-69, p. 80.

[49] Hani Morgan, "Conducting a Qualitative Document Analysis", The Qualitative Report, Vol. 27, No. 1, 2022, pp. 70-71.

[50] Glenn A. Bowen, "Document Analysis as a Qualitative Research Method", *Qualitative Research Journal*, Vol. 9, No. 2, pp. 27-40.

THE SALIENCE OF EU ISSUE IN THE MANIFESTOS OF THE EUROPEAN FAMILIES

Prior to the campaign period, all European political parties had presented their manifestos in view of the EP elections held in June 2024[51]. In 2022, the Authority for European Political Parties and European Political Foundations (APPF) validated ten European political parties: 1) The European People's Party (EPP); 2) The Party of European Socialists (PES); 3) The Alliance of Liberals and Democrats for Europe (ALDE); 4) The European Conservatives and Reformists Party (ECR); 5) The European Democratic Party (EDP); 6) The European Green Party (EGP); 7) The European Free Alliance (EFA); 8) The Identity and Democracy Party (ID Party); 9) The Party of the European Left (PEL); and 10) The European Christian Political Movement (ECPM)[52]. For the purpose of this analysis, we reviewed the manifestos of four groups – EPP, PES, ALDE, and ECR. Our criteria for selection were based on two variables: 1) for Romanian political parties to be members of these groups (PNL – EPP, PSD – PES, USR – ALDE, AUR – ECR); 2) for the Romanian political parties to have passed the electoral threshold in the European elections from June 2024.

The 2024 EPP manifesto, titled "Our Europe, a safe and good home for the people", advocated for "the European way of life", "a strong Europe", "a competitive Europe", "a citizens-oriented Europe", and "a democratic Europe"[53]. Throughout the 25 pages long document, the word "policy" is mentioned only twice, in relation to EU competitiveness and asylum policies. In the first case, the emphasis is put on boosting economic performance and job creation, while maintaining support for the euro and the single market as a critical support framework for economic performance. The manifesto supports the need "to streamline regulations" and cautions against over-regulation[54]. It also proposes a Competitiveness Strategy for Europe and an EU Competitiveness Check that would foster entrepreneurship and support small and medium-sized enterprises[55]. On asylum, the language calls for an overhaul of European asylum law, stressing that "the EU, together with its Member States, must have the right to decide to whom and where is it granted", introduces the concept of "safe third countries" for the processing of asylum requests, and proposes setting up quotas at the EU level of admitting "vulnerable individuals"[56]. Notably, the manifesto supports full Schengen admission for Bulgaria and Romania, including the lifting of land border controls[57].

In the case of the PES manifesto – "The Europe we want: Social, democratic, sustainable" – twenty commitments are identified in support of the European ideal for a free, fair, and secure Europe, that are rooted in the following decalogue: 1) the right to quality jobs and fair wages; 2) a new Green and Social Deal for a just transition; 3) strong democracy rooted in the rule of law; 4) a strong and competitive European economy; 5) a protective Europe defending the wellbeing of European citizens; 6) a feminist Europe, protecting women's control over their lives and bodies, and ending all forms of gender-based violence and discrimination; 7) a Europe for young people; 8) a

[51] Similarly, this applies to the 2019 European elections: Pascal Lamy et al.'s analysis of the Euro-parties' agenda, focused on the documents that resulted from the EPP congress (Helsinki, November 2018); the manifestos adopted by PES (Madrid, February 2019), ALDE (Madrid, November 2018), and the European Greens (Berlin, November 2018); and the programme issued by ECR (Brussels, November 2018). (Pascal Lamy et al., "The campaign for the European elections: Theme and divides", Policy Brief, 11.02.2019, Jacques Delors Institute, p. 1, https://institutdelors.eu/wp-content/uploads/2020/08/ThemesandDivides-Groupedetravailelectionseuropennes-Feb19-1.pdf).

[52] Nathalie Brack, Wouter Wolfs, "European political parties: Poorly identified political bodies?", Jacques Delors Institute, Study – May 2023, pp. 23-24, https://institutdelors.eu/wp-content/uploads/2023/05/E_230522_Partis-politiques-europeens_Brack-et-Wolfs_EN.pdf.

[53] EPP, "EPP 2024 Manifesto", March 2024, p. 2, https://www.epp.eu/files/uploads/2024/03/Manifesto_2024.pdf.

[54] *Ibidem*, p. 6.

[55] *Ibidem*.

[56] *Ibidem*.

[57] *Ibidem*.

Europe providing decent and affordable housing for all; 9) a strategically independent Europe; and 10) a strong Europe in the world, able to safeguard peace, security and human rights[58]. At the policy level, the manifesto identifies various directions of action such as establishing a Roadmap for Quality Work and Well-paid Jobs; a need for EU to prioritise "a secure affordable and reliable energy supply for all" and reform the energy market; or creating a "Made in Europe" Strategy to strengthen the Single Market. As concerns the asylum policy, unlike the EPP manifesto, PES is against forms of EU border externalisation, emphasising the need for fair procedures and safe and legal pathways for asylum[59]. At the social level, the manifesto identifies and priorities the European Youth Guarantee, widening access to Erasmus+, or advocating for an EU Strategy on Age Equality[60]. A priority for the EU identified in both the EPP and PES manifestos stresses the need to strengthen European defence, with PES supporting the development of the European defence industry and "strengthening EU's capacity to act in an enlarged Union".[61]

The ALDE manifesto, titled "Your Europe, your freedom: Delivering change for you", identifies three priority directions: 1) keeping Europe free, safe and democratic by enhancing Europe's defence capabilities and economic security in pursuit of Europe's increased independence (helping Ukraine win the war is mentioned from the onset as a first actionable priority); 2) boosting economic growth to support European citizens' freedom, with a focus on "digital and sustainable technologies to create jobs, reduce our dependencies"; and 3) earning the trust of European citizens through action and reform which ALDE as "Europe's centrist force of liberal and democratic parties" would be best equipped to do[62]. When considering actual policies that directly impact European citizens, it is interesting to remark that this topic is fourth in order of relevance, the manifesto beginning with a focus on European security, EU defence policy and the development of military industrial capabilities. This is followed by a section on EU's enlargement policy and the need to consolidate the European Political Community. A third priority focuses on trade ("push for EU trade and investment agreements with open, market-based economies […] based on international commitments")[63]. The sections on economic growth and a competitive European market include provisions ranging from the consolidation of European budgetary programmes to shortening the wait time for EU funds to reach the communities to providing municipalities with direct access to EU programmes, allocating more resources for the Emissions Trading System, prioritising cross-border EU investments, assisting industries across varied economic sectors and ensuring equal taxation opportunities for companies[64]. On asylum, the ALDE manifesto identifies the need to reform the Common European Asylum System, and again, of note is the idea of developing "EU-managed common facilities outside the EU borders for asylum seekers" that will streamline the application process[65]. From the electoral perspective, a section on institutional reforms advances a bold vision for the EU, that would stimulate more citizen engagement in relation to EU decision-making process[66].

[58] PES, "PES manifesto for the 2024 European elections", adopted at the 2024 PES Election Congress, Rome, March 2024, p. 4, https://pes.eu/wp-content/uploads/2024/03/2024_PES_Manifesto_EN.pdf.
[59] *Ibidem*, p. 15.
[60] *Ibidem*, p. 16.
[61] *Ibidem*, p. 19.
[62] ALDE, "Your Europe, Your Freedom: Delivering change for you Our 2024 Manifesto", adopted at ALDE Party's Extraordinary Congress, Brussels, March 2024 p. 2, https://www.aldeparty.eu/web/content/16745?unique=7d15e2d8b2c98c4ec639829e93565373051e87ce&download=true.
[63] *Ibidem*, p. 4, p. 6, p. 7.
[64] *Ibidem*, p. 10, p. 11.
[65] *Ibidem*, p. 24.
[66] *Ibidem*, p. 21.

Finally, in the case of ECR, the manifesto identifies ten main themes: 1) Preserving National Identity, centred on reforming the EU and strengthening state sovereignty; 2) Safeguarding our citizens, based on consolidating European defence; 3) Securing our borders, by adopting a Comprehensive Migration Strategy; 4) Harvesting tomorrow, with a focus on sustainable farming and fishing; 5) Revising the Green Deal; 6) Igniting economic growth through the consolidation of the Single Market and European small businesses; 7) Energise and innovate, with an emphasis on energy security, innovation and EU connectivity; 8) Driving global economic growth; 9) Smart spending, smart future, addressing the need to reform the EU Budget; 10) Charting Europe's course, intended to strengthening global security and support further enlargement in the current geopolitical environment[67]. We can remark that the manifesto shares common themes, which are even framed in a similar style with those of EPP and ALDE. This is less indicative of a change in ECR's Euro-pragmatic agenda, rather it reflects an adjustment in the approach of the other two groups based on what they perceive as relevant topics for the European citizens, which have the potential to attract votes.

ROMANIAN PARTY MANIFESTOS AND EUROPEAN ELECTIONS

A discussion on the Romanian trends emerging from the analysis of their manifestos can begin with a comparative overview of the party slogans used during the campaigns for the 2024 and 2019 EP elections (see Table no. 1). Though the campaign for 2019 EP elections remained staunchly focused on the usual domestic issues, the slogans made an attempt to mention Europe to one degree or another, however, in 2024, we can note an even stringent shift, that focused single-handedly on Romania ("stability for Romania"; "modern Romania"; "patriots in Europe"; "sovereign Romania"). We can also observe that in 2019 the slogans citing the EU belonged to smaller parties, that broke away from PSD and PNL: "Proud to be Romanians. Proud to be European" (PRO Romania) and "United in Europe" (PMP). Another small party which defected from PNL – the Romanian ALDE[68], campaigned on two slogans that were in the same vein as above: "In Europe with Dignity" and "Romania, Respected in Europe".

In 2019, the two main government and opposition parties led the charge with two slogans that centred solely on Romania: "Patriots in Europe. Romania Deserves Better" (PSD) and "Romania First" (PNL). In 2024, they ran together on common candidate lists, and their slogan seemed more appropriate for the local elections than for the European ones ("Stability and development for Romania"). Another outlier was the case of the Alliance for the United Right (ADU), a nominally pro-EU coalition that, where USR was the largest party. ADU continued the trend from the last European elections campaign: if in 2019, USR-PLUS focused on an issue of national interest ("Without Theft We Get Far", a continuation of an earlier USR initiative – "No Criminals in Public Office"), in 2024 their slogan was "Don't let them steal your future!", holding on to their anti-corruption discourse. USR's choice was peculiar, since the party boasted the most Europeanised membership of all: not only was one of the party's co-leaders, Dacian Cioloș, a former European Commissioner, but, in the 2019 EP group configuration, he would become the leader of Renew Europe, the group that succeeded ALDE.

Considering these slogans, we examine the political manifestos to identify the broader vision that the parties embraced in the runup to the European election. In the case of PSD and PNL, the

[67] ECR, "ECR Party Manifesto", 24.04.2024, https://ecrparty.eu/2024/04/24/ecr-party-adopts-manifesto-for-european-elections-decides-not-to-put-forward-a-lead-candidate/.

[68] The party failed to pass the electoral threshold (4.11% < 5%) and did not obtain any seats in the EP. In 2022, it would rejoin PNL.

general theme invoked by the candidates was centred on the need to reduce the differences between Romanians and other European citizens, which was linked to the need to increase the absorption capacity of European funds. The two parties presented themselves as the alliance for stability and development, and stated that, in the current uncertain international context, Romania needed balance and security. To achieve this, experienced MEPs who knew how to defend the country's interests in Brussels were needed, their main mission being to bring more European funds in Romania, required for reforms and investments[69]. This was a common discourse theme, that was used by PSD candidates both in 2024 and 2019: sending to Brussels patriots who would support the interests of Romania and who would "work every day to bring European money for the development of the country"[70].

EP Elections			
2024 Party Slogans		**2019 Party Slogans**	
PSD + PNL	*Stability and development for Romania*	**PSD**	*Patriots in Europe. Romania Deserves Better*
		PNL	*Romania First*
ADU (USR + PMP + FD)	*Don't let them steal your future! Choose a modern Romania!*	**USR-PLUS**	*Without Theft We Get Far*
AUR	*Patriots in Europe* or *Defenders of the Romanian motherland*	**Pro Romania**	*Proud to be Romanians. Proud to be European*
Socialist Romania Alliance	*A sovereign Romania in a sovereign Europe*	**PMP**	*United in Europe*
PRM	*For a dignified Romania in Europe*	**ALDE**	*Romania, Respected in Europe*

Table no. 1 – Slogans for the EP elections from Romanian political parties and independent candidates (2019-2024)

The two parties' campaign manifesto contained mentions to important European issues, such as Romania's accession to the Schengen Area and the Eurozone; increasing the amount of European funds that Romania could access; or attracting European funds for the construction of highways and hospitals. Other EU-adjacent themes included the parties' support for the future enlargement of the EU that would include the Republic of Moldova (seen as the highest priority) and the region of the Western Balkans. In the campaigns for both the 2024 and in 2019 European elections, the political programs of PSD and PNL focused an important part of the discourse on the rights of Romanian consumers and the issue of products of an inferior quality commercialised to Eastern EU countries[71]. The parties emphasised the idea of existing double standards in several areas of the single market, dividing the citizens of Western and Eastern Europe. In an electoral document encompassing five promises of the coalition for the European elections, the parties advocate for: 1) stability and development; 2) attracting European funding, stressing that the rate of absorption rose from 25% to 96% under their leadership; 3) strengthening Romania by coming together despite the differing

[69] Alina Manolache, „Cenușăreasa alegerilor din 2024. Europarlamentarele și promisiunile neauzite ale candidaților", *Europa Liberă*, 24.05.2024, https://romania.europalibera.org/a/alegeri-europarlamentare-promisiuni-candidati/32955009.html. For the 2019 European elections, see: M. Ivănescu, L.M. Filimon, *op. cit.*, p. 126; Digi24, „Rovana Plumb: PSD este cel mai pro-european partid, trebuie să trimitem în PE patrioți", 17.03.2019, https://www.digi24.ro/stiri/actualitate/politica/rovana-plumb-psd-este-cel-mai-pro-european-partid-trebuie-sa-trimitem-inpe-patrioti-1099229.

[70] *Ibidem*.

[71] *Ibidem.*

ideologies of the two parties; 4) advocating the cause of Romania in the name of Romanian entrepreneurs and farmers and against the rising tide of extremism; 5) emphasising that the coalition represents the best option for the country that can commit to the modernisation projects sought by the Romanian citizens[72].

The Save Romania Union (USR) was at their second participation in an EP election in 2024, once again as member of a coalition – the United Right Alliance – that also included the People's Movement Party (PMP) and the Force of the Right (FD). Though USR came third and maintained its ranking from 2019, it had suffered a significant loss in support, obtaining only three seats (as opposed to 10 seats in 2019) and dropping nearly 15 percentage points, which translated in a loss of approx. 1 250 000 votes cast from the last election. In 2024, even though their slogan was a continuation of the one used in 2019, focusing on the corruption of Romanian institutions, ADU promoted more European-focused campaign themes and objectives. These concerned Romania's full accession to Schengen, including the land borders, after joining Schengen in 2024, but only with air and sea borders; Romania's accession to the Eurozone; a more efficient spending of European funds and attracting more funds for agriculture; better trained and better integrated European armies into NATO; supporting the accession of the Republic of Moldova to the EU (an older objective that was present in 2019 in the electoral manifesto of PMP); state reform and anticorruption; or the fight against illiberal slippages[73]. These last three were all themes that were also used in 2019 by PMP and its main candidate, former Romanian President Traian Băsescu, and, like then, no concrete solutions were proposed to achieve these objectives. Once again, most of these themes had less to do with the activity of the MEPs, since they fell within the purview of the national government while the campaign for European elections was centred on the internal dimension even when USR was, arguably, more attached to a European identity.

In 2024, on the radical right front, the Alliance for the Union of Romanians (AUR) participated for the first time in European elections and declared itself a euro-realist and sovereigntist party. The themes expressed in its campaign platform focused on: opposition to globalism; the defence of Romania's national sovereignty in the EU; support for fair and decent access conditions to European funds, by combating the double standard that prevents Romania from accessing them; or agricultural subsidies that should be equal to those of other countries, so that Romanian farmers can face the economic competition on the single European market[74].

Further to the right of AUR[75], the SOS Romania Party, which was also at its first participation in European elections, formulated its manifesto by recycling themes used by other parties in 2019, with Eurosceptic ideas characterising the party: the right of Romanians to healthy food, the elimination of double standards for products and the protection of Romanian farmers and agriculture; encouraging the use of cash and simplifying fiscal rules; reducing labour taxation for all Romanians; reducing the retirement age to 60 years[76]. In relation to the EU, SOS vowed to defend Romania's

[72] *Ibidem*.

[73] USR, „Angajamentul Dreptei Unite pentru România Modernă", 2024, https://usr.ro/wp-content/uploads/2024/01/Angajamentul-Dreptei-Unite-pentru-Romania-Moderna.pdf; Digi24, „12 puncte care transformă România într-o țară cu adevărat europeană și modernă. Ce propune alianța Dreapta Unită la europarlamentare", 29.01.2024, https://www.digi24.ro/opinii/opinie-si-promovare-politica/12-puncte-care-transforma-romania-intr-o-tara-cu-adevarat-europeana-si-moderna-ce-propune-alianta-dreapta-unita-la-europarlamentare-2667859.

[74] Alianța pentru Unirea Românilor, „Planul AUR pentru Parlamentul European", 2024, https://media.hotnews.ro/assets/document/2023/07/22/26414219-0.pdf.

[75] The party's leader, Diana Șoșoaca being first elected as a senator on AUR's candidate lists back in 2020 and expelled from the party shortly after.

[76] Europa Liberă, „Programul S.O.S. România pentru alegerile europarlamentare", 22.05.2024, https://romania.europalibera.org/a/program-sos-alegeri-europarlamnetare/32958925.html.

sovereignty and restore the supremacy of the Romanian Constitution over any other international or European institution[77].

The last party analysed, REPER (Renewing Romania's European Project) failed to cross the electoral threshold and was the main loser of the European elections. REPER's performance, while plagued by the traditional fragmentation of the right[78] and muted electoral tactics, reflected the descending trajectory of Renew at the European level (the European political group to which REPER belonged). In REPER's political program, the references to the EU refer to Romania's place in the European development hierarchy, to the good governance models that could be adopted by Romania (e.g.: the EU staff selection model), as well as to Romania's objective to be integrated into the "hard core of the EU", by joining the Schengen area and the Eurozone[79]. The fact that the party formerly known as the Freedom, Unity and Solidarity Party (PLUS) did not reconfirm any of the members who won MEP mandates in 2019, not even Dacian Cioloș – the European politician par excellence, former European Commissioner and the president of the Renew group in the EP between 2019 and 2024 – indicates a serious deficiency of the party. This is typical of small parties, even of those that have reached political maturity, and is centred on the parties' capacity to ensure political continuity from one electoral cycle to another.

DISCUSSION

Due to the EP election coinciding with the local ones, Romania registered the highest turnout (52.40%) in a European election since it became a member and the tenth highest in the EU. The citizens' interest in the local elections' topics meant that not only was turnout in the European elections vastly improved, but also, that the governing political parties also benefited from it, gaining a greater number of votes that they would have otherwise received. National parties promoted issues concerning the EU during the campaign only in a limited capacity, and, due to the second-order nature of the EP elections, their campaigns focused mainly on internal issues (on account of the electoral distortions created by the merger with the local elections).

In addition, the analysis of the 2019 and 2024 EP elections reveals a series of constants and differences. The political centre wins in both cases, but in 2019, PNL and PSD are opponents (2019: centre-right – first place, centre-left – second place), and in 2024 they are part of the PSD-PNL electoral alliance, obtaining almost half of the total votes validly expressed. The score of the PSD-PNL alliance, of 48.55%, was below one percentage point (0.95%), compared to the combined score obtained by the two parties in 2019. If there was a feeling of partisan dissatisfaction on the part of citizens because of the formation of this alliance, it did not translate into a distinct electoral behaviour. Moreover, these two coalition parties were nearing the end of their government mandate, yet they maintained their support among citizens (in the parliamentary elections of 2020, PSD obtained 28.90% of the votes and PNL, 25.19%), representing a deviation from the secondary order model. By November 2024, when the first round of the presidential election would take place, this sense of tranquillity would prove to be the calm before the storm.

On the issue of merging local and European elections, the main argument that both presidents of the ruling coalition parties presented the public, after being criticised for their decision to merge the local and European elections, was that there were other EU countries where local or regional

[77] *Ibidem*.

[78] Votes were dispersed into four directions, at the level of two parties (USR as a member of the United Right Alliance and the REPER Party) along with two independent candidates (Nicolae Ștefănuță and Vlad Gheorghe).

[79] For REPER's EP electoral program, see: Alexandru Costea, „Dacian Cioloș deschide lista de candidați REPER pentru Parlamentul European", *Digi24*, 11.03.2024, https://www.digi24.ro/alegeri-europarlamentare-2024/dacian-ciolos-deschide-lista-de-candidati-reper-pentru-parlamentul-european-2719189.

elections were set to take place in parallel with the EP elections, stating that the precedent had already been created[80]. However, as several opposition parties showed, the difference was that those countries had not amended the electoral legislation just a few months before the elections, as Romania did, and in some cases the regulations regarding the organisation of local and European elections in the same day were stated in the Constitution (i.e.: Belgium and Hungary). Furthermore, in most of those countries, the election period had been the same for years (even when they overlapped with the EP elections), so the decision to hold them at the same time was not one isolated only to 2024, like in Romania. In addition to these arguments, this merger would favour the big, traditional parties, that would gain more votes reflected in local or MEP seats, and would disadvantage smaller or newer parties, some of which could have more local or regional electoral agendas. In this regard, the electoral system used for the EP elections – proportional representation on closed party lists – usually favours parties or electoral alliances which obtain a larger vote share, in the redistribution process. Even if a much-invoked argument in favour of merging the elections was the decrease of the costs of organising the elections, this was more of a strategic move, used to give the impression to the electorate that the government tried to keep the costs low and allocate the money elsewhere. However, according to the legislative provisions, there would have to be separate polling stations for local and EP elections, so, in the end, the cut in costs would not be so significant.

Another possible explanation for the PSD-PNL coalition's decision to merge local and EP elections would be that both ruling parties were trying to minimise AUR's results in these elections. AUR, a radical right party that adopted a rhetoric which made use of all the major concepts that nationalist far right parties have used and made known over the years (family, fatherland, faith, freedom) had been the surprise of the 2020 Romanian parliamentary election, receiving almost 10% of the votes cast at their first participation in a national election (more than UDMR, a constant member of the Parliament in the last decades, or than former parliamentary parties, like ALDE or PMP). Of the over half a million votes it received, 30% came from the Romanian diaspora, where the discourse of AUR's candidates had even more success than at home. Notably, in 2024 European elections, AUR received 14.90% of the votes, more than doubling its vote share (upwards of 1.300.000 votes).

CONCLUSIONS

During the 2024 electoral cycle, the chronic lack of themes about the EU was not an accident. In the case of the major parties, this was reflected in their eschewing of electoral debates and confrontations as well as in the absence of related projects highlighting the importance of European elections. Regarding this display of disinterest for European affairs, we can surmise that the responsibility is split between the politicians and the voters themselves. Politicians are to blame because they have always mainly addressed domestic issues and rarely touched upon European topics (an exception in this regard may be accession to Schengen). Neither topics related to agriculture, nor those related to migration[81], the European Green Deal, or the EU budget were of interest to Romanian politicians. In recent years, especially after the pandemic, many broached the topic of European funds in connection to the post-pandemic National Recovery and Resilience Plan (PNRR) but failed to provide the public with sufficient details about the policies they would implement. As for the citizens, most of them feel disconnected from what is happening in Brussels and understand only to a small extent the European institutional dynamics or the relations that are

[80] Those countries are Belgium, Germany, Italy, Ireland, Hungary, Cyprus, and Malta.

[81] On the issue of migration see: Maria Costea, Simion Costea, "Challenges of the EU in the Migrant/Refugee Crisis in 2015*",* in *Discourse as a form of multiculturalism in literature and communication. History and cultural mentalities*, Arhipelag XXI Press, Tîrgu-Mureş, 2015, pp. 166-175.

established between the European institutions and the national government, and these aspects, in turn, contribute to their lack of interest for the European elections. Thus, a cycle of Euro-apathy is generated and maintained, to the point that not even the campaign dedicated to the European Parliament can reset the dynamic.

In 2024, merging the EP elections with the local ones represented an additional reason why European themes were hardly discussed. The governing coalition (PSD + PNL) knew that the local elections would be in the foreground and had a vested interest in this setup since the votes it would have received if only European elections would take place, would have failed to match the voting potential of the local elections (incumbent mayors who wanted a new mandate played a crucial role in this regard). The turnout for previous EP elections, except for 2019, would appear to confirm this hypothesis (2007 – 29.47%; 2009 – 27.67%; 2014 – 32.44%)[82].

On the relation between SOE and radical right parties, AUR managed to gain around 14% of the votes (a notable result given that the party was as its first participation in this type of election), but it still came short of the alarming 20% threshold, which polls predicted in the first months of the year. This electoral breakthrough happened even though the ruling coalition included in their campaign program for the European elections the commitment to contain the radical right. This underperformance can be attributed to the increased turnout. Even so, with PSD and PNL opting to run together on a single candidate list, AUR placed second, outcompeting the recently created electoral alliance, ADU, which comprised of moderate centre-right pro-EU parties: USR, PMP, and a newly formed party Force of the Right (FD). From this we can conclude that the decision to merge the elections extinguished what little interest the average Romanian voter had in the European elections, even though, at first glance, the increased turnout would seem to tell a different story.

Finally, we cannot end without an assessment of the political manifestos of EU and national political parties as concerns the validity of the SOE model. Our analysis of the European parties' agendas revealed that even at this level, a paradoxical second order dynamic was present. Raunio and Johansson's analysis of the manifestos states that these documents lack "concrete proposals" and do not focus on "institutional questions", arguing that this might potentially be a sign of broadening internal divisions within the ranks of the European political parties[83]. While Europe and strengthening the EU were at the centre of the manifestos, little consideration was afforded to the needs of European citizens and what benefits they might derive from the outcome of European elections. As the manifestos showed, the undecided European voter was not an issue of concern neither for the European parties, nor for the Romanian ones, the parties being satisfied only with preaching to the converted. Such electoral approaches, combined with the number of votes (approximately ten million) that were cancelled because numerous parties failed to cross the electoral threshold, denotes not just the traditional second order patterns we came to expect from these elections, but a broader crisis that affects Europe and enables illiberal actors to take advantage of this inherent weakness, potentially setting the EU on a path towards an uncertain, de-Europeanised future.

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[82] By comparison, the turnout in local elections for 2008, 2012, and 2016 was: 48.34%; 56.39%; and 48.43%, respectively.
[83] Tapio Raunio, Karl Magnus Johansson, "Advocating for further integration: Europarties in the 2024 European Parliament elections", *The Swedish Institute of International Affairs*, UI Paper 1, 2024, pp. 10-11, https://www.ui.se/globalassets/ui.se-eng/publications/ui-publications/2024/ui-paper-no-1-2024.pdf.

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The 1994 Budapest Memorandum and European Security Architecture: Ukraine's Denuclearization and the Limits of 'Security Guarantees'

DR AUREL LAZĂR[1]
"GEORGE EMIL PALADE" UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE, AND TECHNOLOGY OF TARGU MURES, ROMANIA

Abstract: *This article reassesses Ukraine's denuclearization by treating the 1994 Budapest Memorandum as a non-justiciable assurance and evaluating its deterrent quality through a credible-commitment lens. It offers a chronological, source-grounded reconstruction (1990–2022) and advances three expectations: assurances without coercive clauses and mutual-defence guarantees underperform; denuclearization lowers near-term proliferation and accident risks but shifts strategic risk to the beneficiary absent robust capabilities or alliances; grey-zone instruments exploit political-assurance frameworks more readily than enforceable guarantees.*
Findings show Budapest met the U.S.–UK objective of rapid denuclearization yet failed to embed a deterrence-capable order, producing responses skewed to ex post compensation (aid, sanctions) rather than ex ante prevention. For the EU, the arrangement entrenched reliance on assurance tools (norms, sanctions, conditionality) alongside transatlantic deterrence while stopping short of NATO-type guarantees (pre-committed forces, automaticity). After 2014—and especially after 2022—EU strategic culture shifted toward resilience, defence-industrial ramp-up, and tighter EU–NATO complementarity, without retroactively making Budapest enforceable.
Keywords: *Budapest Memorandum, European Security Order, EU–NATO complementarity, Ukraine–EU relations*

FRAMING THE PUZZLE: UKRAINE, BUDAPEST, AND THE CREDIBLE-COMMITMENT PROBLEM

The dissolution of the Soviet Union in 1991 reconfigured global power relations and recalibrated regional dynamics in Eastern Europe and the Black Sea area. Within this framework, the Russian Federation sought to preserve a strategic glacis—strategic depth—through direct control, politico-military arrangements, or hybrid pressure. From the outset, Ukraine occupied a pivotal position in this glacis, not only by virtue of its geography but also owing to the strategic legacy of the Soviet era: the presence on its territory of one of the world's most substantial nuclear arsenals and the status of Sevastopol—the base of Russia's Black Sea Fleet—which, after 1991, operated under a negotiated legal regime extended through bilateral agreements. Ukraine's trajectory of rapprochement with Euro-Atlantic institutions was perceived in Moscow as a source of security costs, a perception that shaped the denuclearization and the Black Sea dossiers.

This article's principal contribution is a historical reassessment of Ukraine's denuclearization and of the legal–political architecture surrounding the Budapest Memorandum, rather than a novel legal re-interpretation of the instrument or a forward-looking policy evaluation. By reconstruing the 1990–2022 sequence through process tracing and contemporaneous documentary evidence, the study situates "assurances" within the concrete strategic practices and institutional compromises of the post-Soviet transition, thereby reassessing how those practices conditioned deterrence outcomes.

[1] Dr Aurel Lazăr is a Teaching Assistant at the "Petru Maior" Faculty of Science and Letters, within the "George Emil Palade" University of Medicine, Pharmacy, Science, and Technology of Targu Mures, Romania. PhD in Political Science (SNSPA Bucharest) and author; ORCID: https://orcid.org/0009-0009-1927-1699; Scopus ID: 57412110900; WoS: ID MDS-5544-2025; Google Scholar: https://scholar.google.com/citations?user=iNLQOSUAAAAJ; ResearchGate: https://www.researchgate.net/profile/Aurel-Lazar-3?ev=hdr_xprf

Following credible-commitment theory[2], I treat the Budapest Memorandum as a non-justiciable promise vulnerable to a classic commitment problem: in the absence of mechanisms that make non-compliance costlier than compliance, assurances decay under strategic pressure. In this setting, credibility rests on three interlocking pillars: (i) enforcement instruments (coercive clauses or mutual-defence guarantees that transform words into executable obligations); (ii) pre-committed capabilities (pre-positioned forces, readiness and defence-industrial capacity that signal resolve and shorten response times); and (iii) audience and alliance costs (political and reputational penalties that raise the *ex-ante* price of defection).

I operationalize these through the presence/absence of coercive clauses; consultative *vs.* executive decision rules; observable pre-positioning and readiness; speed/scale of coordinated response; and expected costs to an aggressor (sanctions severity, military risk, alliance activation). Observable implications: where these indicators are weak—as under Budapest (1994) and the Sevastopol basing compromises—revisionist tests become more likely and policy drifts toward *ex post* compensation (aid/sanctions) rather than *ex ante* deterrence, as illustrated in Crimea 2014. Where they strengthen—via NATO's forward posture (2014–2022, intensified post-2022)—expected costs rise and the scope for incremental territorial revision narrows, moving the system closer to an enforceable commitment rather than a merely declaratory assurance.

While a substantial body of scholarship clarifies the conceptual distinction between security assurances and security guarantees, the field still lacks a longitudinal, source-grounded reconstruction that integrates denuclearization, basing regimes (Sevastopol/Black Sea Fleet), and hybrid instruments into a single causal narrative from 1990 to 2022. Existing Western think-tank analyses (e.g., Chatham House[3], Policy Exchange[4], RAND[5], CSIS[6], Brookings Institution) have provided valuable policy briefs, scenario modelling, and prescriptive assessments focused on sanctions, force posture, or alliance management. This study differs by offering a historically sequenced reassessment anchored in treaty texts, UN records, and official communiqués, and by linking archival/legal materials to observed strategic behaviour to explain why assurance-based arrangements underperform as deterrents absent enforceable mechanisms or robust indigenous capabilities.

Against this backdrop, the study's research question is as follows: to what extent, and through which mechanisms, did the security assurances contained in the 1994 Budapest Memorandum shape Ukraine's security outcome over 1994–2022, as compared with security guarantees (entailing coercive clauses and/or mutual defence)? The conceptual distinction is central. By security assurances we mean politico-legal undertakings of a declaratory nature (respect for sovereignty, non-use of force, consultations) that lack effective enforcement mechanisms. By security guarantees we mean commitments equipped with instruments of execution: coercive clauses, mutual defence, pre-

[2] Thomas C. Schelling, *Arms and Influence*, New Haven: Yale University Press, 1966 (repr. 2008), pp. 35–41.
[3] Orysia Lutsevych, *How to end Russia's war on Ukraine – Fallacy 3: 'Ukraine should adopt neutrality'*, Chatham House, June 27, 2023, available at: https://www.chathamhouse.org/2023/06/how-end-russias-war-ukraine/fallacy-3-ukraine-should-adopt-neutrality (accessed November 3, 2025).
[4] John Bew and Gabriel Elefteriu, *The UK and the Western Alliance: NATO in the New Era of Realpolitik*, Policy Exchange, March 2017, available at: https://policyexchange.org.uk/wp-content/uploads/2017/03/The-UK-and-the-Western-alliance-NATO-in-the-new-era-of-realpolitik.pdf (accessed November 4, 2025).
[5] Polina Sinovets, John V. Parachini, and Khrystyna Holynska, *How Russia's Nuclear Double Cross of Ukraine Teaches Dangerous Lessons*, RAND Corporation, August 16, 2022, available at: https://www.rand.org/pubs/commentary/2022/08/how-russias-nuclear-double-cross-of-ukraine-teaches.html (accessed November 4, 2025).
[6] Daniel Fata and Janina Staguhn, *Thinking Through Security and Coordination Aspects Needed for Ukraine's Reconstruction*, Center for Strategic & International Studies (CSIS), September 15, 2022, available at: https://www.csis.org/analysis/thinking-through-security-and-coordination-aspects-needed-ukraines-reconstruction (accessed November 4, 2025).

positioning of capabilities, and automatic or conditional response triggers. The article proceeds on three hypotheses within this framework: (H1) in the absence of executive/enforcement clauses, Budapest-type assurances cannot generate a level of deterrence comparable to guarantees; (H2) denuclearization reduced immediate risks of proliferation and accident but shifted strategic risk onto the beneficiary state where assurances were not complemented by robust internal capabilities or alliances; and (H3) practices of military deception, plausible deniability, and grey-zone instruments exploit assurance-type arrangements more readily than those endowed with enforcement clauses.

Methodologically, the study adopts an explanatory single-case design with process tracing across critical sequences: 1990–1994 (the Declaration of State Sovereignty of Ukraine; the START Treaty; the Lisbon Protocol; the Trilateral Statement of 14 January 1994; and the Budapest Memorandum), 1997–2010 (the Sevastopol/Black Sea Fleet regime), 2014 (the occupation and annexation of Crimea through the deployment of unmarked troops, the so-called "polite people"[7], commonly referred to as the "little green men"—in a covert operation characteristic of hybrid warfare), and 2022 (the full-scale aggression). Source triangulation encompasses the treaty corpus (NPT/START, the Trilateral Statement), United Nations records (UNTS, meeting records and draft resolutions), official communications by state actors (the United States, the United Kingdom, Russia, Ukraine; and the unilateral assurances issued by China and France), as well as the relevant literature in international relations (deterrence, credible-commitments, the political economy of sanctions) and security studies (hybrid/grey-zone warfare).

The operationalization of the assurances/guarantees distinction relies on enforcement-credibility indicators (the presence or absence of coercive clauses; consultation and implementation mechanisms with effect; pre-positioning of capabilities; and anticipated costs for the aggressor), coupled with security-outcome indicators (violations of sovereignty and territorial integrity; territorial changes; international institutional responses; and the type and cadence of external support). Intermediate variables—plausible deniability, military deception, economic/energy pressure, and the legal regimes governing military basing—are traced to identify the mechanisms through which political promises are eroded in practice.

To set readers' expectations—strictly as intermediate results of the analysis, without any claim to final conclusions—we note that: (i) the assurance-type arrangement facilitated denuclearization and reduced the immediate risks of proliferation and accident, but did not, by itself, establish a functional architecture of deterrence; (ii) the 2014 and 2022 episodes point to implementation limits of assurances when confronted with a revisionist actor capable of combining conventional and grey-zone instruments; and (iii) audience costs and the institutional mechanisms associated with assurances proved insufficient to generate credible *ex ante* costs for the aggressor, whereas subsequent material support (economic/military) functioned more as *ex post* compensation than as prevention. The interpretation of these findings is reserved for the discussion section.

The study's positioning within the relevant literature is twofold. On the one hand, it offers a conceptual clarification of the assurances/guarantees distinction in a major post–Cold War case, connecting deterrence theory and the literature on credible-commitments with the limited juridical force of politico-diplomatic instruments. On the other hand, it advances a process-traced historical reassessment of the 1994–2022 sequences, integrating the hybrid dimension (plausible deniability, covert operations, economic coercion) to explain why political promises—absent enforcement clauses or robust internal capabilities—tend to shift strategic risk onto the beneficiary state.

[7] In Russian language, *vezhlivye lyudi*—troops in dark-green, unmarked uniforms—masked, well equipped, and tightly coordinated—who seized strategic sites in Crimea (the Simferopol parliament, airports, and military bases) in early 2014. Moscow initially denied involvement; however, on 17 April 2014 Vladimir Putin publicly acknowledged that Russian military personnel operated in Crimea, including Russian special operations forces (Spetsnaz).

The research, inevitably, has limitations: uneven access to internal executive sources, the possibility of reporting biases, and the inherent difficulties of causal attribution in a strategic environment shaped by exogenous shocks. From an ethical standpoint, we rely exclusively on open sources and maintain an explicit separation between empirical findings and normative assessments.

The structure of the article reflects this architecture: following this introduction, the next section delineates the theoretical framework and operational concepts; it is followed by the historical contextualization and the architecture of the Budapest arrangement; then the methodology and data; the process-tracing analysis across the selected sequences; the presentation of findings; and, finally, the discussion and conclusions, with implications for the design of future post-denuclearization arrangements.

UKRAINE'S ACCEPTANCE OF THE BUDAPEST MEMORANDUM—CONTEXT AND CONSEQUENCES

With regard to Ukraine's policy on nuclear weapons, it should be noted at the outset that in 1990—while still a non-independent[8] Soviet republic—it declared, through its Declaration of State Sovereignty, its intention to eschew any involvement in activities related to nuclear armaments. Article IX of the Declaration provides: "The Ukrainian Soviet Socialist Republic solemnly declares its intention to become a permanently neutral state, non-aligned with military blocs, and to uphold the following three principles: (1) not to accept[9], (2) not to produce, and (3) not to acquire nuclear weapons."[10]

Although Ukraine then possessed the world's third-largest nuclear arsenal[11], relinquishment was regarded as the most appropriate working option—due in part to the traumas generated by the 1986 Chernobyl disaster, which fostered a profound anti-Soviet sentiment in the Ukrainian SSR and cultivated a pervasive reticence toward the use of any form of nuclear technology.[12]

Nevertheless, nuclear disarmament was not universally accepted within Ukraine. Following the 1991 declaration of independence[13], the state's approach to the nuclear domain underwent a series of fundamental shifts, driven primarily by the perceived Russian threat—an assessment not overlooked by Ukrainian leaders. Despite appearances, the Kremlin retained a presence on Ukrainian territory after the Soviet dissolution; a salient example was the stationing of Russia's Black Sea Fleet in Crimea, at Sevastopol, under a bilateral agreement that provided for discounted prices on natural gas supplied to Ukraine by the Russian Federation.[14]

Despite certain reservations, in December 1991 Ukraine, together with Belarus and Kazakhstan, signed the Minsk Agreement on the Strategic Armed Forces, committing to the dismantlement of nuclear armaments by 1994. It should be noted that the agreement stipulated that, until dismantlement, such weapons could be used only with the explicit consent of the states on

[8] Ukraine declared its independence on 24 August 1991.

[9] In the sense of "to possess."

[10] Verkhovna Rada of Ukraine, *Declaration of State Sovereignty of Ukraine*, Kyiv, July 16, 1990, available at: https://static.rada.gov.ua/site/postanova_eng/Declaration_of_State_Sovereignty_of_Ukraine_rev1.htm (accessed March 20, 2025).

[11] At the time of its declaration of independence from the Soviet Union in 1991, Ukraine possessed the world's third-largest nuclear arsenal: approximately 1,900 warheads, 176 intercontinental ballistic missiles, and 44 strategic bombers.

[12] Adrien Nonjon, *De la lutte pour l'indépendance jusqu'à aujourd'hui: une brève histoire de l'éco-nationalisme ukrainien*, THE CONVERSATION, August 23, 2021, available at: https://theconversation.com/de-la-lutte-pour-lindependance-jusqua-aujourdhui-une-breve-histoire-de-leco-nationalisme-ukrainien-166237 (accessed March 20, 2025).

[13] World History Commons, *Act of Declaration of Independence of Ukraine*, available at: https://worldhistorycommons.org/act-declaration-independence-ukraine, August 24, 1991, (accessed March 20, 2025).

[14] Robert Peston, *Should Crimea be leased to Russia?*, BBC, March 6, 2014, available at: https://www.bbc.com/news/business-26452298 (accessed March 20, 2025).

whose territory they were located. One year later, on 23 May 1992, Ukraine, Belarus, and Kazakhstan signed the Lisbon Protocol, undertaking to return the nuclear weapons to the Russian Federation and to accede to the START I Treaty and the Nuclear Non-Proliferation Treaty.

Nevertheless, after the protocol was signed, a number of Ukrainian officials opposed Ukraine's surrender of its nuclear armaments. In the spring of 1993, they issued a declaration setting out thirteen conditions, including a series of security assurances from the United States and the Russian Federation, as well as financial compensation for the nuclear material to be removed from Ukrainian territory. The declaration—endorsed by more than 150 Ukrainian officials—also provided that Ukraine would relinquish only 36% of its nuclear-armed missile launchers and 42% of its warheads, with the remaining quantities to continue to be held by Ukraine.[15]

These developments generated discontent in both Washington and Moscow. Subsequently, on 3 September 1993, Russian and Ukrainian officials met in Crimea, culminating in the signing of the Massandra Agreements[16], which contained four provisions concerning Russia's Black Sea Fleet and the management of nuclear armaments located on Ukrainian territory. The agreements, however, were never implemented owing to disagreements between Moscow and Kyiv.

Nevertheless, the meeting's tangible outcome was the involvement of the United States in mediating negotiations between Ukraine and the Russian Federation on the nuclear arsenal. On 14 January 1994, the Trilateral Statement[17], was issued, under which Ukraine undertook to disarm completely in exchange for economic support and security assurances from the United States and Russia. Ukrainian officials agreed to transfer the nuclear warheads in their possession to the Russian Federation and to receive U.S. economic assistance for the dismantlement of missiles, nuclear infrastructure, and related systems. The Statement further stipulated that Ukrainian warheads would be dismantled on Russian territory, with financial compensation reflecting the commercial value of the uranium contained in the warheads.

The "success" of trilateral cooperation was confirmed a month later, on 3 February 1994, when the Ukrainian Parliament ratified the START I Treaty. Moreover, the Ukrainian legislature repealed its earlier preconditions, which had required accession to the Nuclear Non-Proliferation Treaty only in the event that security guarantees were provided[18]. Ukraine nonetheless received a set of assurances through the Budapest Memorandum[19], signed on 5 December 1994 by the United States, the Russian Federation, and the United Kingdom.

Although accidents—including Chernobyl—were adduced as arguments for arsenal reductions and denuclearization, "Budapest" reflected a convergence of distinct strategic interests from a different register. For the United States, the principal aims were rapid non-proliferation and the stabilization of post-Soviet borders without mutual-defence commitments, alongside keeping Russia embedded in arms-control regimes (START/CTR). The United Kingdom pursued an Atlanticist line: the credibility of norms, coherence in non-proliferation, and the avoidance of prematurely extending military guarantees. For Russia, priority lay in preserving a strategic *glacis*

[15] Resolution of the Supreme Rada of Ukraine on the Ratification of the Treaty between the Union of Soviet Socialist Republics and the United States of America on the Reduction and Limitation of Strategic offensive Arms Signed in Moscow on July 31, 1991, and the Protocol to it Signed in Lisbon on behalf of Ukraine on May 23, 1992, available at: https://www.bits.de/NRANEU/START/documents/radaresolution.htm (accessed March 20, 2025).

[16] The Massandra Palace (Yalta, Crimea) served as the official residence of the Ukrainian government.

[17] National Security Archive, *January 14 Trilateral Statement*, January 14, 1994, available at: https://nsarchive.gwu.edu/media/30922/ocr (accessed March 20, 2025).

[18] Daryl G. Kimball, *Ukraine, Nuclear Weapons, and Security Assurances at a Glance*, Arms Control Association, March 2022, available: https://www.armscontrol.org/factsheets/ukraine-nuclear-weapons-and-security-assurances-glance (accessed March 21, 2025).

[19] The agreement's full title was "Memorandum on Security Assurances in Connection with Ukraine's Accession to the Treaty on the Non-Proliferation of Nuclear Weapons."

and freedom of maneuver in the "near abroad," including through elastic legal arrangements (Sevastopol/Black Sea Fleet). Ukraine sought sovereign recognition, economic and security support, and a trajectory of European integration while minimizing the costs of denuclearization. European actors aimed at market integration and the reduction of conflict risks on NATO/EU's periphery, relying on political assurances rather than coercive guarantees.

In response to the "guarantees" received, officials in Kyiv formally acceded to the Nuclear Non-Proliferation Treaty as a non-nuclear-weapon state, thereby fulfilling the final condition for the ratification of START I. Subsequently, Kyiv discharged the obligations undertaken through the series of agreements providing for the relinquishment of nuclear armaments and related facilities: by 1996 the last nuclear warheads had been removed from Ukrainian territory, and by 2001 all components that could be used for the delivery and launch of nuclear weapons had been eliminated.

For analytical completeness, it must be underscored that Ukraine's decision to relinquish nuclear weapons resulted from a confluence of factors, not a single determinant. At the material level, economic constraints proved decisive: estimates placed the costs of safeguarding, maintaining, and modernizing the inherited arsenal at roughly $65 billion[20], a burden far beyond the capacities of a state in systemic transition. This calculus intersected with concerted political pressures from the United States and the Russian Federation, both oriented toward rapid denuclearization and Ukraine's incorporation into a credible non-proliferation regime. In parallel, international recognition and the conditionalities attached to financial assistance (including IMF programs) created powerful compliance incentives by offering liquidity and external legitimacy. Finally, the diplomatic ambition to join the "European community of law and democratic states" (the logics of accession to the EU and the Council of Europe) reinforced the preference for disarmament, insofar as retaining the arsenal would have collided with those organizations' normative and admissibility criteria. Although the EU did not directly manage Ukraine's disarmament, it is important to note that its involvement in Ukraine's nuclear status evolved from an elusive, marginal common policy on disarmament into a discreet yet coherent common policy of non-proliferation. Throughout this period, Brussels relied on Washington's leadership, intervening in a complementary rather than a direct capacity.[21] Read in this light, denuclearization appears as a constrained choice at the intersection of prohibitive costs, external power vectors, and strategic objectives of Euro-Atlantic anchoring.

Following the completion of this process, relations between the Russian Federation and Ukraine did not register major tensions, with the exception of 2006 and 2009, when Moscow decided to reduce gas flows to Europe through the Ukrainian pipeline system, citing a series of alleged violations by the Ukrainian side of bilateral energy agreements[22]. Ukraine also faced serious security challenges in 2009, in the context of the expiration of the START I Treaty; however, Washington and Kyiv issued a joint statement offering Ukraine assurances regarding the continued observance of the provisions of the 1994 Budapest Memorandum[23].

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[20] David S. Yost, *The Budapest Memorandum and Russia's Intervention in Ukraine*, International Affairs 91, no. 3, May 2015, pp. 533 (accessed November 11, 2025).

[21] Adérito Vicente, *European Responses to Ukraine's Nuclear Idiosyncrasies: From Kyiv's Independence to Moscow's Aggression (1991–2022),* Portuguese Journal of Political Science 2023, Issue 19: 37–48. DOI: 10.59071/2795-4765.RPCP2023.19/pp.37-48, available at: https://rpcp.pt/index.php/rpcp/article/view/184 (accessed November 6, 2025).

[22] Edward C. Chow, *Ukraine and Russian Gas – The Never Ending Crisis*, Center for Strategic and International Studies, December 19, 2013, available at: https://www.csis.org/analysis/ukraine-and-russian-gas-never-ending-crisis (accessed March 21, 2025).

[23] U.S. Department of State, *Joint Statement of the Second Session of the United States–Ukraine Strategic Partnership Commission,* July 3, 2010, https://2009-2017.state.gov/r/pa/prs/ps/2010/07/143943.htm (accessed October 4, 2025).
U.S. Department of State, *U.S.-Russia Joint Statement on Expiration of the START Treaty*, Bureau of Public Affairs, Office of the Spokesman Washington, DC, December 4, 2009, available at: https://2009-2017.state.gov/r/pa/prs/ps/2009/dec/133204.htm (accessed March 3, 2025).

Developments on the ground, however, demonstrated that the so-called "security guarantees" amounted to little more than insubstantial promises, as the Kremlin moved in 2014 to annex the Crimean Peninsula—despite the fact that the United States and the United Kingdom, Western signatories of the Budapest Memorandum, deemed the Russian Federation's action a flagrant breach of the security assurances set out therein. Although Kyiv sought, in this context, to bring the signatories of the Budapest Memorandum to the negotiating table, its efforts met with resounding failure. The Kremlin maintained that there were no grounds for negotiations, while Washington—through its ambassador to Ukraine, Geoffrey Pyatt—stated that the Budapest Memorandum was not an agreement establishing security guarantees, but rather an understanding embodying a commitment to respect Ukraine's sovereignty and territorial integrity[24].

For a fuller understanding of the circumstances surrounding the 1994 signing of the Budapest Memorandum and Ukraine's actual situation at the time, the analysis of Leonid Kravchuk—President of Ukraine from 5 September 1991 to 19 July 1994—is instructive. The former head of state dismantles the claim that Ukraine could have defended itself against the Kremlin's hostile actions from 2014 onward had it not surrendered its nuclear arsenal. In a 2014 interview with *Deutsche Welle*, Kravchuk stated that, following the dissolution of the Soviet Union, Ukraine possessed the world's third-largest nuclear force, but that this was, in reality, largely nominal, since **Kyiv had no effective say over it—above all because control of the nuclear systems was held entirely by the Kremlin**[25].

The former Ukrainian president Kravchuk underscores that the famous "black briefcase" and the nuclear button were in the possession of the Russian president, Boris Yeltsin, and that had Kyiv wished to retain and keep operational the Soviet nuclear arsenal, the costs would have been colossal—amounting to **some 65 billion U.S. dollars—at a time when the Ukrainian state coffers were empty**. He further notes that, after 1991, Ukraine was effectively compelled to cede the arsenal, having been threatened by Western states with isolation on the grounds that the nuclear forces stationed on Ukrainian territory were configured to target the United States and, at that time, remained ready for immediate use. As for the "security guarantees" set out in the Budapest Memorandum, Leonid Kravchuk argued that these were little more than a formality, as they did not provide for sanctioning mechanisms against states that might violate the agreement[26].

Despite the circumstances outlined by Leonid Kravchuk, the Russian Federation's annexation of the Crimean Peninsula in 2014—and, even more so, the offensive launched by Moscow in February 2022—prompted a series of reactions from prominent figures acknowledging the failure of the Budapest Memorandum. Among them was former U.S. President Bill Clinton who, in an April 2023 interview with the Irish broadcaster RTÉ, **expressed regret for having persuaded the Ukrainians to give up the nuclear arsenal** inherited from the USSR. In that interview, Clinton suggested that the Russian Federation would not have dared to attack Ukraine had the latter retained a nuclear arsenal, fearing the unpredictable consequences such an action might have had for Russia's own security. He further noted that, although the Ukrainians recognized the ex-Soviet nuclear arsenal as a significant security guarantee for the Ukrainian state, they relinquished it reluctantly, in part under Western pressure.[27]

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[24] Roman Goncharenko, *Ukraine's forgotten security guarantee*, Deutsche Welle, May 12, 2014, available at: https://www.dw.com/en/ukraines-forgotten-security-guarantee-the-budapest-memorandum/a-18111097 (accessed March 21, 2025).

[25] *Ibidem*.

[26] *Ibidem*.

[27] Miriam O'Callaghan, *Clinton regrets persuading Ukraine to give up nuclear weapons*, RTÉ, March 4, 2023, available at: https://www.rte.ie/news/primetime/2023/0404/1374162-clinton-ukraine/?utm_source=chatgpt.com (accessed September 18, 2025).

In the same vein, and in light of subsequent developments, Bill Clinton positioned himself in favour of Western support for Ukraine, which he regarded as a country of particular importance that was attacked by President Vladimir Putin when he deemed it opportune, in breach of prior agreements—first through the annexation of Crimea, and later through the February 2022 offensive. In other words, Clinton's interview may be read as implying that Ukrainian officials were aware that relinquishing the nuclear arsenal entailed exposure to the Russian threat, their sole foundation being Western assurances which, as events in 2014—and even more clearly since February 2022—have shown, did not suffice to halt Russia's offensive.[28]

Viewed in perspective—and with reference to undertakings previously assumed by both Moscow and the West—the course of events makes it abundantly clear that Russia de facto breached the terms of the agreements. It is often argued, admittedly with some basis, that the Budapest Memorandum contains numerous ambiguous formulations; de jure, however, it is more difficult—especially in strictly legal terms—to demonstrate that the Russian Federation acted outside the framework of that understanding, even if, in practice, this appears evident.

There is a substantial body of analysis **criticizing the ambiguity of the Budapest Memorandum and the security consequences flowing from it**—implications of considerable magnitude for Ukraine and for the entire Eastern Flank/Eastern Europe. For example, Lord (George) Robertson, former UK Secretary of State for Defence and former NATO Secretary General, in an article published by Policy Exchange, avoids the language of "security guarantees" when discussing the Budapest Memorandum and instead employs the rather pejorative phrasing "so-called assurances," thereby underscoring his view of the memorandum's marginal relevance and, by extension, of the "security guarantees" it purports to offer.[29]

Likewise, Anders Fogh Rasmussen, former NATO Secretary General, noted in a September 2022 exchange with Ukrainian officials that any future arrangement modelled on the Budapest Memorandum would have to provide genuine security guarantees for Ukraine—thereby standing in complete contrast to the Hungarian understanding, which, in his view, is obsolete[30]. In the same vein, Michael McFaul, former U.S. ambassador to Russia, stated on X (formerly Twitter) that "the only credible security guarantee for Ukraine is NATO membership. Anything less will feel like the 1994 Budapest Memorandum," thereby suggesting that Budapest-type assurances are wholly inadequate and devoid of real effect[31].

Accordingly, an examination of statements by Western officials shows that they emphasize the Budapest Memorandum does not provide robust security guarantees but rather assurances which, in practice, lack the capacity to safeguard Ukraine's security and territorial integrity. It is precisely legally weighty guarantees that Ukrainian officials have consistently sought, fully cognizant—at considerable cost—of what it means to relinquish a strategic weapon in exchange for assurances that resemble promises more than enforceable commitments. Although Western states that joined Ukraine and the Russian Federation in signing the Budapest Memorandum have furnished Kyiv with

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[28] *Ibidem*.

[29] Rt Hon Lord Robertson of Port Ellen KT GCMG, *Remarks to the First Sea Lord's Symposium on the 60th Anniversary of the Polaris Sales Agreement*, Policy Exchange, May 26, 2023, available at: https://policyexchange.org.uk/blogs/remarks-to-the-first-sea-lords-symposium-on-the-60th-anniversary-of-the-polaris-sales-agreement/?utm_source=chatgpt.com (accessed September 18, 2025).

[30] Office of the President of Ukraine, *A package of recommendations on security guarantees for Ukraine prepared by the Yermak-Rasmussen Group was presented to the President,* Official website of the President of Ukraine, September 13, 2022, available at: https://www.president.gov.ua/en/news/glavi-derzhavi-prezentuvali-paket-rekomendacij-shodo-bezpeko-77737 (accessed September 18, 2025).

[31] Michael McFaul (@McFaul), *The only credible security guarantee for Ukraine is NATO membership. Anything less will feel like the 1994 Budapest Memorandum*, X (formerly Twitter), August 16, 2025, available at: https://x.com/McFaul/status/1956791104935985165 (accessed September 19, 2025).

economic and military support, this assistance has not sufficed to halt Russia's offensive and, by extension, the open conflict.

Given the complexity of the subject, it is also necessary to note the positions of other global actors regarding whether the Russian Federation did or did not violate the Budapest Memorandum—most notably those of China and India—even though both states maintain what might be termed a privileged relationship with Russia by virtue of their membership in BRICS, an organization often regarded as a competitor to the Western world in multiple respects.

Accordingly, China has maintained a posture of neutrality on the issue, affirming as a matter of principle the preservation of territorial integrity—partly against the backdrop of its own sensitivities over Tibet. At the same time, it has urged that the legitimate security concerns of all parties be taken into account. On the one hand, China's public statements appear to buttress Ukraine's arguments. For example, in 2015 Premier Li Keqiang stated at a press conference that China respects Ukraine's sovereignty, independence, and territorial integrity, while declining to be drawn into the dispute over whether Crimea belongs to Ukraine or to the Russian Federation[32]. In a similar vein, in 2024 Foreign Minister Wang Yi affirmed that Beijing favours adherence to the UN Charter as well as consideration of all states' security concerns. In short, the discourse is dual—deliberately diplomatic and neutral—encouraging balance and a peaceful settlement of the dispute, with due regard for the positions of all parties.

On the other hand, in terms of concrete decisions, China has tended to align with the interests of the Russian Federation—evidenced by its abstention in 2014 on a draft resolution introduced by forty-two states, mostly Western, declaring the Crimean referendum illegitimate.[33] China's stance is particularly noteworthy given that, although Beijing was not among the signatories of the Budapest Memorandum, it voluntarily and unilaterally undertook to extend a set of assurances to Ukraine. These security assurances did not entail military support in the event of aggression; rather, they comprised a firm commitment neither to use nor to threaten the use of nuclear weapons against Ukraine, a non-nuclear-weapon state. They also included a firm undertaking to provide assistance in the UN Security Council to any non-nuclear-weapon state attacked with nuclear weapons, including through the imposition by Beijing of a strict and effective sanctions regime against the aggressor.[34]

Also relevant in this context is India's position. Speaking for New Delhi, National Security Adviser Shivshankar Menon observed that the Russian Federation has legitimate interests in Crimea, given the proportion of ethnic Russians residing there. The stance of India's Ministry of External Affairs, however, was markedly more balanced[35], calling for dialogue and for the existence of a legitimate democratic process with respect to the Crimean referendum. India's calibrated ambivalence—acknowledging Russia's claimed equities in Crimea while urging procedural legitimacy—prefigures the section that follows, where the divergent strategic priorities of the United States, the United Kingdom, and Russia reveal how the Budapest framework privileged non-proliferation and border stabilization over enforceable deterrence.

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[32] Jason Subler, *China Premier says respects Ukraine integrity, won't be drawn on Crimea*, Reuters, March 15, 2015, available at: https://www.reuters.com/article/world/china-premier-says-respects-ukraine-integrity-won-t-be-drawn-on-crimea-idUSKBN0MB052/?utm_source=chatgpt.com (accessed September 26, 2025).

[33] United Nations Security Council, *Provisional Verbatim Record of the 7138th meeting (S/PV.7138)*, New York, March 15, 2014, available at: https://docs.un.org/en/S/PV.7138 (accessed September 26, 2025).

[34] United Nations General Assembly, *Letter dated 12 December 1994 from the Permanent Representative of China to the United Nations addressed to the Secretary-General (A/49/783), Annex: Statement of the Chinese Government on the security assurance to Ukraine issued on 4 December 1994,* New York, December 14, 1994, available at: https://docs.un.org/en/A/49/783 (accessed September 26, 2025).

[35] Ministry of External Affairs (India), *Official Spokesperson's response to a media query on recent events in Ukraine*, New Delhi, May 7, 2014, available at: https://www.mea.gov.in/media-briefings.htm?dtl%2F23305%2Fofficial+spokespersons+response+to+a+media+query+on+recent+events+in+ukraine= (accessed September 26, 2025).

ROLE OF THE UNITED STATES, THE UNITED KINGDOM, AND RUSSIA: STRATEGIC INTERESTS AND THE BUDAPEST PROCESS

This section is a necessity because the Budapest Memorandum crystallized a moment when great-power priorities intersected with Ukraine's existential choices, any historical reassessment that treats the instrument merely as a legal text missing its animating logic. The Memorandum's assurances were neither negotiated nor interpreted in a vacuum: they reflected the strategic preferences and risk tolerances of the United States and the United Kingdom, and they directly confronted Russia's project of preserving a post-Soviet sphere of privileged interests. Reconstructing these vectors clarifies both what the Budapest framework could plausibly deliver and why, under stress, it failed to generate a credible deterrent.

From Washington's perspective, the overriding objective in the early 1990s was preventing nuclear proliferation amid the unprecedented diffusion of Soviet strategic assets across newly independent states. The United States sought rapid denuclearization of Ukraine (as well as Belarus and Kazakhstan), not as a peripheral arms-control preference but as a cornerstone of post–Cold War order. This **non-proliferation priority** was coupled with a second aim: stabilizing post-Soviet borders to reduce conflict risks along NATO's periphery and to create conditions for Europe's economic and political integration. The policy instruments followed logically: diplomatic recognition and support for Ukraine's sovereignty; material assistance for warhead removal and dismantlement; and a set of **political assurances—rather than defence guarantees—intended to socialize Moscow and Kyiv into a rules-based modus vivendi while avoiding new rigid alliance entanglements**.[36]

Two constraints shaped this design. First, in the absence of a domestic consensus for NATO-style mutual defence commitments to non-members, Washington privileged assurance-based solutions that preserved strategic flexibility. Second, **U.S. planners sought to keep Russia inside a cooperative arms-control architecture** (START implementation, CTR programs) rather than precipitating a rupture that might jeopardize disarmament. The Budapest formula—assurances affirming sovereignty, non-use of force, and consultations—thus reflected an equilibrium between the imperatives of **denuclearization and the desire to avoid immediate alliance expansion or direct security guarantees**.[37]

Within this architecture, the Clinton administration increasingly treated Ukraine as a stabilizing buffer in a delicate NATO–Russia equilibrium. The logic was not to consign Kyiv to permanent liminality, but to sequence objectives: lock in denuclearization and border respect; embed Russia in cooperative frameworks; and leave open a path for Ukraine's European integration without precipitating a binary security confrontation. The Sevastopol/Black Sea Fleet arrangements and the endorsement of political assurances at Budapest were consistent with this approach: they sought to defuse hard security dilemmas while buying time for institutional socialization and economic reform.[38]

This buffer logic carried a structural vulnerability. By elevating political assurances over enforceable guarantees, it implicitly outsourced deterrence to norms and reputational costs. It also

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[36] Mariana Budjeryn, *The Power of the NPT: International Norms and Ukraine's Nuclear Disarmament*, *The Nonproliferation Review* 22, no. 2 (2015): 203–237, available at: https://www.tandfonline.com/doi/10.1080/10736700.2015.1119968 (accessed November 4, 2025), DOI: 10.1080/10736700.2015.1119968.

[37] Mariana Budjeryn, *Inheriting the Bomb: The Collapse of the USSR and the Nuclear Disarmament of Ukraine* (Baltimore: Johns Hopkins University Press, 2022), esp. chs. 5–7 (on U.S. domestic constraints, assurance-based design, and CTR/START implementation).

[38] Mary Elise Sarotte, *How to Enlarge NATO: The Debate inside the Clinton Administration, 1993–95*, *International Security* 44, no. 1 (Summer 2019): 7–41, available at: https://direct.mit.edu/isec/article/44/1/7/12232 (accessed November 4, 2025). DOI: 10.1162/isec_a_00353.

underestimated the extent to which Russian policy—animated by the pursuit of a strategic glacis—could mobilize military deception, coercive energy leverage, and calibrated military pressure to revise arrangements that lacked coercive teeth. In short, the equilibrium was sustainable only so long as Moscow perceived the expected costs of revisionism as outweighing the gains; Budapest, as a political instrument, did little to fix those costs *ex ante*.[39]

Russia's seizure of Crimea in 2014 marked an inflection point. For the Obama administration, the immediate response combined non-military coercion (sanctions), NATO reassurance measures along the Eastern flank, and intensified security assistance to Ukraine short of formal guarantees. The underlying strategic update was twofold. First, the events exposed the limits of assurance-based architectures when confronted by a revisionist power willing to incur sanctions and reputational costs. Second, they re-prioritized deterrence credibility in U.S. and allied policy, not by transforming Budapest into a guarantee, but by thickening the external environment—rotational deployments, exercises, readiness initiatives—that raised the expected cost of further Russian advances.[40]

The full-scale invasion of 2022 catalysed a second update under the Biden administration. U.S. policy moved from reassurance to sustained military, financial, and intelligence support for Ukraine, the forward posture of NATO forces, and the acceleration of alliance adaptation (force structure, defence production, and new members). Doctrinally, the lesson extracted from the Budapest experience was clear: denuclearization can reduce immediate risks, but without coercive clauses or an institutionalized response architecture, it does not produce a stable deterrent. Consequently, Washington has treated the ongoing war as a test of deterrence restoration—raising the adversary's costs in real time while attempting to rebuild Europe's defence ecosystem to pre-commit future capabilities and reduce the feasibility of incremental territorial revision. [41]

London's role broadly converged with Washington's across the three phases. In the 1990s, the UK prioritized non-proliferation and border stabilization, favoured assurance-based diplomacy to manage Russia's sensitivities, and leveraged its status as co-signatory to reinforce the political weight of Budapest without extending security guarantees. Post-2014, the UK became an early mover on sanctions, Eastern-flank reassurance, and bilateral assistance to Ukraine, reflecting a consistent Atlanticist view that European security ultimately rests on credible deterrence backed by U.S.–UK leadership. Post-2022, London played a catalytic role in advanced capabilities transfers and coalition-building, implicitly acknowledging that the Budapest paradigm—while instrumental in achieving denuclearisation—proved insufficient to deter revisionist coercion in the absence of enforceable mechanisms and pre-committed capabilities.[42]

For Moscow, the through-line has been the preservation of a strategic glacis and the constraint of Western military-political penetration into its near abroad. Russia accepted the form of Budapest's assurances insofar as they facilitated the removal of nuclear weapons from Ukraine and preserved freedom of manoeuvre under an instrumental reading of the commitments (minimizing their justiciability and elasticizing their scope). When confronted with Ukraine's European and transatlantic drift, Russia combined grey-zone tools (plausible deniability, information operations, energy leverage) and episodic military force to test and erode the political architecture that Budapest

[39] Keir Giles, *Russia's 'New' Tools for Confronting the West: Continuity and Innovation in Moscow's Exercise of Power*, London: Chatham House, 2016, pp. 9–13, available at: https://www.chathamhouse.org/2016/03/russias-new-tools-confronting-west-continuity-and-innovation-moscows-exercise-power (accessed November 4, 2025).

[40] Lawrence Freedman, *Ukraine and the Art of Crisis Management*, *Survival* 56, no. 3 (2014): 32–34, available at: https://www.tandfonline.com/doi/full/10.1080/00396338.2014.920143 (accessed November 4, 2025), DOI: 10.1080/00396338.2014.920143.

[41] Freedman, *Command: The Politics of Military Operations from Korea to Ukraine*, New York: Oxford University Press, 2022, pp. 445, 460–461.

[42] *Ibidem*, pp. 458–466, 512–516.

had sanctified but could not enforce. In this sense, Russia's strategy exposed a structural asymmetry: assurances rely on restraint; revisionism exploits its absence[43].

Reassessed through the lens of great-power interests, the Budapest Memorandum succeeded at the task for which the United States and the United Kingdom primarily designed it—denuclearization without alliance entanglement—but failed to embed Ukraine in a deterrence-capable security order. The Clinton administration's equilibrium strategy bought time and reduced immediate nuclear risk; later administrations, confronted with Russia's escalation, shifted toward deterrence reinforcement rather than retrofitting Budapest into a guarantee it was never meant to be[44]. For the historian, the implication is straightforward: the Memorandum's promise was contingent on the strategic context and the parties' evolving preferences. For policymakers, the lesson is starker: assurance-based arrangements can **enable disarmament, but unless paired with enforceable guarantees or robust indigenous capabilities, they transfer strategic risk to the beneficiary—precisely what the post-2014 and post-2022 trajectories have laid bare**.

Furthermore, the Budapest Memorandum is more accurately understood when situated within the European security architecture: unlike the EU's instruments—anchored in soft power, conditionality, and economic integration (the ENP and, subsequently, the Eastern Partnership)—Budapest functioned as a minimal political undertaking designed to facilitate denuclearization rather than to establish security guarantees or strategic autonomy. While the European Security Strategy (2003)[45] and the EU Global Strategy (2016)[46] consolidated the Union's normative vocabulary (resilience, multilateralism, prevention), they did not furnish, in Ukraine's case, mechanisms equivalent to coercive clauses; EU–NATO complementarity operated chiefly as a "division of labour" (integration, sanctions, and civilian/economic assistance on the EU side; allied military deterrence on NATO's), leaving Budapest in the realm of declaratory assurances without pre-positioned capabilities or clear response triggers.

In the European security architecture, assurances—the EU's declaratory norms, sanctions, and conditionality instruments lacking coercive triggers[47]—function as a complementary layer that raises political and economic costs[48], whereas guarantees—embodied by NATO's Article 5 and pre-committed force posture[49]—supply the enforceable military commitment that renders deterrence credible[50].

In comparative perspective, the Budapest framework reflected a narrow transactional logic (denuclearization in exchange for political assurances), whereas CFSP/CSDP and the Eastern

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[43] Bettina Renz, *Russia's Military Revival*, Cambridge: Polity, 2018, pp. 121–154, 155–186.

[44] Matthew Evangelista, *A 'Nuclear Umbrella' for Ukraine? Precedents and Possibilities for Postwar European Security*, *International Security* 48, no. 3 (Winter 2023/24): 7–38, available at: https://direct.mit.edu/isec/article/48/3/7/119981/A-Nuclear-Umbrella-for-Ukraine-Precedents-and (accessed November 4, 2025), DOI: 10.1162/isec_a_00476.

[45] Council of the European Union, *A Secure Europe in a Better World—European Security Strategy*, (originally adopted 12 December 2003; reprinted 2009), Brussels: Council of the European Union, 2009, available at: https://www.consilium.europa.eu/media/30823/qc7809568enc.pdf, (accessed November 6, 2025).

[46] European External Action Service, *Shared Vision, Common Action: A Stronger Europe—A Global Strategy for the European Union's Foreign and Security Policy,* Brussels: EEAS, June 2016, available at: https://www.eeas.europa.eu/sites/default/files/eugs_review_web_0.pdf (accessed November 6, 2025).

[47] *Ibidem*.

[48] Consolidated Version of the Treaty on European Union, **Article 42(7)**, ***Official Journal of the European Union*** C 202, 7 June 2016, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12016M/TXT (accessed November 7, 2025).

[49] North Atlantic Treaty (Washington Treaty), Article 5, Washington, DC: 4 April 1949, Official text, available at: https://www.nato.int/cps/en/natohq/official_texts_17120.htm (accessed November 7, 2025).

[50] NATO, ***Madrid Summit Declaration*** (29 June 2022), esp. paras. 5–11, 18–22 (enhanced forward posture, force structure and defence production), available at: https://www.nato.int/cps/en/natohq/official_texts_196951.htm (accessed November 7, 2025).

Partnership (2009–2022) pursued structural transformation through conditionality and interdependence without substituting alliance-type guarantees. Debates on strategic autonomy remained, until 2022, below the threshold required to generate credible deterrence in the East, while EU–NATO complementarity became salient only after 2014/2022 through the strengthening of the allied posture and European economic instruments; neither trajectory, however, "retrofitted" Budapest into a regime of enforceable guarantees. Analytically, the conclusion is that Budapest served non-proliferation, but—absent explicit anchoring in EU–NATO mechanisms of deterrence and rapid response—it did not produce a security order capable of shielding Ukraine from incremental revisionism.

CONCLUDING REMARKS

Reassessing the 1994 Budapest Memorandum through a credible-commitment lens yields three core findings that speak directly to European security practice. First (H1), assurance-based arrangements that lack coercive clauses or mutual-defence guarantees systematically underperform as instruments of deterrence. The Memorandum achieved its proximate purpose—rapid denuclearization—but, by remaining non-justiciable and unenforceable, it failed to convert political promises into behavioural constraints on a revisionist actor. Second (H2), while denuclearization lowered near-term risks of proliferation and accident, the absence of either alliance guarantees, or robust indigenous capabilities shifted strategic risk onto Ukraine; the pattern of post-2014 policy—sanctions and aid as *ex post* compensation—confirms that prevention was not credibly priced in *ex ante*. Third (H3), grey-zone methods—military deception, plausible deniability, energy coercion—are especially effective against assurance regimes, which can be stressed without crossing bright legal thresholds that would mobilize automatic responses.

Situated within the European security architecture, these findings clarify the limits—and the value—of the EU's tools. The Union excelled at normative signalling, sanctions orchestration, macro-financial support, and regulatory/state-aid adaptations that sustained Ukraine's war economy and constrained Russia's. Yet these instruments, by design, are *assurances* that raise political and economic costs without supplying the *guarantee* function—pre-committed force, automaticity, and coercive execution—resident in NATO. EU–NATO complementarity therefore emerges not as a rhetorical device but as an analytical necessity: the EU thickens the cost environment and the resilience base; NATO furnishes the credible threat of denial and punishment that underwrites deterrence.

The temporal, source-grounded reconstruction (1990–2022) adds historical specificity to this division of labour. In the 1990s, U.S.–UK priorities converged on non-proliferation and border stabilization without alliance entanglement; the EU's CFSP/CSDP remained embryonic, privileging conditionality and economic integration. After 2014—and especially after 2022—the EU shifted toward a more strategic posture (defence-industrial ramp-up, joint procurement frameworks, energy decoupling, and expanded sanctions governance) while NATO moved to forward presence and readiness. Crucially, none of these trajectories retrofitted Budapest into an enforceable regime; rather, they attempted to rebuild deterrence in real time around it.

The comparative lesson for European doctrine is twofold. Conceptually, the assurances/guarantees distinction maps cleanly onto EU–NATO roles: EU instruments can make violations costlier and recovery faster, but they cannot by themselves *close* the credible-commitment gap where coercive triggers are required. Practically, credible deterrence in Europe's East depends on knitting EU economic-industrial power (energy security, defence production, sanctions enforcement, critical-infrastructure protection) to NATO's military guarantees (force posture,

planning, command-and-control), thereby raising both the probability and the *speed* of a costly response.

For policy design, the evidence supports a minimal package to accompany any future post-denuclearization or assurance-type arrangement: (1) graded enforcement clauses linked to verifiable triggers and clear temporalities; (2) pre-positioned capabilities and readiness standards that shorten decision-to-action intervals; (3) automaticity and burden-sharing rules that reduce vulnerability to shifting political will; (4) economic-security integration (energy, logistics, cyber, finance) configured with resilience clauses so that interdependence cannot be weaponized; and (5) joint monitoring that tracks not only materials and facilities, but behaviours relevant to coercion and grey-zone operations. In EU terms, this implies deepening the defence-industrial base and sanction-implementation capacity while hard-wiring interoperability with allied planning cycles.

For the EU specifically, the Budapest experience cautions against over-reliance on declaratory norms when facing an actor willing to absorb reputational and economic penalties. The Union's comparative advantage—in rules, markets, and scale—becomes strategically decisive only when fused to enforceable guarantees that shape adversary expectations *ex ante*. The post-2022 acceleration of EU defence initiatives and EU–NATO coordination is therefore not merely incremental reform; it is the institutional translation of the article's central inference: assurances can *enable* security outcomes, but only guarantees—or guarantee-like effects generated by capabilities and automaticity—can reliably *produce* them.

Methodologically, a historical, chronologically sequenced analysis adds a distinct scholarly contribution: it links treaty text and official communiqués to observed strategic behaviour across discrete episodes (1990–1994; 1997–2010; 2014; 2022), showing how gaps in enforcement and capability were repeatedly exploited. This strengthens the generalizability of the hypotheses beyond the Ukrainian case to other assurance-heavy, guarantee-light settings in the European neighbourhood.

The normative implication is clear. Where revisionist risk is non-trivial, assurance regimes should not be treated as endpoints but as transitional devices that must be anchored, early, in enforceable mechanisms and pre-committed capabilities—whether through alliance guarantees or through an EU-enabled, NATO-backed architecture that makes defection costlier than compliance. The Budapest Memorandum succeeded on non-proliferation; it failed on deterrence. A European security order that internalizes this dual verdict will be one that aligns its legal promises, economic instruments, and military guarantees to close, rather than reproduce, the credible-commitment gap.

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DR. MARIA COSTEA[2]
ROMANIAN ACADEMY, "GHEORGHE ŞINCAI" INSTITUTE FOR SOCIAL SCIENCES AND THE HUMANITIES, TÂRGU-MUREŞ

Historian Ela Cosma, an exceptionally rigorous Cluj-based scholar, has achieved a truly remarkable editorial accomplishment by publishing military documents of high historical value retrieved from the Russian State Military Historical Archive in Moscow—sources that are exceptionally rare and difficult (now impossible) to access.

Volume III of *Documente militare din anii 1848–1850* [*Military Documents from the Years 1848–1850*], coordinated by Ela Cosma, was published in two major editions: one in Romanian (2017), and a revised and expanded edition in English and Russian (2022). The Romanian edition is titled: *Campania militară țaristă în Țările Române la 1848–1850. Documente militare, vol. III Komarov & Nepocoicițchi: Jurnal de campanie* [*The Tsarist Military Campaign in the Romanian Lands in 1848–1850. Military Documents, Vol. III, Komarov & Nepokoitchitsky: Campaign Journal*]. It was coordinated by Ela Cosma (introductory study, regesta, notes, editing of German documents, bibliographical, onomastic and toponymic indexes), with Russian documents edited by Tatiana Onilov, Angela Stîcalin-Colin, and Alexander Stykalin. It was published within the series *Biografii istorice transilvane* [*Transylvanian Historical Biographies*], vol. XIII, Argonaut Publishing – Symphologic Publishing, Cluj-Napoca – Gatineau, 2017, 550 pages.

The English-Russian edition, *The Tsarist Military Campaign in the Romanian Principalities in 1848–1850. Military Documents, Vol. III, Komarov and Nepokoitchitsky's Campaign Diary*, was coordinated again by Ela Cosma (critical edition, introductory study, notes, glossary, references, short biographies, regesta, editing of German documents, indexes of names and places), with contributions by Tatiana Onilov (critical edition, editing of Russian documents), Angela Stîcalin-Colin (editing of Russian documents), and Alexander Stykalin (editing of Russian documents). The English translations were done by Marcela Ganea and Ela Cosma. It was published in 2022 in the same collection, vol. XIV, 578 pages.

This third volume continues the scholarly endeavor initiated by Ela Cosma through the publication of Volumes I–II of the same series:

- *Armatele imperiale austro-ruse şi românii la 1848–1849. Documente militare, vol. I, Descrieri generale şi militare* [*The Imperial Austro-Russian Armies and the Romanians in 1848–*

[1] Maria Costea has published a Romanian version of this book review: "Ela Cosma (ed.), ***Campania militară țaristă în Țările Române la 1848–1850. Documente militare, vol. III, Komarov & Nepocoicițchi: Jurnal de campanie*** (Cluj-Napoca–Gatineau: Argonaut Publishing – Symphologic Publishing, 2022)," ***Anuarul Institutului de Istorie „George Barițiu" din Cluj-Napoca. Series Historica*** LXIII (2024): 467–480. ISSN 1584-4390 (print); ISSN 2344-2093 (online).

[2] **Dr. Maria Costea- Researcher,** Romanian Academy, "Gheorghe Șincai" Institute for Social Sciences and the Humanities, Târgu-Mureș . ORCID: https://orcid.org/0009-0006-7201-645X
WoS ResearcherID: JWP-2948-2024;
Google Scholar Maria Costea – Google Scholar
ResearchGate Maria COSTEA

1849. Military Documents, Vol. I: General and Military Descriptions], coordinated by Ela Cosma, with Editors Daniela Deteșan, Angela Stîcalin-Colin, Tatiana Onilov, and English translations by Horia Cosma, Argonaut – Symphologic Publishing, Cluj-Napoca – Gatineau, 2012, 286 pages + 22 illustrations;

• *Armatele imperiale austro-ruse şi românii la 1848–1849. Documente militare, vol. II, Corespondenţă şi rapoarte militare* [*The Imperial Austro-Russian Armies and the Romanians in 1848–1849. Military Documents, Vol. II: Correspondence and Military Reports*], same Editors and publishers, 2013, 356 pages.

Volumes I and II brought fundamental scholarly novelty by extensively consulting the Russian State Military Historical Archive (RGVIA) in Moscow, which holds previously unexplored collections crucial for the history of 1848–1849 and for modern Romanian history as a whole. The editorial team also accessed the Archive of the Russian Ministry of Foreign Affairs in Moscow, the State Archives of the Odessa Oblast, the Central State Historical Archive of Ukraine in Kyiv, the National Archives of the Republic of Moldova in Chișinău, the Kriegsarchiv in Vienna, and the French Ministry of Foreign Affairs Archive in Paris.

The texts published reflect the scope of the volumes' title *Armatele imperiale austro-ruse şi românii la 1848–1849* [*The Imperial Austro-Russian Armies and the Romanians in 1848–1849*], and their subtitles indicate the types of sources: *descrieri, rapoarte, corespondență* [*descriptions, reports, correspondence*]. These are highly sophisticated critical editions requiring multilingual palaeographic, linguistic, and editorial expertise (Romanian, Russian, German, French, English). The volumes include critical notes, extended regesta, and extensive indexing, aiming to maximize accessibility and scholarly dissemination.

The Romanian edition of Volume III (2017) contains 46 military documents, a biographical index, a glossary of military terms, and name and place indexes. A previously unknown primary source—*Jurnalul campaniei țariste* [*The Tsarist Campaign Diary*]—preserved in the Moscow archive, is published in full. The English-Russian edition (2022) is a critical edition of the same 46 military documents, now rendered in Russian (original language) and English (translation), including the campaign diary compiled by colonel Arthur Adamovich Nepokoitchitsky and lieutenant-colonel Alexander Vissarionovich Komarov, under the command of General Alexander Nicolaevich Lüders.

The documents are precise reports sent from Moldavia, Wallachia, and Transylvania to the Imperial Army command in Saint Petersburg. Examples include reports from Bârlad (20 July 1848), Buzău (25 September 1848), Bucharest (6 October 1848), and Târgu-Mureș (23 June 1849). The final documents also include pages of memoirs and a biography of Lüders compiled in Saint Petersburg (1874).

The scholarly apparatus is solid, the editing standards are high, and the archival novelty is indisputable. The entire collection—published as part of a research grant financed by CNCS–UEFISCDI (2011–2016), titled *Armatele imperiale austro-ruse şi românii. Mărturii militare secrete din arhivele ruseşti şi austriece (1848–1849)* [*The Imperial Austro-Russian Armies and the Romanians: Secret Military Testimonies from the Russian and Austrian Archives (1848–1849)*]—constitutes a monumental editorial project.

In conclusion, the *Documente militare* collection, and especially Volume III (2017/2022), represents a major scholarly contribution to the understanding of 1848 military history in the Romanian Principalities and of the Russian occupation, hitherto poorly documented. Through rigorous archival work and critical methodology, Ela Cosma and her team have opened up a new comparative and interdisciplinary perspective on international relations in Central, Eastern, and Southeastern Europe during the mid-19th century.

CHAPTER 4
EU Neighbourhood and Mediterranean Dynamics

La Méditerranéité à l'épreuve des défis révolutionnaires et migratoires en Tunisie: Dynamiques et représentations / Mediterraneity Confronted with Revolutionary and Migratory Challenges in Tunisia: Dynamics and Representations

DR MOURAD MHENNI[1]
UNIVERSITY OF SOUSSE (TUNISIA)

Abstract: *Mediterraneity Confronted with Revolutionary and Migratory Challenges in Tunisia: Dynamics and Representations. Mediterraneity is frequently depicted as a natural space of dialogue, circulation, and cooperation between the northern and southern shores. Yet the Tunisian experience since the 2011 revolution profoundly challenges this idealized narrative. Rather than constituting a harmonious or self-evident reality, Mediterraneity emerges as a social, political, and symbolic construction shaped by historical asymmetries, competing representations, and evolving power relations. Drawing on a socio-anthropological perspective and an analysis of post-revolutionary transformations, this article examines how Mediterraneity is being reconfigured in contemporary Tunisia.*

The discussion first revisits the historical and geopolitical foundations of the concept, underlining how Euro-Mediterranean relations have long been structured around imbalances embedded in cooperation frameworks. Particular attention is given to the evolution of the ***European Union's Mediterranean policy****, from the Barcelona Process and the European Neighbourhood Policy to the post-2011 strategic approach, which increasingly links security, mobility governance, economic stabilization, and migration control. These policy instruments, while formally promoting partnership and shared prosperity, continue to reproduce structural asymmetries that strongly influence how Tunisian actors perceive and negotiate Mediterraneity.*

The article then analyzes how the 2011 revolution reshaped social imaginaries and uses of the Mediterranean, especially through new forms of citizen mobility, artistic and cultural expressions, and contested symbolic meanings. These transformations reveal both the emancipatory potential and the profound vulnerabilities characterizing Tunisia's position within the Mediterranean space.

Finally, the study investigates the impact of recent migration dynamics—irregular departures, changing mobility patterns, and the European Union's externalization mechanisms—on Mediterranean imaginaries in Tunisia. These developments expose fractures, new forms of resistance, and alternative aspirations emerging from civil society and youth groups in the South, illustrating how Mediterraneity today is contested, re-appropriated, and re-imagined from below.

Keywords: *Tunisia, Mediterraneity, Post-revolutionary dynamics, Migrations, North–South relations, EU Mediterranean policy*

Résumé : *La Méditerranéité est souvent présentée comme un espace naturel de dialogue, de circulation et de coopération entre les deux rives. Pourtant, l'expérience tunisienne depuis la révolution de 2011 invite à nuancer cette vision idéalisée. Loin d'être univoque ou consensuelle, la Méditerranéité relève d'une construction sociale, politique et symbolique traversée par des tensions et des rapports de pouvoir. En croisant une approche socio-anthropologique et une analyse des dynamiques postrévolutionnaires, cet article explore les recompositions contemporaines de la Méditerranéité à partir du cas tunisien. Il revient sur la genèse historique du concept en montrant les logiques asymétriques des cadres euro-méditerranéens, puis analyse les effets de la révolution de 2011 sur les représentations et les usages sociaux de la Méditerranée. Enfin, il interroge l'impact des dynamiques migratoires récentes sur les imaginaires méditerranéens, en mettant en lumière les fractures, les résistances et les aspirations portées par les sociétés civiles du Sud.*

Mots-clés*: Tunisie-Méditerranéité – Dynamiques postrévolutionnaires – Migrations – Rapport Nord-Sud*

[1] Dr Mourad Mhenni, Sousse University- mouradmhenni@yahoo.fr **ORCID:** 0009-0006-8540-3563,
Scopus https://www.scopus.com/home.uri?zone=header&origin=sbrowse# ,
Web of Science https://www.webofscience.com/wos/author/my-profile ,
Google Scholar https://scholar.google.fr/citations?user=7QMAqzYAAAAJ&hl=fr

INTRODUCTION

La Tunisie occupe une position stratégique au sein de l'espace méditerranéen, à l'intersection de plusieurs aires culturelles et politiques – l'Afrique du Nord, le monde arabe et l'Europe méridionale. Cette centralité géographique, souvent soulignée dans les discours politiques et académiques, confère à la Tunisie une place particulière dans la construction du concept de « Méditerranéité ». Celui-ci ne renvoie pas uniquement à une donnée spatiale; il désigne un cadre symbolique, politique et culturel au sein duquel se jouent des enjeux de représentation, d'appartenance et de pouvoir. Loin d'être univoque, la Méditerranéité se donne à voir comme un espace de tensions. Elle est à la fois valorisée comme horizon civilisationnel et réinvestie comme dispositif de contrôle, notamment à travers les politiques de coopération euro-méditerranéennes. En Tunisie, elle a fait l'objet de multiples appropriations, parfois complémentaires, souvent contradictoires. Tantôt mobilisée comme ressource discursive dans les projets étatiques de modernisation et de légitimation, tantôt investie par les acteurs de la société civile dans une perspective critique, la Méditerranée devient le lieu d'une pluralité de significations.

Depuis la révolution de 2011, ces représentations se sont profondément recomposées. La fin de l'autoritarisme a permis l'émergence de nouveaux récits sociaux et politiques dans lesquels la Méditerranée est appréhendée non plus seulement comme un espace institutionnel ou patrimonial, mais comme un champ conflictuel d'énonciation, de mobilité et de lutte. Dans le même temps, la multiplication des départs migratoires, réguliers et irréguliers, a révélé les asymétries persistantes entre les deux rives, mettant en cause les principes affichés de dialogue, de co-développement et de solidarité.

Dans ce contexte, il convient d'interroger la Méditerranéité en tant que construction sociale historiquement située, traversée par des dynamiques postcoloniales, des rapports de pouvoir et des reconfigurations symboliques. Ce cadre théorique invite à dépasser les dichotomies usuelles – entre ouverture et fermeture, Nord et Sud, local et global – pour saisir les formes concrètes de circulation, d'appropriation et de résistance qui se jouent dans l'espace méditerranéen contemporain. L'objectif de cet article est d'analyser les effets des bouleversements politiques et migratoires sur les représentations tunisiennes de la Méditerranée au XXI^{e} siècle. À partir d'une approche socio-anthropologique, il s'agira de montrer comment les acteurs tunisiens – institutions, artistes, migrants, citoyens – participent à la redéfinition de leur place dans un espace à la fois partagé et fragmenté. L'analyse s'organise en trois temps: une première partie portera sur les usages historico-politiques de la Méditerranéité en Tunisie avant 2011 ; la seconde examinera les recompositions symboliques et géopolitiques induites par la révolution; enfin, la troisième s'intéressera aux effets des circulations migratoires sur les représentations contemporaines de la Méditerranée.

1. LA MEDITERRANEITE COMME CONSTRUCTION HISTORIQUE ET ENJEU CONTEMPORAIN

1.1 – Genèse historique et géopolitique du concept de Méditerranéité

Le concept de Méditerranéité dépasse largement une simple référence à la mer Méditerranée . Il s'agit d'un mot chargé d'histoires, de représentations, de stratégies et de récits qui, depuis des siècles, façonnent les imaginaires des deux rives. Derrière l'apparente évidence géographique, c'est tout un champ symbolique qui s'ouvre, traversé de tensions, de rapports de pouvoir et d'appropriations multiples. Car si la Méditerranée a souvent été vue comme un pont entre les peuples, elle est aussi un miroir des inégalités, des déséquilibres et des hégémonies. L'un des premiers à poser les fondations de cette construction conceptuelle est Fernand Braudel. Dans son ouvrage majeur ***La Méditerranée et le monde méditerranéen à l'époque de Philippe II*** (1949), il invite à penser la région comme un espace-temps pluriel. Selon lui, la Méditerranée est faite de

rythmes lents et de structures profondes, d'échanges complexes, et de mouvements de très longue durée. Cette vision a bouleversé les sciences sociales, en mettant en lumière la richesse des interactions entre les sociétés de l'espace méditerranéen[2]. Pourtant, derrière cette fresque ambitieuse, plusieurs chercheurs ont relevé un biais eurocentré, qui tend à lisser les rapports de domination et à minimiser les traces coloniales[3]. D'autres, comme Horden et Purcell dans ***The Corrupting Sea***, ont complexifié la lecture en insistant sur la diversité des micro-régions et l'importance des discontinuités[4]. Mais là encore, les voix du Sud restent en marge.

À partir des années 1990, le concept de Méditerranéité prend une tournure politique plus affirmée. Le lancement du Processus de Barcelone en 1995, suivi de la création de l'Union pour la Méditerranée en 2008, témoigne de la volonté de bâtir un partenariat structuré entre l'Union européenne et les pays du Sud. Ces initiatives affichent des objectifs généreux: promouvoir la paix, la stabilité et le développement partagé[5]. Mais derrière ces promesses, on retrouve souvent une logique de domination, où les pays du Nord fixent les règles du jeu. Les conditionnalités économiques, les exigences sécuritaires, les priorités stratégiques européennes priment sur les attentes sociales et démocratiques des sociétés concernées[6]. C'est une Méditerranéité institutionnelle qui se met en place, technique, distante, souvent déconnectée des réalités vécues sur le terrain[6].

Ce récit dominant n'a pas tardé à susciter des réactions critiques. Des penseurs comme Bichara Khader, Predrag Matvejević ou Amin Maalouf ont appelé à renverser le regard. Pour eux, il est urgent de penser la Méditerranée depuis ses marges, de réintégrer les voix oubliées, les mémoires occultées, les histoires croisées[7]. Ils plaident pour une Méditerranéité multiple, conflictuelle parfois, mais ouverte à la pluralité des récits. Loin d'un modèle imposé, cette approche valorise les dynamiques locales, les formes d'hybridation culturelle, les initiatives venues « d'en bas ».

En Tunisie, cette réflexion a pris une dimension particulière. Plusieurs travaux académiques ont joué un rôle clé dans la remise en question des représentations dominantes de la Méditerranée. L'Institut de Recherche sur le Maghreb Contemporain (IRMC) a produit de nombreuses études soulignant les effets d'extraversion induits par les cadres euro-méditerranéens[8], et la manière dont ceux-ci peuvent renforcer une dépendance politique et symbolique. D'autres travaux , ont analysé la place ambivalente de la Tunisie dans les dispositifs méditerranéens, entre volonté d'intégration et préservation d'une souveraineté partielle[9]. Par ailleurs, certains projets pluridisciplinaires portés par les universités tunisiennes – en lien parfois avec des institutions européennes – ont cherché à documenter les perceptions locales de la Méditerranée, en s'appuyant sur les récits de migrants, les mémoires ouvrières, les trajectoires diasporiques. Ces recherches ont mis en lumière une Méditerranéité vécue, ressentie, et parfois contestée, bien loin des discours technocratiques portés par les institutions.

Ainsi, bien avant la révolution de 2011, la Méditerranéité était déjà le théâtre d'un affrontement de visions. Entre espace de domination et lieu de résistance, entre norme politique et imaginaire

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[2] Fernand Braudel, *La Méditerranée et le monde méditerranéen à l'époque de Philippe II*, Paris, Armand Colin, 1949, p. 15–30.

[3] Edward Said, Orientalism, New York, Pantheon Books, 1978; voir aussi: François Hartog, Le miroir d'Hérodote, Paris, Gallimard, 1980, p. 205.

[4] Peregrine Horden et Nicholas Purcell, The Corrupting Sea: A Study of Mediterranean History, Oxford, Blackwell, 2000, p. 45–50.

[5] Richard Gillespie, "The Barcelona Process and Euro-Mediterranean Relations", European Union Institute for Security Studies, Occasional Papers, no. 60, 2005, p. 2–3.

[6] Bichara Khader, L'Europe et la Méditerranée: géopolitique d'une région partagée, Paris, L'Harmattan, 2001, p. 88.

[7] Jean-François Drevet, "L'Union pour la Méditerranée: chronique d'un échec annoncé?", Questions internationales, n° 55, 2012, p. 23–26.

[8] Predrag Matvejević, Bréviaire méditerranéen, Paris, Fayard, 1992, p21-29.

[9] IRMC, Regards croisés sur la Méditerranée. Enjeux de pouvoir, savoirs et sociétés civiles, Tunis, 2015, p. 49–65

collectif, elle révèle toute la complexité des relations entre le Nord et le Sud. La Tunisie, de par son histoire, sa position et ses mobilisations, s'est affirmée comme un lieu central de ces tensions. Et c'est dans ce contexte que les événements post-2011 viendront redessiner les contours d'une Méditerranéité critique, plus inclusive, plus disputée aussi, mais sans doute plus proche des réalités humaines qu'elle prétend embrasser.

1.2 – La Méditerranéité en Tunisie pré-2011: entre héritage, politiques et imaginaires

Avant la révolution de 2011, la Tunisie entretenait une relation ambivalente à l'idée de Méditerranéité, à la croisée de l'héritage colonial, des stratégies de légitimation étatique et des projections géopolitiques euro-méditerranéennes. Cette ambivalence s'exprimait dans une tension constante entre un imaginaire d'ouverture vers l'Europe, porté par les élites politiques, et une réalité sociale marquée par des disparités, des tensions et des logiques autoritaires.

Sous Habib Bourguiba (1956-1987), la référence à la Méditerranée se dessine dans une vision moderniste et historique de la nation. Le discours officiel mobilise l'héritage gréco-romain et andalou pour affirmer une continuité civilisationnelle avec l'Europe, tout en réaffirmant l'identité arabo-musulmane du pays. Cette construction est moins idéologique que stratégique, elle vise à positionner la Tunisie comme un modèle de modernité dans le monde arabe, notamment sur les questions d'émancipation féminine, d'éducation et de laïcité politique[10]. Mais cette projection concerne essentiellement les élite, connectées aux réseaux francophones et occidentalisés, et trouve peu d'écho dans les espaces périphériques où la Méditerranée reste un horizon lointain.

Avec l'arrivée au pouvoir de Ben Ali (1987-2011), cette mise en scène de la Méditerranéité prend une tournure plus pragmatique. Le régime capitalise sur l'ouverture euro-méditerranéenne pour asseoir sa légitimité internationale. L'intégration active au Partenariat euro-méditerranéen (PEM) à partir de 1995 puis à l'Union pour la Méditerranée (UpM) en 2008 place la Tunisie comme un interlocuteur central dans la coopération régionale[11]. La Méditerranée devient alors un levier diplomatique permettant de valoriser une image d' « exception tunisienne », réformiste et stable, mais en réalité déconnectée des aspirations citoyennes[12].

Dans le discours politique, la Méditerranée est mobilisée pour affirmer l'ancrage occidental du pays, tout en masquant les pratiques autoritaires. En interne, cette orientation renforce une fracture territoriale croissante, les régions côtières bénéficient des projets de coopération et des investissements orientés généralement au profit de la rive nord, alors que les régions de l'intérieur restent marginalisées. La Méditerranée devient alors une ligne de clivage, vécue comme une frontière ouverte à l'économie mais fermée aux mobilités humaines, en particulier pour les jeunes précaires des zones rurales[13].

Sur le plan institutionnel, cette Méditerranéité technocratique repose sur une coopération intergouvernementale où les priorités de l'Union européenne – sécurité, migration, commerce priment sur les enjeux sociaux. Le gouvernement tunisien, en quête de reconnaissance internationale, adopte ces orientations, tout en limitant les mécanismes de concertation avec la société civile. Dans ce cadre, les discours sur la modernité et le partenariat masquent un durcissement du contrôle social et politique, légitimé au nom de la stabilité[14].

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[10] Kenneth Perkins, *A History of Modern Tunisia*, Cambridge, Cambridge University Press, 2014, p. 89.
[11] Bichara Khader, op.cit, p. 117-120.
[12] Münevver Cebeci, "The EU's Constructions of the Mediterranean", *Mediterranean Politics*, vol. 17, no. 3, 2012, p. 311. https://www.iai.it/sites/default/files/medreset_pp_1.pdf consulté: 2-5-2025
[13] Jean-Pierre Cassarino, "Channelled Policy Transfers: EU-Tunisia Interactions on Migration Matters", *European Journal of Migration and Law*, vol. 16, no 14, 2014, p.105-108 https://www.researchgate.net/publication/270538342_Channelled_Policy_Transfers_EU-Tunisia_Interactions_on_Migration_Matters. Consulté: 22-5-2025.
[14] Ibid. p 28-30.

Face à cette vision descendante, des critiques émergent dès les années 2000. Dans les milieux intellectuels, artistiques et militants, on assiste à une relecture de la Méditerranéité à partir des vécus marginaux. Des chercheurs des collectifs féministes, ou encore des artistes engagés proposent une Méditerranéité vécue: celle des départs clandestins, des mémoires coloniales, des circulations contrariées. Des productions artistiques alternatives, ainsi que des actions des militants de la société civile posent la Méditerranée comme un espace de lutte[15].

Cette relecture déplace la Méditerranée du registre symbolique vers celui de l'expérience sociale. Elle révèle l'écart entre les promesses d'intégration et la réalité des inégalités. Elle souligne aussi la centralité des territoires oubliés dans la contestation de l'ordre euro-méditerranéen. La mer cesse d'être un mythe de passage paisible; elle devient espace de tri, de rejet et de résistance.

2.LA REVOLUTION TUNISIENNE ET LA RECONFIGURATION DES REPRESENTATIONS MEDITERRANEENNES

2.1 – La révolution tunisienne comme rupture dans les équilibres géopolitiques méditerranéens

La révolution tunisienne de 2011 a marqué une césure majeure dans les rapports entre les deux rives de la Méditerranée, bouleversant les équilibres politiques et symboliques sur lesquels reposait la coopération euro-méditerranéenne depuis les années 1990. Longtemps perçue comme un partenaire stable et prévisible, la Tunisie jouait un rôle de pivot dans le dispositif régional de sécurité et de développement conçu par l'Union européenne. Le régime autoritaire de Ben Ali, en dépit de son caractère répressif, était valorisé comme garant d'un ordre favorable à la lutte contre l'immigration dite illégale et au maintien d'une stabilité régionale[16].

Avec la chute du régime en janvier 2011, cet équilibre s'effondre, révélant la fragilité des logiques sécuritaires dominantes. Les soulèvements populaires, mettent en lumière les inégalités territoriales, la corruption endémique et l'exclusion sociale qui minaient le pays. Cette explosion sociale prend de court les partenaires européens, dont les instruments d'analyse et de coopération se révèlent inadaptés à la dynamique révolutionnaire[17].

La coopération euro-méditerranéenne, jusqu'alors axée sur la croissance économique et la sécurité, apparaît alors en décalage avec les aspirations démocratiques des sociétés du Sud. Dans les mois qui suivent la révolution, les institutions européennes tentent de réorienter leur discours en intégrant les notions de gouvernance, de participation citoyenne et de justice sociale. Toutefois, cette inflexion reste limitée, car dominée par la priorité donnée aux enjeux migratoires et à la sécurisation des frontières[18].

Parallèlement, la Tunisie postrévolutionnaire voit émerger une Méditerranéité plus critique, portée par les voix de la société civile. Des initiatives comme le festival « Dream City » ou le projet « Artocracy » réinvestissent l'espace public en interrogeant les récits dominants, les héritages coloniaux et les rapports de pouvoir[19]. À travers ces pratiques artistiques et citoyennes, la Méditerranée devient un terrain de luttes symboliques, un espace de contestation et de création où se croisent mémoires, identités marginalisées et imaginaires politiques.

Ce processus s'accompagne d'une intensification des échanges transnationaux, entre acteurs du Sud et du Nord, mais aussi entre sociétés du Sud elles-mêmes. Ces dialogues horizontaux

[15] Abdelkader Zghal, « Le Maghreb et la Méditerranée: rupture ou continuité? », *IBLA*, vol. 178, 2002, p. 157.
[16] Bichara Khader, op.cit, p. 24-27.
[17] Amin Allal et Thomas Pierret (dir.), *Au cœur des révoltes arabes*, Paris, Armand Colin, 2013, p. 72.
[18] Münevver Cebeci, "The EU's Constructions of the Mediterranean, op.cit, p 311. .
[19] Marco Berrebi, Artocratie enTunisie https://www.editionsalternatives.com/site.php?type=P&id=1035 . consltém 2-4-2025

redéfinissent les termes de l'appartenance méditerranéenne, en rompant avec les logiques verticales et technocratiques du partenariat officiel. Des chercheurs, des activistes et des artistes participent à l'émergence d'une Méditerranée alternative, moins centrée sur les institutions que sur les expériences vécues de mobilité, de précarité, d'engagement et de résistance[20]. La révolution tunisienne a également produit un effet d'entraînement régional. En inspirant d'autres mobilisations dans le monde arabe, elle a remis en cause l'universalité présumée des modèles démocratiques exportés par l'Europe, en montrant la capacité des sociétés du Sud à forger leurs propres trajectoires de changement. Dans cette perspective, la Méditerranée cesse d'être un espace figé de coopération institutionnelle pour devenir un champ mouvant de conflits, de solidarités et d'initiatives politiques[21].

Néanmoins, cette dynamique de réinvention se heurte à des logiques de restauration. Rapidement, l'agenda sécuritaire européen reprend le dessus, surtout avec l'émergence des menaces hybrides notamment des groupes islamistes[22], reléguant les aspirations démocratiques au second plan. La Méditerranée est à nouveau mobilisée comme un filtre, un rempart contre les flux migratoires indésirables, plutôt que comme un espace de co-construction des politiques régionales. Cette évolution réactive les asymétries qui caractérisaient déjà la période pré-2011. la révolution tunisienne a profondément redéfini les contours de la Méditerranéité. Elle a déplacé le regard des institutions vers les sociétés, des élites vers les marges, des discours figés vers les pratiques sociales. En révélant la plasticité et la conflictualité de l'espace méditerranéen, elle a ouvert la voie à des représentations plus plurielles, critiques et ancrées dans l'expérience.

2.2 – Mobilité révolutionnaire et reconfiguration symbolique de la Méditerranéité

La révolution tunisienne de 2011 a initié un mouvement de transformation dépassant les frontières nationales, en impulsant des formes multiples de mobilité dans l'espace méditerranéen. Cette mobilité n'est pas seulement physique ou migratoire , elle est aussi politique, sociale, symbolique. Elle s'incarne dans la circulation des pratiques citoyennes, des récits révolutionnaires, des formes artistiques de contestation et des réseaux de solidarité tissés entre les rives sud et nord. Ainsi, la Méditerranéité, longtemps pensée comme cadre géopolitique figé, s'ouvre à de nouvelles formes de subjectivation politique et de recomposition symbolique. L'un des effets les plus marquants du processus révolutionnaire réside dans la prolifération des initiatives citoyennes transnationales. Dès 2011, des collectifs tunisiens tissent des liens avec des partenaires à Marseille, Barcelone, Palerme ou Beyrouth, donnant naissance à des formes inédites de coopération horizontale fondées sur des valeurs partagées telles que la justice sociale, la mémoire ou la dignité[23]. Ces collaborations témoignent d'une Méditerranéité vivante et polycentrique, qui émerge par le bas, loin des mécanismes institutionnels asymétriques.

Les répertoires de contestation tunisiens comme les occupations de l'espace public, performances artistiques, usage militant des réseaux sociaux s'inscrivent dans une mobilité globale du bassin méditerranéen. Des mouvements tels que les Indignés en Espagne, les mobilisations d'Athènes et les occupations culturelles à Rome démontrent une dynamique régionale de protestation, qui donne à la Méditerranée une épaisseur politique inédite[24].

Dans cette configuration, les citoyens tunisiens s'approprient la Méditerranée non comme un concept abstrait, mais comme un espace d'expression et de lutte. Des festivals engagés comme

[20] Sofiane Kerkeni, "Art, contestation et espace public à Tunis", *L'Année du Maghreb*, vol. 8, 2012, p. 209.
[21] Olfa Lamloum, *Tunisie, une jeunesse en transit*, Tunis, Arabesques, 2015, p. 122.
[22] Mourad Mhenni , La Tunisie face aux menaces hybrides: quand les mouvements islamistes exploitent les fragilités d'une transition inachevée, https://www.researchgate.net/publication/390208455. Consulté: 28-5-2025.
[23] Gobe, Éric et Boukhobza, Malek, « L'espace public postrévolutionnaire en Tunisie: entre libération et fragmentation », *L'Année du Maghreb*, n° 10, 2014, p. 159.
[24] Allal, Amin, « Révolutions et circulations dans l'espace méditerranéen: effets de la révolution tunisienne », *L'Année du Maghreb*, n° 9, 2013, p. 24.

« Dream City », des plateformes médiatiques telles que « Nawaat, » ou des espaces de création collaborative redéfinissent les récits méditerranéens à partir de trajectoires locales[25]3. Ces initiatives donnent à voir une Méditerranée corporelle, affective, ancrée dans l'expérience, où se côtoient mémoires postcoloniales, récits de migration et résistances artistiques.

Cette dynamique s'accompagne d'un affrontement symbolique entre les récits du Nord et les contre-narrations du Sud. Si la révolution tunisienne a suscité une admiration généralisée, elle a aussi été interprétée par certains discours européens sous un prisme universaliste, minimisant ses dimensions postcoloniales ou séculières. Cette tension est perceptible dans les traductions culturelles et médiatiques qui déforment ou neutralisent le sens original des mobilisations tunisiennes[26].

En outre, les projets de coopération culturelle entre la Tunisie et l'Europe, bien que nombreux, restent souvent gouvernés par des logiques de hiérarchisation implicite. L'accès aux financements, à la reconnaissance symbolique ou à la diffusion internationale est majoritairement contrôlé par des institutions du Nord. Des artistes et militants tunisiens y répondent en développant des formes de collaboration plus égalitaires et critiques, comme en témoignent les réseaux indépendants ou les espaces autogérés de production culturelle[27].

Les plateformes numériques jouent également un rôle central dans cette recomposition. Des blogs, podcasts, web-documentaires et archives orales issus de la société civile tunisienne documentent les expériences postrévolutionnaires, les reliant aux luttes en Algérie, au Liban, en France ou ailleurs. Ces dispositifs donnent naissance à une Méditerranéité connectée, plurielle et politique, enracinée dans les solidarités concrètes[28].Cependant, les obstacles persistent. La mobilité citoyenne reste freinée par les politiques de visas restrictives, les barrières administratives et les rapports de pouvoir structurels. L'accès aux espaces de visibilité culturelle ou aux arènes de décision reste inégal, ce qui empêche l'émergence d'un véritable espace politique partagé. Les revendications d'égalité, de reconnaissance et de circulation demeurent au cœur des luttes méditerranéennes contemporaines.

la révolution tunisienne a fait émerger une Méditerranéité nouvelle, traversée par les récits de celles et ceux qui expérimentent les frontières, les résistances et les alliances. Loin des représentations figées, elle devient un champ de luttes, d'échanges et de créations, redéfini par les voix du Sud et les pratiques transversales de contestation et de solidarité.

3. L'IMPACT DU PHENOMENE MIGRATOIRE SUR LA MEDITERRANEITE TUNISIENNE

3.1 – Circulations migratoires et fracture méditerranéenne: vers une Méditerranéité asymétrique

Depuis la révolution de 2011, les mobilités humaines en provenance de Tunisie se sont intensifiées, révélant les lignes de fracture structurelles qui traversent l'espace euro-méditerranéen. La Méditerranée, longtemps vue comme un lieu d'échanges, devient le théâtre d'un profond déséquilibre, un espace fragmenté, hiérarchisé, où les circulations sont triées, contrôlées, inégalement réparties. Dans ce contexte, la Méditerranéité contemporaine ne reflète plus une communauté partagée, mais bien une géographie des inégalités, alimentée par les politiques migratoires et les représentations sociales.

[25] El Hédi, Saïd, « Dream City ou l'invention d'un espace culturel postrévolutionnaire », *Revue Tunisienne de Sciences Sociales*, vol. 55, 2021, p. 88.
[26] Zghal, Abdelkader, « Méditerranéité et postcolonialité: éléments pour un débat tunisien », *IBLA*, vol. 182, 2014, p. 131.
[27] Martin, Sylvie, « La Méditerranée comme scène d'art politique », *Revue d'Histoire Contemporaine de l'Afrique*, no. 6, 2022, p. 190.
[28] Lamloum, Olfa, *Tunisie, une jeunesse en transit* op.cit, p. 122.

La Tunisie post-2011 est rapidement devenue un foyer majeur de départs migratoires, dans des formes aussi diverses qu'inquiétantes : migrations économiques, exils de diplômés, traversées clandestines de jeunes marginalisés, ou encore transit de personnes originaires d'Afrique subsaharienne. Cette dynamique migratoire est alimentée par la crise économique, les désillusions politiques, l'effondrement des services publics et une perte généralisée d'espérance en l'avenir[29]. Hsan Boubakri observe que, depuis 2011, la migration devient une forme d'action sociale pour une jeunesse désenchantée, une manière de fuir mais aussi de dénoncer[30].

Parallèlement, le rôle géopolitique de la Tunisie se transforme. D'un pays de départ, elle devient un espace de transit, voire de rétention, pour des milliers de migrants sub-sahariens, sous l'effet des stratégies d'externalisation migratoire mises en œuvre par l'Union européenne. Cette logique consiste à déléguer la gestion des flux migratoires aux pays du Sud, en contrepartie d'une aide financière ou diplomatique[31]. Les accords bilatéraux, notamment avec l'Italie, et les dispositifs comme l'Agenda de Partenariat UE-Tunisie renforcent cette dynamique de sous-traitance sécuritaire[32].

La Méditerranée devient alors un espace de filtrage, plus qu'un pont entre les peuples. Elle sépare, trie, isole. On parle à ce propos d'une « gouvernance migratoire asymétrique » où les mobilités du Nord sont légitimées et facilitées, tandis que celles du Sud sont contenues et criminalisées[33].

Dans ce contexte, les jeunes Tunisiens vivent la mer comme une ligne de fracture: lieu d'espoir, mais aussi de mort. Le phénomène des «***harragas» est*** révélateur d'une culture du départ comme ultime recours, devenue une forme de désobéissance civile silencieuse[34]. Les naufrages, les disparus, les "martyrs de la mer" nourrissent un imaginaire tragique et contestataire de la Méditerranée.

Ce vécu est profondément différencié selon la position sociale. Tandis que certains peuvent encore bénéficier de visas ou de programmes d'échange, beaucoup d'autres sont enfermés dans l'impossibilité de circuler. La Méditerranée reflète ainsi , des inégalités, des discriminations et des frustrations[35]. La mer, dans l'imaginaire populaire, est aujourd'hui ambivalente: horizon d'émancipation et de perte. Elle traverse les récits familiaux, les chansons, les œuvres d'art, comme autant de témoignages d'une Méditerranée douloureuse. Sylvie Martin parle d'une « Méditerranée tragique » façonnée par les deuils, les espoirs brisés, mais aussi par la résilience des survivants et des familles[36].

Face à cette complexité, les études menées par des chercheurs de la rive sud offrent un cadre critique majeur. Ils appellent à dépasser les approches technocratiques de la migration, pour penser la Méditerranée comme un espace politique, traversé de conflits, de luttes et d'aspirations légitimes

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[29] Lamloum, Olfa, ***Jeunesse tunisienne: marges et vulnérabilités***, Tunis, Arabesques, 2014, p. 73.

[30] Hassan Boubakri et Swanie Potot, « Migrations et révolution en Tunisie », *Revue tunisienne des sciences sociales* (RTSS), n° 141, 2013, pp. 59–78, en ligne: https://hal.science/hal-01317993v1/document. Consulté: 4-6-2025.

[31] Cassarino, Jean-Pierre, « Channelled Policy Transfers: EU-Tunisia Interactions on Migration Matters », ***op.cit,*** p. 111-115.

[32] Cuttitta, Paolo, « Externalisation et "hotspots" en Méditerranée », ***Cultures & Conflits***, n° 108, 2018, p. 122.

[33] Boubakri, Hsan, « Les politiques migratoires en Méditerranée centrale: vers un espace régional de sécurité? », ***CARIM Notes d'analyse et de synthèse***, 2012, p. 6.

[34] Bensaâd, Ali, « Les harragas: migrants clandestins ou aventuriers de la mer? », ***L'Année du Maghreb***, vol. 3, 2007, p. 57.

[35] Cebeci, Münevver, « The EU's Constructions of the Mediterranean, op.cit, p. 314.

[36] Martin, Sylvie, « Mourir en mer: récits tunisiens de la Méditerranée tragique », ***Revue d'Histoire Contemporaine de l'Afrique***, no. 6, 2022, p. 205.

à la mobilité et à la dignité[37]. Les circulations migratoires contemporaines ont redéfini les contours de la Méditerranéité tunisienne. Ce n'est plus une idée de dialogue abstrait, mais un champ de tensions, de ruptures et d'espoirs. Une Méditerranée marquée par l'asymétrie des droits et la violence des frontières, mais aussi par les récits et les résistances qui refusent de s'y résigner.

3.2 – Représentations croisées et résistances méditerranéennes: vers une reconfiguration politique des imaginaires

Les dynamiques migratoires qui ont suivi la révolution tunisienne ont contribué à transformer en profondeur les regards portés sur la Méditerranée. Loin d'être un simple cadre spatial ou un objet de coopération technique, elle devient un espace de confrontation symbolique, traversé par des récits concurrents, des injustices perceptibles et des résistances portées par des voix longtemps marginalisées.

Les représentations projetées de part et d'autre de la Méditerranée témoignent d'un déséquilibre persistant. Tandis que l'Europe institutionnelle continue d'adopter une lecture sécuritaire et utilitariste des mobilités issues du Sud, les sociétés maghrébines, en particulier la société tunisienne, exprime un fort sentiment d'injustice face aux politiques de fermeture, de tri et de stigmatisation des corps en mouvement[38]. La mer, autrefois perçue comme un trait d'union, est désormais vécue comme une frontière redoutée, voire un espace de violence bureaucratique et d'exclusion sociale.

Face à cette asymétrie, des initiatives citoyennes et artistiques prennent forme pour revendiquer une autre manière d'habiter et de penser la Méditerranée. En Tunisie, des projets culturels comme ceux menés par le collectif Art Rue, ou encore les actions du Forum Tunisien pour les Droits Économiques et Sociaux (FTDES), proposent des narrations alternatives[39]. En s'appuyant sur des récits de naufragés, des souvenirs de migration ou des mémoires de colonialité, ces créations ouvrent des brèches dans les discours dominants. Elles donnent à voir une Méditerranéité vécue, parfois douloureuse, mais aussi résistante et porteuse de solidarité.

Les mobilisations pour les droits humains, les commémorations de disparus en mer, ou encore les luttes contre les violences aux frontières matérialisent un imaginaire collectif fondé sur la justice et la mémoire[40₃]. Ces pratiques ancrées dans le quotidien deviennent les vecteurs d'une réappropriation critique de la Méditerranée. Elles rappellent que cet espace est aussi fait de relations humaines, de deuils partagés, d'espérances communes – bien au-delà des cartes diplomatiques et des politiques de sécurité.

La mémoire migratoire, transmise par la littérature, le cinéma, la musique urbaine ou les arts visuels, nourrit aujourd'hui un langage partagé entre les rives. Des auteurs comme Yamen Manaï, Alice Zeniter ou Faïza Guène traduisent dans leurs œuvres les trajectoires de déracinement, de recomposition identitaire, mais aussi de résistance au silence imposé[41]. Par ces récits, la Méditerranée devient un espace narratif, traversé de subjectivités multiples qui bousculent les visions uniformes.

En arrière-plan, une critique s'affirme contre la nature asymétrique des partenariats euro-méditerranéens. Souvent centrés sur la gestion des flux et la sécurisation des frontières, ces dispositifs négligent les enjeux de justice, de co-développement et de reconnaissance mutuelle[42]. Des

[37] Boubakri, Hsan, « Tunisie: état des lieux migratoire et coopération euro-méditerranéenne », ***Migrinter***, n° 52, 2014, p. 91.

[38] Paolo Cuttitta, « Externalisation et "hotspots", op.cit, p. 120-135.

[39] Voir le site du collectif Art Rue: https://lartrue.org/; ainsi que les rapports du FTDES: https://ftdes.net/ consulté:10-4-2025.

[40] Abderrahman Hedhili , « Morts en Méditerranée: pour une reconnaissance des disparus », Tunis, FTDS, 2020, p 15-19.

[41] Faïza Guène, *Un homme, ça ne pleure pas*, Fayard, 2014

[42] Münevver Cebeci, « The EU's Constructions of the Mediterranean », *op.cit*, p58.

intellectuels et collectifs du Sud appellent à repenser la Méditerranée comme un espace commun, traversé d'histoires entremêlées, mais aussi porteur de droits pour celles et ceux qui le traversent.

Les représentations médiatiques ne sont pas en reste. Tandis que de nombreux médias européens véhiculent encore une image de la rive Sud comme lieu de désordre ou de péril, les productions tunisiennes et maghrébines mettent en valeur une Méditerranée créative, hybride, marquée par des formes de résilience quotidiennes. Les travaux de chercheuses comme Fatma Khemiri et Karima Dirèche ont bien montré combien ces images médiatiques participent à maintenir des hiérarchies symboliques et des frontières mentales[43]..

Enfin, les formes de solidarité transnationale – portées par des réseaux tels que Alarm Phone ou Mediterranea Saving Humans – donnent chair à une Méditerranée vécue depuis le bas. Ces collectifs, en agissant concrètement pour la sauvegarde des vies et le respect des droits, incarnent une autre manière de faire lien entre les rives[7]. Ils traduisent une Méditerranéité active, engagée, enracinée dans des pratiques de soin, d'écoute et de dignité. Ainsi, à travers les récits, les luttes et les gestes quotidiens, se dessine une autre Méditerranée fragmentée mais habitée, contestée mais partagée. Une Méditerranéité critique, portée par ceux et celles qui refusent de rester invisibles, et qui, depuis les marges, redessinent les contours d'un espace commun à réinventer.

CONCLUSION

Explorer la Méditerranéité depuis la Tunisie contemporaine, c'est interroger un concept dont les contours ont longtemps été dictés par des imaginaires dominants. Présentée comme un espace de convergence ou un carrefour de civilisations, la Méditerranée révèle en réalité des lignes de fracture profondes, que les bouleversements politiques et sociaux survenus après 2011 ont fortement mis en lumière.

Avant la révolution, la Tunisie semblait incarner une forme de réussite dans les partenariats euro-méditerranéens, portée par une image de stabilité et d'ouverture. Mais cette représentation officielle, construite sur des logiques d'alignement institutionnel, masquait mal les inégalités vécues au quotidien par une grande partie de la population. Les promesses d'intégration régionale se heurtaient aux expériences concrètes d'exclusion, de marginalisation, et à une frustration croissante vis-à-vis d'un ordre méditerranéen ressenti comme imposé.

La chute du régime autoritaire a ouvert un espace nouveau de circulation des idées, des récits et des corps. Les mobilités migratoires, les expressions artistiques, les initiatives citoyennes ont donné naissance à une autre manière de penser la Méditerranée: non plus comme une abstraction technocratique, mais comme un espace profondément vécu. Un espace où s'expriment à la fois les blessures du départ, les espoirs d'un avenir meilleur, et les luttes pour la reconnaissance.

Aujourd'hui, la Méditerranéité tunisienne ne se laisse pas enfermer dans des catégories figées. Elle se déploie dans les récits de ceux qui partent et de ceux qui restent, dans les formes d'art qui racontent la mer comme frontière, mais aussi comme passage. Elle se réinvente dans les solidarités transnationales, dans les critiques formulées face aux logiques sécuritaires, et dans les efforts pour bâtir un langage commun entre les rives.

Ainsi, loin d'être un simple héritage ou un horizon figé, la Méditerranéité apparaît comme une construction collective, fragile, mouvante, mais résolument politique. À travers l'expérience tunisienne, elle se révèle porteuse de conflits, certes, mais aussi d'inventions. C'est dans ces marges, dans ces gestes et ces voix souvent relégués à l'arrière-plan, que se dessinent peut-être les contours d'un nouvel imaginaire commun – plus juste, plus horizontal, et plus fidèle aux réalités humaines qui animent les rivages méditerranéens

[43] Karima Dirèche, « Méditerranée et représentations médiatiques », *L'Année du Maghreb*, n°18, 2020, p31.

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DR ADEL BOUZID[1]
DIRECTOR OF DEPARTMENT, UNIVERSITY OF SOUSSE (TUNISIA)

Abstract: *This study offers an extensive analysis of the concept of indigenous enterprises by placing it within its wider conceptual, epistemological, and socio-cultural context. Using the major paradigms of entrepreneurship as the primary theoretical framework, it examines how indigenous economic initiatives emerge from deeply rooted historical experiences, community norms, and collective systems of solidarity. The central argument is that the indigenous enterprise represents a distinct form of social entrepreneurship—one that prioritizes community well-being, cultural continuity, and long-term local resilience rather than conventional market-driven objectives.*

*The discussion engages with the three dominant approaches in contemporary entrepreneurial scholarship: the **entrepreneur paradigm**, focused on individual agency and innovation; the **context paradigm**, emphasizing the influence of socio-cultural and institutional environments; and the **process paradigm**, which explores the dynamic sequences that structure entrepreneurial activity. The study shows that none of these paradigms, taken in isolation, fully captures the complexity of indigenous enterprises. Their hybrid nature—combining economic logics with cultural identity, social cohesion, and collective governance—necessitates a tailored analytical approach.*

*Therefore, the analysis supports the use of carefully selected models derived from these paradigms, such as the **business opportunity model** and the **entrepreneurial ecosystem model**, on the condition that they are adapted to the realities of local communities. These models help clarify how indigenous enterprises identify needs, mobilize resources, and institutionalize forms of cooperation rooted in traditional norms. At the same time, the study highlights the relevance of broader policy frameworks—most notably the **EU's Mediterranean policy**, which increasingly encourages the promotion of inclusive, community-based economic initiatives in Southern and Eastern Mediterranean societies. This policy dimension reinforces the argument that indigenous enterprises contribute not only to local development but also to larger regional objectives related to social stability, cultural preservation, and sustainable economic cooperation.*

Overall, the study concludes that understanding the formation and evolution of indigenous enterprises requires acknowledging their embeddedness in local social structures and their potential alignment with European and Mediterranean strategies for inclusive and community-driven development.

Keywords: *Social and solidarity economy, Indigenous enterprise, Social entrepreneurship, Local society, EU Mediterranean policy*

Résumé : *Cette étude représente un essai de conceptualisation de la notion d'entreprises indigènes dans son contexte conceptuel et épistémologique, en adoptant le paradigme de l'entrepreneuriat avec ses différentes approches, comme cadre théorique. Elle a abouti que l'entreprise communautaire représente en réalité une forme d'entrepreneuriat social. Ainsi nous avons abordé les principales approches théoriques de la pensée entrepreneuriale, à savoir le « paradigme de l'entrepreneur », le « paradigme du contexte » et le « paradigme du processus ». Nous avons conclu que l'adoption de l'une de ces approches pour comprendre la structure des entreprises indigènes constitue une forme de projection arbitraire, compte tenu de la spécificité du projet d'entreprise indigènes, en plus de la nécessité de prendre en compte la diversité des contextes sociaux locaux, ce qui suppose de se limiter à des modèles analytiques de ces approches, tels que*

[1] Dr Adel Bouzid, Assistant Professor of Sociology, Faculty of Letters and Human Sciences, Maitre-assistant en sociologie, Département d'anthropologie, Faculté des lettres et sciences humaines de Sousse (Tunisie), ORCID: 0009-0005-1987-3172 Scopus https://www.scopus.com/freelookup/form/author.uri?zone=TopNavBar&origin=NO%20ORIGIN%20DEFINED # , Web of Science https://www.webofscience.com/wos/author/my-profile , Google Scholar https://scholar.google.com/citations?hl=ar

le modèle «d'opportunités d'affaires » ou « l'écosystème », pour comprendre comment l'entreprise indigène se forme et évolue.
Mots clés: *Economie sociale et solidaire/les entreprises indigènes/L'entrepreneuriat social/La société locale*

INTRODUCTION

Parmi les sujets qui occupent de manière marquante les médias tunisiens ces derniers temps, et qui préoccupent de nombreux individus et groupes, se trouve celui des entreprises indigènes, qui sont aujourd'hui présentées comme une alternative économique, un moteur de développement local, et un moyen de produire et de redistribuer la richesse de manière équitable. Cependant, la large diffusion du concept d'entreprises indigènes (plus de 164 entreprises en Tunisie à ce jour), et l'aisance avec laquelle il semble être abordé dans diverses littératures, et domaines de connaissance, ne doivent pas nous faire perdre de vue les ambiguïtés et les obstacles, qui entourent sa mise en œuvre réelle, et son adéquation avec l'environnement économique et social. Cela nécessite de l'ancrer dans son contexte conceptuel et cognitif, dans une tentative de comprendre ses dimensions théoriques et méthodologiques, avant de l'aborder sur le terrain. Sachant que le projet des entreprises indigènes s'inscrit dans les grands axes de l'agenda politique du chef d'Etat « Kaïs Saïed», qui a émis un décret le 20 mars 2022, organisant ses missions et objectifs, lesquels expriment clairement que ce projet porte le flambeau de l'économie sociale et solidaire. Il est présenté comme une alternative économique, comportant des dimensions sociales, visant à réaliser la justice sociale, et une distribution équitable de la richesse, compte tenu de l'échec du modèle économique libéral et néolibéral, notamment après les événements de 2011, et des crises économiques et sociales qui ont suivi, avec une forte augmentation du chômage, de la marginalisation sociale et des disparités régionale.

Dans ce contexte, nous considérons que le projet des entreprises indigènes est encore récent, et à ses débuts en matière d'application sur le terrain, et qu'il nécessite donc une accumulation théorique, et une construction cognitive suffisante, avant d'être abordé sur le terrain. Des études sociologiques ont prouvé que comprendre la réalité du phénomène, et en maîtriser les enjeux, nécessite un certain temps pour que le phénomène s'ancre dans le tissu social et culturel, et s'intègre dans les institutions qui composent la société. En conséquence, cette étude vise à adapter le paradigme entrepreneurial, afin de permettre une meilleure compréhension des entreprises indigènes, ce qui conduira à une intensification des connaissances, sur le concept d'entreprises indigènes, et à clarifier la nature de leur relation avec le concept d'entrepreneuriat, dans la mesure où elles constituent une forme d'entrepreneuriat, englobant les mêmes dimensions et objectifs, que ceux recherchés par l'entrepreneuriat, en tant que moteur du développement économique, porteur des solution alternatives aux problèmes de chômage, et acteur productif de la richesse.

Comment se définit le concept d'entreprises indigènes? Selon quels critères peut-on considérer les entreprises indigènes comme une forme d'entrepreneuriat dans ses dimensions contemporaines? Comment peut-on comprendre et interpréter les entreprises indigènes du point de vue de la sociologie de l'entrepreneuriat?

Hypothèse de la recherche et méthodologie

L'hypothèse de recherche que nous adoptons, suppose que les entreprises indigènes sont une forme d'entrepreneuriat social, dont la structure et les objectifs sont déterminés par la spécificité locale, et en réponse aux besoins de la communauté locale. Cependant, les facteurs de leur succès ou de leur échec, restent conditionnés par la disponibilité d'un système de soutien local (écosystème), pour de telles organisations, ainsi que par la conviction des fondateurs dans leur projet. Nous utiliserons une méthode historique et analytique pour vérifier la validité de cette hypothèse.

I – LE FONDEMENT CONCEPTUEL ET HISTORIQUE DES ENTREPRISES INDIGENES

1- Le fondement conceptuel

Le concept d'entreprises indigènes s'enracine dans un champ conceptuel émergent, englobant de nombreuses appellations similaires, qui expriment dans l'ensemble, des organisations économiques à dimensions sociales, apparues en réaction à la régression du rôle social de l'État, et face à la domination sauvage et aiguë du modèle économique libéral et néolibéral. Quelles sont les principales de ces modèles organisationnels et quelles sont leurs implications conceptuelles?

1-1 L'économie sociale et solidaire

Il est utile de noter que le concept d'entreprises indigènes s'inscrit clairement dans le champ de l'économie sociale et solidaire, qui reflète directement les dimensions sociales et solidaires du travail économique. De nombreuses économies ont connu des expériences réussies, en appliquant ce modèle économique, comme l'Inde, la Chine et le Brésil.

En général, l'économie sociale et solidaire est définie selon le code juridique tunisien[2], comme un modèle économique constitué de l'ensemble des activités économiques à visées sociales, liées à la production, à la transformation, à la distribution, à l'échange, à la commercialisation et à la consommation de biens et de services, assurées par des entreprises de l'économie sociale et solidaire, en réponse aux besoins communs, de ses membres et à l'intérêt économique général **et social, et son objectif principal n'est pas le partage des bénéfices. Parmi les entreprises de l'économie sociale et solidaire, on trouve les coopératives, les groupements de développement, et les associations coopératives... Certains décrivent l'économie sociale et solidaire comme une démocratie économique, une solution pour réduire les inégalités sociales[3]. C'est un mode de gouvernance locale et de gestion des affaires locales, et d'un autre point de vue, c'est une économie contre la pauvreté et la marginalisation sociale. C'est un modèle qui réalise la durabilité et est responsable de l'environnement et du milieu. Selon le regard sociologique de l'économie sociale et solidaire, elle est considérée comme une économie visant à réorganiser les liens entre les individus[4], dans le but de créer un environnement ou un modèle économique nouveau, permettant d'intégrer le plus grand nombre possible de groupes vulnérables, en se concentrant sur le renforcement des liens contractuels, et volontaires que les individus établissent pour réaliser une vie meilleure.**

1-2 Les entreprises indigènes

Le décret relatif aux entreprises indigènes en Tunisie définit dans son deuxième chapitre, l'entreprise indigène est toute personne morale crée par un groupe d'habitants de la région, dont le motif de création est d'atteindre la justice sociale, et une distribution équitable des richesses, à travers la pratique collective d'une activité économique, à partir de la zone géographique où ils résident[5]. Ces entreprises sont généralement reconnues comme une forme et un mécanisme de l'économie sociale et solidaire. Ainsi, elles constituent une structure émanant de la communauté locale ou régionale, gérée de manière collective, et reposant sur la valorisation des richesses et des potentialités locales, pour des objectifs communs, parmi lesquels le développement local. Certaines études mentionnent que les sociétés africaines et maghrébines sont les plus susceptibles de créer de telles

[2] Loi nº30 de l'année 2020, daté du 30juin 2020, relative à l'économie sociale, p1.

[3] Bidet Eric, « Economie sociale, nouvelle économie sociale et sociologie économique », Revue, Sociologie du travail, Vol 42, Nº4, (Octobre – décembre 2000), France.

[4] Mahjoub Aziz, Ghazal Mariem, Mahfoudh Mourad, « L'économie sociale et solidaire: un nouveau modèle de développement pour l'économie locale face aux défis de la mondialisation », Revue de la créativité, Volume9, Nº1,2019, p79.

[5] Décret nº 15, de l'année 2022, daté du 20 mars 2022, relatif aux entreprises indigènes, p1.

entreprises, compte tenu du poids évident du facteur social[6], et de la forte prévalence des modes économiques informels.

1-3 L'entrepreneuriat social

Les entreprises indigènes représentent un modèle d'entrepreneuriat social, qui est défini comme une entreprise ayant des objectifs sociaux, ne se basant pas sur l'économie de marché, mais sur les besoins de la communauté locale, et reposant sur des bases solidaires, pour renforcer la cohésion de la communauté. D'un autre point de vue, l'entrepreneuriat social vise à valoriser la dimension sociale dans les activités économiques, en s'attachant aux problèmes sociaux, **et l'établissement de la justice sociale. Ce modèle entrepreneurial s'est répandu dans de nombreux pays, en raison de l'augmentation des besoins humains, face à un recul du rôle social de l'État, et à son désengagement de nombreux secteurs économiques. À cela s'ajoute la montée de la crise environnementale, et un intérêt croissant pour le développement durable. Certains chercheurs considèrent que l'émergence de l'entreprise sociale coïncide avec les années 1990 et les mouvements de solidarité qui ont suivi, se manifestant principalement dans le secteur tertiaire[7]. En général, trois approches sont proposées pour étudier et comprendre l'entrepreneuriat social. Nous trouvons l'approche européenne, qui le considère comme une idée promue par des mouvements de renouveau et des groupes, cherchant à revitaliser l'économie sociale traditionnelle. L'approche anglo-saxonne le voit comme une idée fondée sur la mission sociale, qui lui est assignée, tandis que l'approche américaine considère que l'idée d'entrepreneuriat social est essentiellement une activité de solidarité, fondé sur la base populaire. Ainsi, l'entrepreneuriat social fait référence, dans l'une de ses dimensions, à la manière d'exploiter une partie des ressources de l'entreprise pour traiter des problèmes sociaux, ce qui signifie que les acteurs de l'entrepreneuriat social sont tenus de fournir un service social, qui contribue à ancrer des valeurs sociales dans l'esprit des individus. Malgré le contraste et la contradiction entre l'objectif économique et social, c'est-à-dire entre les valeurs du profit et celles du service à la communauté, l'entrepreneuriat social est tenu à la responsabilité sociale. Il est utile de noter que le concept d'entrepreneuriat social se croise largement avec celui des entreprises indigènes, et les objectifs qu'elles peuvent atteindre, le plus important étant de traiter un problème commun entre un groupe d'individus, et de répondre dans une large mesure aux aspirations de la communauté locale. En effet, cette structure, en plus d'être un domaine de production de richesse, est un moyen de produire des valeurs sociales, et de provoquer le changement social souhaité.**

2-LES RACINES HISTORIQUES DES ENTREPRISES INDIGENES EN TUNISIE ET LES CONTEXTES DE STRUCTURATION

2-1 Racines historiques

Il est certain que l'idée des entreprises indigènes, en tant que pratique culturelle de solidarité, a des racines historiques et culturelles dans le contexte social tunisien, sous forme des plusieurs dimensions et classifications. Il existe des pratiques de solidarité spontanées dans le cadre de l'espace privé, c'est-à-dire entre une même tribu, ou une unité de parenté, qui regroupe un ensemble de familles, dans le but de faire face à des dépenses importantes, ou de répartir la richesse et les biens, ainsi que les ressources entre des individus unis par des liens sociaux et des relations de voisinage. Parmi les pratiques de solidarité les plus connues qui ont loin de ce qui est connu sous le nom de «

[6] Alain Fayolle, Dossier: Entrepreneuriat et social à la fois, De Boeck Supérieur, Entreprendre & Innover, N° 27, 2015, France, p44.

[7] Becaddour Aicha, Evolution du champ de l'entrepreneuriat: une approche théorique, Journal Of Economics And Management, N° 01,2021, Algérie, p17.

touwiza », également désignée dans certains milieux sociaux par « chakhra jamaÏa»[8], cela consiste en l'appel d'un individu à des membres de sa communauté, pour les aider à accomplir une tâche spécifique. C'est une pratique qui est presque saisonnière ou événementielle, se répandant Particulièrement lors des saisons de récolte des produits agricoles, de la construction de logements, et de l'organisation de célébrations. La « touwiza » repose sur le principe de l'échange indirect et inconditionnel.

Il existe également des pratiques de solidarité supervisées par des institutions sociales connues sous le nom de «waqfs ou habous», qui prennent la forme de terres et de biens immobiliers. Ce processus consiste à conférer au bien immobilier un caractère religieux, le rendant exclusif à sa descendance, ou le transformant en projet religieux ou caritatif[9]. Cependant, en 1957, les «waqfs» de toutes sortes ont été abolis, suite à l'annulation de l'association des «waqfs», en raison de la corruption, et des dérives qui ont touché de nombreuses filiales régionales de cette association, et en cohérence avec la nouvelle orientation politique, qui considère que la supervision de ces institutions à caractère religieux, doit être assurée par l'État. De plus, le «waqf» contribue à entraver la circulation du capital, et à limiter l'accès à la propriété privée, ce qui va à l'encontre du caractère libéral de la politique économique de l'État tunisien, à l'aube de l'indépendance.

On outre qu'il y a des autres pratiques de solidarité traditionnelles, qui ont prévalu en Tunisie, celles qui relèvent de ce qui est connu sous le nom de «terres socialistes», une appellation moderne pour ce qui était connu sous le nom de terres tribales, qui sont possédées en commun par les membres des tribus selon l'héritage[10]. Elles sont gérées de manière participative par ce qu'on appelle la « jamâa », qui est un parlement regroupant les notables des tribus, chargé de prendre des décisions concernant la nature des activités, et la manière d'exploiter la terre. Cet héritage culturel de solidarité, a contribué à l'émergence de diverses structures de solidarité durant la période coloniale, telles que les associations de bienfaisance, et les coopératives à caractère social. Cette tendance a conduit à des discussions et des dialogues, au cours desquels les pionniers du mouvement national, ont été convaincus de la nécessité de fonder des syndicats, et des organisations pour défendre leurs intérêts, soutenant ainsi le processus de libération nationale. Cela a abouti à la création de nombreuses associations de production et de consommation, ainsi des coopératives se sont répandues dans les domaines des services, du commerce et de l'industrie, et l'État s'est engagé pleinement dans ce processus, et cette politique économique, en adoptant le slogan de la nationalisation, et de la coopération comme deux grands axes du modèle économique.

2-2Contextes d'émergence des entreprises indigènes au niveau mondial et local

A-Contexte d'émergence mondiale

Le concept d'entreprises indigènes s'est développé dans le contexte mondial, dans ce que l'on appelle l'économie sociale, un modèle économique alternatif qui a émergé de manière significative dans les années 1980, dans les pays occidentaux, en réponse à l'application du modèle économique libéral et néolibéral, qui a progressivement entraîné une montée des crises économiques et sociales, une augmentation des inégalités de classe, et régionales dans de nombreuses sociétés, ainsi qu'une propagation du chômage, de la pauvreté et de la marginalisation sociale. C'est pourquoi l'économie sociale et solidaire est considérée comme un nouveau paradigme, pour restaurer le rôle social de l'État, et assurer une redistribution équitable des richesses.

Ce modèle économique a donné naissance à un ensemble de modèles organisationnels tels que: les coopératives, les associations coopératives, les entreprises sociales, etc. Pour

[8] Trabelsi Safwan, « L'économie sociale et solidaire en Tunisie: un phénomène aux racines historiques et sociales profondes », La pensé Juridique, Tunisie, Nº19, 2020, p4.

[9] Timoumi Hedi, *Tunisie (1956-1987)*, Edition, Mohamed Ali Hammi, Tunisie, 2008, p37.

[10] Touzi Mohamed, « Dans la tribu: une réalité multidimensionnelle », traduit par Mounir Saidaini, Imran pour Les études sociales et humaines, Nº 15, Beyrouth, 2016, p32.

institutionnaliser légalement ces organisations[11], une organisation européenne a abouti à la définition d'un certain nombre de critères économiques et sociaux, pour déterminer l'activité de ces organisations. Les critères économiques comprennent:

•Une activité productive continue
•Un minimum d'indépendance
•Un niveau acceptable de sécurité face aux risques économiques
•Un minimum de travail rémunéré

Les critères sociaux, quant à eux, expriment

•Une initiative émanant des citoyens
•Un pouvoir décisionnel qui ne repose pas sur la détention de capital
•Une dynamique participative qui intègre toutes les parties prenantes dans l'activité.
•Une distribution des bénéfices soumise à une détermination préalable.

Le tournant décisif pour le développement de l'économie sociale et solidaire, avec toutes ses entreprises a coïncidé avec la crise économique de 2008 en Europe, qui a transformé ce modèle économique alternatif en un des axes de l'agenda politique, dans le cadre de la politique économique de l'Union européenne, pour faire face au problème du chômage, fournir autant que possible des emplois, et ancrer l'idée de développement durable, et de protection de l'environnement.

Dans le contexte de la mondialisation croissante, et de l'intensification de la concurrence économique, entre les entreprises multinationales, ainsi que des répercussions économiques et sociales négatives qui en découlent, telles que le chômage, la pauvreté et l'exclusion, et avec l'émergence des groupements économiques, l'intérêt pour l'économie sociale et solidaire a commencé à s'élargir parmi les acteurs politiques. En conséquence, les initiatives en matière d'économie sociale et solidaire se sont multipliées, et de nombreuses structures officielles et non officielles ont été créés, pour encourager et organiser ces initiatives. Par exemple, en France, après la crise économique de 2008, l'entreprise sociale n'est plus seulement une façade politique, mais est devenue une réalité économique et sociale, intégrée dans les politiques publiques, pour remodeler la politique générale, et s'ouvrir davantage aux aspects sociaux.

B- Contexte d'émergence locale

-L'économie sociale et solidaire: une nouvelle vision de développement

L'idée des entreprises indigènes trouve ses racines dans un ancien cumul historique, mais sa structuration de manière organisée peut être attribuée à la période des années 1990, lorsque l'État tunisien a commencé à établir un écosystème[12], et des règles organisationnelles pour l'économie sociale et solidaire. Les premières initiatives se sont concrétisées avec la création de l'Agence nationale de l'emploi et du travail indépendant en 1993, puis de la Banque tunisienne de solidarité en 1997, qui est aujourd'hui le principal soutien aux entreprises indigènes, avec une ligne de financement des petites et moyennes entreprises ont été créé, sachant que les deux institutions financières ont des agences dans la plupart des gouvernorats du pays.

Au début de l'année 2011, et suite aux événements politiques et aux bouleversements structurels, qui ont touché toutes les structures de la société et ses secteurs, les autorités de tutelle ont été confrontées à la nécessité d'ancrer l'idée de l'économie sociale et solidaire dans le tissu social global, et de mobiliser le soutien populaire de toutes les organisations nationales. Cela a conduit à la signature d'un contrat de partenariat, entre le ministère de la Formation professionnelle et de l'Emploi, l'Agence de l'emploi et du travail indépendant, et la Banque tunisienne de solidarité, en

[11] Chabanet Didier& Richard Damien, « L'entrepreneuriat social: un nouveau paradigme?», Revue, Entreprendre et Innover, N°32, 2017, France, p26.

[12] Yasmine Boughzala, Hervé Defalvard et Zohra Bousninan, « La difficile émergence de l'entrepreneuriat social dans le processus démocratique de la Tunisie: une solution du côté des territoires?» Revue Interventions économiques, Open Edition Journal, 2016, p 3.

plus du contrat social qui a été conclu entre le gouvernement tunisien, l'Union générale tunisienne du travail et l'Union tunisienne de l'industrie, du commerce et de l'artisanat, résultat du dialogue social qui a eu lieu, et qui a été signé le 14 janvier 2013. Ce contrat, a mentionné que la Révolution du 14 janvier 2011 a révélé des déséquilibres structurels graves dans l'économie, et des défis auxquels le pays est confronté en termes de taux d'inflation et de chômage élevé, notamment parmi les diplômés de l'enseignement supérieur, en particulier les femmes, ainsi que le déséquilibre régional et le rythme lent du développement dans les régions intérieures**. Cette situation a conduit à considérer que, l'économie sociale et solidaire est actuellement la meilleure option, car elle pourrait réaliser la relance économique souhaitée.**

II-La question de l'entrepreneuriat dans les entreprises indigènes et problématique de fondement épistémologique

Considérer les entreprises indigènes comme une forme d'entrepreneuriat, nous amène à examiner la présence de la signification de l'action entrepreneuriale, et son adéquation à cette appellation. Pour révéler ces données, il est utile d'enraciner le concept d'entrepreneuriat dans son contexte historique, et épistémologique, qui implique des approches et des perspectives théoriques aux contextes cognitifs multiples et variés. En effet, le sujet de l'entrepreneuriat est devenu l'un des thèmes qui dominent plusieurs domaines scientifiques, tels que l'économie, la sociologie, la psychologie et les sciences de gestion. Malgré les bénéfices que le champ de l'entrepreneuriat tire de cette diversité disciplinaire, il n'y a pas eu de consensus sur les grandes lignes de la représentation du champ entrepreneurial.

Cependant, il est certain qu'il existe un accord sur ses répercussions en matière de développement économique, ainsi que sur la création d'emplois et la production de richesse.

Selon l'historique de la pensée entrepreneuriale, on peut conclure que le sujet de l'entrepreneuriat a traversé deux phases essentielles[13]: la première phase correspond à l'émergence du champ entrepreneurial, qui a coïncidé avec la fin de la Première Guerre mondiale, avec une approche principalement économique. La deuxième phase, qui a débuté dans les années 1970, a vu une diversification des approches théoriques, notamment du point de vue des sciences humaines et sociales. Les fruits de cette phase se sont manifestés dans les analyses, et propositions des chercheurs concernant les contextes, et les processus de structuration des entreprises, les modèles d'entrepreneurs et les actions entrepreneuriales, ouvrant ainsi la voie à de nombreuses théories, pour comprendre et expliquer le phénomène entrepreneurial.

1- L'approche économique de l'entrepreneuriat

C'est une approche qui est classée comme la référence théorique originale du champ entrepreneurial. Elle s'est développée à travers des théoriciens dans le domaine économique, parmi lesquels Richard Cantillon*, qui est considéré comme le premier à avoir inventé le concept d'entrepreneuriat, en présentant une vision claire de l'ensemble des activités que peut entreprendre un entrepreneur. Quant au penseur Jean-Baptiste Say*[14], il a approfondi les recherches de Cantillon, en clarifiant la profession d'entrepreneur et de capitaliste, en établissant un lien entre l'entrepreneur et le facteur d'innovation, considérant que l'entrepreneur est l'acteur clé du changement social, et parmi ses caractéristiques, il anticipe, organise, gère et surveille. Mais les deux chercheurs

[13] Becaddour Aicha, Ibid., p2.

*Richard Cantillon, (1680- 1734),Economiste irlandais et français, il est l'un des auteurs les plus significatifs qui marquent la transition du mercantilisme vers l'économie classique.

[14] Filion Louis Jaques, « Le champ de l'entrepreneuriat: historique, évolution, tendances », Revue internationale P.M.E, Nº2 ,1997, p132.

* Jean-Baptiste Say,(1767- 1832),Economiste Français, il fut l'un des premiers économistes à étudier l'entrepreneuriat et les entrepreneurs, conceptualisés comme organisateurs et moteurs du tissu économique

* Joseph Schumpeter,(1883- 1950),Economiste américain, connu pour ses théories sur les fluctuations économiques, la destruction créatrice et l'innovation.

s'accordent autour des principaux traits de l'acteur entrepreneurial, il est quelqu'un qui prend des risques, car il transforme des biens ou des fonds en valeurs financières inconnues à l'avance. Il est également cette personne qui découvre, et saisit les opportunités, pour réaliser des profits.

Le tournant décisif dans l'étude de l'entrepreneuriat coïncide avec l'émergence de l'économiste Joseph Schumpeter*, qui a enrichi le champ de l'entrepreneuriat, en formulant une théorie du développement économique, concluant que l'entrepreneur est celui qui porte une innovation créative, et qui représente le noyau central dans le développement économique.

Dans la résultante on dit que les partisans de l'approche économique, considèrent que l'entrepreneuriat est une pièce maitresse pour comprendre le processus de croissance économique. Cependant, le rôle de l'entrepreneur selon cette approche reste flou, en ce qui concerne les activités et les tâches qui lui sont assignées, et il a souvent pris une dimension lucrative, ce qui a conduit l'approche économique à ne pas aboutir à l'élaboration de modèles théoriques et méthodologiques, dans le domaine de la croissance économique, et en relation avec l'action entrepreneuriale, sans oublier qu'elle reste dominée par la notion de l'homme économique (L'homoéconomecus). Cette approche a fait l'objet de nombreuses critiques, en raison de son caractère quantitatif, et de son incapacité à utiliser une approche qualitative, avec des dimensions sociales, culturelles et psychologiques. Avec l'émergence des années 1970, la dimension socio-anthropologique a été ajoutée à l'étude de l'entrepreneuriat, en vue d'une meilleure compréhension de l'action entrepreneurial, et d'une théorie plus globale de l'entrepreneuriat.

En comparant ces spécificités entrepreneuriales avec la nature de l'organisation de l'entreprise indigène, et ses objectifs, il apparaît une dissonance évidente, et un contraste frappant, entre l'organisation entrepreneuriale aux objectifs économiques clairement lucratifs, sans tenir compte des dimensions sociales et solidaires, et l'organisation de l'entrepreneuriat indigène aux objectifs économiques lucratifs limités, et à la valorisation claire des dimensions sociales et solidaires. Ainsi, ancrer le concept de l'entreprise indigène dans la pensée économique, dans le but de le comprendre et de l'expliquer, constitue une forme d'arrogance et de projection dénuée de sens.

2-La question de l'entrepreneuriat dans la pensée entrepreneuriale sociale

En opposition aux théories économiques, principalement orientées vers la fonction économique de l'entrepreneuriat, des approches culturelles, issues principalement de la sociologie, de l'anthropologie et de la psychologie, ont émergé, se concentrant essentiellement sur la valorisation des dimensions sociales et culturelles de l'action. Dans ce contexte, le sociologue Max Weber*, a considéré que l'action entrepreneuriale, est en réalité une organisation rationnelle du travail libre, qui nécessite la séparation du travail domestique de l'entreprise sur la base d'un calcul précis, et il est considéré que la catégorie des entrepreneurs, est une catégorie qui a émergé dans l'école de la vie difficile, se caractérisant par la patience, la confiance en soi, la stabilité, et un engagement total envers leur travail. À partir de cette base conceptuelle, le paradigme de l'entrepreneur comme acteur, s'est progressivement développé pour comprendre, analyser et interpréter le phénomène entrepreneurial.

2-1 La question de l'entrepreneuriat à la lumière du paradigme de l'entrepreneur et sa relation avec l'organisation des entreprises indigènes

Les partisans de ce paradigme considèrent que l'entrepreneur individuel, est l'unité d'analyse pour comprendre le phénomène entrepreneurial. Sur cette base, l'entrepreneur est défini comme cette personne créative, qui se distingue par sa capacité à définir, et à atteindre des objectifs, tout en maintenant en permanence un haut degré de sensibilité, à l'exploitation des opportunités de travail potentielles, selon un style de prise de décision à risque modéré, visant à préserver les tendances à l'innovation et à l'action entrepreneuriale[15].

[15] Filion Louis Jaques, Ibid., p151.

* Max Weber (1864-1920), Economiste et sociologue allemand ,Considéré comme l'un des principaux fondateurs de la sociologie, et fondateur de la sociologie compréhensive.

Dans ce cadre les chercheurs sont appuyés sur des modèles analytiques comme les « traits de personnalité » de l'entrepreneur, considérés comme une variable importante influençant le projet entrepreneurial. Cette tendance a dominé, en particulier chez les chercheurs américains, qui ont adopté les traits de personnalité comme une approche, pour comprendre l'action entrepreneuriale, signifiant que l'action de créer une entreprise, est en réalité un processus d'anticipation découlant des traits personnels. À partir de cette perspective méthodologique, de nombreuses recherches et études ont été écrites, par des psychologues, des sociologues et des spécialistes du comportement, qui ont convenu d'une série de caractéristiques qui distinguent l'entrepreneur.

Dans les approches à référence psychologique, le chercheur Macmillan[16] a considéré que l'entrepreneur se distingue des autres individus, par des traits qualitatifs, qui peuvent se manifester sous forme d'indicateurs de leadership entrepreneurial. À la lumière de ces caractéristiques entrepreneuriales, qui sont essentiellement individuelles, l'adoption de ce paradigme comme approche pour comprendre, et déconstruire l'organisation des entreprises indigènes constitue une forme de projection méthodologique, qui ne peut aboutir à des résultats significatifs, tant que la structure de l'entreprise indigène, repose sur l'acteur entrepreneurial collectif ou n'existe pas. En revanche, les partisans du paradigme de l'entrepreneur, ont cherché à forger une théorie de la personnalité entrepreneuriale individuelle, celle qui porte des caractéristiques prédisant l'action entrepreneuriale, en vue de comprendre le système de valeurs et d'incitations entrepreneuriales. Certains ont proposé une théorie du besoin de réalisation, qui englobe un ensemble de traits individuels entrepreneuriaux, qui doivent être présents chez l'entrepreneur, parmi lesquels le besoin de l'**accomplissement / le besoin de confiance en soi / la capacité à résoudre des problèmes**. Cependant, ce qui peut être utile dans ce paradigme pour comprendre les entreprises indigènes, et donc pour les raisons de la création de l'organisation, c'est que les acteurs réalisent qu'il existe un besoin urgent d'accomplissement, qui pousse les individus à devenir entrepreneurs. Le besoin fondamental qui guide le processus de réalisation, est la croyance en un contrôle continu, et que le destin du projet entrepreneurial dépend de l'action des soi entrepreneuriaux, loin des forces extérieures, mais les autres dimensions qui caractérisent ce paradigme, privilégient essentiellement le facteur individuel, qui se manifeste par une série de traits entrepreneuriaux cruciaux, pour le succès entrepreneurial, ainsi que pour le développement de la confiance en soi, et la capacité à surveiller les résultats du projet entrepreneurial. Cela s'ajoute à d'autres traits abordés, tels que la propension à prendre des risques, l'indépendance, le leadership, l'innovation, le désir de réalisation personnelle, et d'expression de soi, le besoin d'indépendance et de liberté, ainsi que le plaisir de l'entrepreneuriat et du leadership.

En opposition à la référence psychologique qui adopte le paradigme de l'entrepreneur, pour comprendre le phénomène entrepreneurial, une référence démographique a émergé comme unité d'analyse, valorisant avec éloquence les caractéristiques personnelles des entrepreneurs, qui s'acquièrent et se forment progressivement à partir du milieu familial, du niveau d'éducation, de l'ampleur et de la richesse de l'expérience professionnelle, ainsi que de la nature de la position économique et sociale, sans négliger le facteur d'âge. L'idée fondamentale pour les partisans de la référence démographique, est que le contexte social et culturel commun, ainsi que les traits personnels constants des individus, fournissent une base pour s'identifier aux caractéristiques démographiques. Ainsi, l'émergence de l'idée de leadership entrepreneurial dans une ville ou un milieu social particulier, est attribuée à l'existence de modèles entrepreneuriaux multiples, et variés qui offrent des exemples, des modèles et un sentiment d'imitation et d'identification dans un certain milieu social. Ce sont des caractéristiques qui peuvent être comprises à la lumière de la structure des

[16] Danjou Isabelle, « L'entrepreneuriat un champ fertile à la recherche de son unité », Revue française de gestion, Nº28, 2002, p112.

entreprises indigènes, et de leur fonctionnement, tant que le facteur du milieu social, et la valeur des caractéristiques démographiques prévalent dans la formation de l'action entrepreneuriale.

Parmi les modèles analytiques qui s'inscrivent dans le paradigme de l'entrepreneur, on trouve ce qui est défini comme « création de valeur »[17], qui se résume à l'idée que l'entreprise est un résultat qui émerge entre l'individu et création de valeur, dont le résultat est l'émergence de l'action entrepreneuriale. Cela signifie que l'individu est l'acteur principal dans la création de l'entreprise, à travers un parcours et un contexte spécifique, visant à valoriser des richesses et des services, en leur attribuant la valeur qui leur revient. Progressivement, cette valeur confère une position sociale différente, en termes d'activité et d'objectifs, pour l'entrepreneur, et l'amène à changer ses attitudes et ses méthodes, Sa réflexion, ce qui signifie que nous sommes face à une relation d'échange, et d'interaction entre l'entrepreneur individuel et la création de valeur. Dans ce sens, ce modèle peut être utilisé pour expliquer la structure de l'entreprise indigène, en tant que projet visant à valoriser le patrimoine local, et les ressources locales, à travers leur découverte et leur transformation en valeur ajoutée. Cependant, la paradoxale réalité est que cette valorisation repose sur une action collective et implique des dimensions de solidarité sociale, ce qui nécessite un effort supplémentaire pour mobiliser la communauté locale et la convaincre de la pertinence du projet de l'entreprise indigènes. En revanche, le modèle création de valeur est fondée sur l'entrepreneur individuel et la dimension lucrative.

Avec l'augmentation des recherches et des études théoriques et empiriques concernant le paradigme de l'entrepreneur, qui ont produit des résultats à la fois qualitatifs, mais souvent contradictoires, il n'a pas été possible de parvenir à un modèle scientifique analytique clair. Ce qui a émergé de la plupart de ces recherches, c'est que l'entrepreneur est un produit social[18] par excellence, il est le fils de son environnement. C'est pourquoi l'entrepreneuriat est souvent considéré comme un phénomène local et régional, car les comportements individuels sont souvent teintés par la culture, les coutumes et les besoins locaux.

2-2 La question de l'entrepreneuriat à la lumière du paradigme du contexte et sa relation avec l'organisation des entreprises indigènes

Les chercheurs qui adoptent ce paradigme estiment que chaque contexte social, économique et culturel a un modèle organisationnel spécifique. Ainsi, cette approche adopte l'idée d'ancrer l'entrepreneur dans son contexte social, culturel, économique et politique. Granovetter[19], qui a été le principal promoteur et développeur de cette idée, considère que l'action économique est avant tout une action sociale, profondément enraciné dans les structures et les systèmes sociaux de la construction sociale dans son ensemble. Il repose sur deux dimensions fondamentales:

•L'action entrepreneuriale est essentiellement sociale et ne peut être expliqué par des motivations individuelles.

• Les entreprises économiques ne sont pas des simples entreprises de production, mais des constructions sociales par excellence.

Ainsi, l'acteur économique n'est pas séparé de la structure sociale, mais est enraciné dans des réseaux et des structures sociales, qui façonnent ses actions et ses comportements. A la lumière de ce paradigme, l'entrepreneuriat est soumis à des contextes sociaux, culturels, politiques et économiques spécifiques. Dans ce cadre, le paradigme du contexte est fortement proposé pour comprendre l'organisation de l'entreprise indigène, qui repose principalement sur les données du contexte local, et ses particularités. De plus, il s'agit d'une organisation qui porte essentiellement des

[17] Thierry Verstraete & Fayolle Alain, « Quatre paradigme pour cerner le domaine de recherche en entrepreneuriat », CIFEPME, Octobre 2004, France, p10.
[18] Filion louis Jaques, Ibid. p140.
[19] Granovetter M, «Economic Action and Social Structure: The Problem of Embeddedness», American Journal of Sociology, Nº 91, Novembre, 1985, p 481-510.

dimensions locales, basées sur le sens commun, la solidarité, la coopération et l'interaction entre tous les acteurs du contexte local.

Parallèlement, les partisans du paradigme du contexte, estiment que l'acteur entrepreneurial, qu'il soit individuel ou collectif, ne peut être compris dans sa réalité sans tenir compte des influences de l'environnement qui l'entoure. Selon le chercheur Cheysson, la valeur de l'entrepreneur ne réside pas dans ce qu'il accomplit ou produit, mais dans ce qu'il représente, en termes de statut et de prestige dans le contexte local, ce qui lui permet de crée une identité entrepreneuriale commune, résultant d'une interaction entre lui et les acteurs interconnectés dans l'environnement. Ainsi, le contexte n'est pas un facteur secondaire dans l'acte entrepreneurial, mais plutôt la traduction réelle de l'entrepreneuriat, ce qui rend la question de la formation de l'identité entrepreneuriale fortement liée à la nature des relations, et des actions que l'acteur entrepreneurial, qu'il soit individuel ou collectif, établit avec les acteurs de l'environnement, en vue de former une culture entrepreneuriale locale ,qui ne se limite pas à l'acteur entrepreneuriale, ou au domaine, mais qui est le fruit d'un sens commun[20].

Ces caractéristiques entrepreneuriales reflètent fortement ce que visent l'organisation des entreprises indigènes, à savoir l'ancrage d'un nouveau modèle de développement, et d'une culture entrepreneuriale solidaire, et coopérative avec des dimensions sociales, fondée sur une distribution équitable de la richesse, et l'intégration de tous les intervenants dans l'environnement local.

En conséquence, plus il existe une interaction forte entre les acteurs interconnectés dans l'environnement local, ou ce que l'on appelle les « agents de socialisation entrepreneuriale », plus la culture de l'entrepreneuriat s'enracine dans son milieu. Dans ce sens, la création de l'entreprise et l'acquisition de ses composantes, ne s'arrêtent pas à un moment donné, mais constituent un processus continu, et un travail durable de construction de significations changeantes.

Il est important de noter, qu'une situation contextuelle donnée, peut être entrepreneuriale à un moment donné, et non entrepreneuriale à un autre. Parfois, une situation contextuelle nécessite le développement d'activités entrepreneuriales autonomes, tandis que d'autres fois, il est nécessaire de créer de nouvelles organisations entrepreneuriales. Avec la diversité et la multiplicité des activités entrepreneuriales, l'environnement économique local acquiert une «mémoire entrepreneuriale». Sachant que l'identité du domaine entrepreneurial découle de l'unicité des initiatives entrepreneuriales[21], et de leur capacité à représenter des opportunités entrepreneuriales de l'environnement économique locale.

Les politiques de développement économique local réussies, sont celles qui émanent des spécificités du contexte local, et de la durée de disponibilité des conditions, et des circonstances favorables à l'émergence de l'action entrepreneuriale.

Il existe également des autres modèles analytiques qui s'inscrivent dans le paradigme du contexte, et qui peuvent être utilisés pour comprendre l'organisation de l'entreprise indigène, on trouve ce que l'on appelle « L'écosystème ». Ce terme, emprunté à la biologie, a été utilisé par Moore[22] dans l'étude des activités économiques, et de la culture des entreprises. Ce système est défini comme un espace intégré de systèmes et de relations interconnectées, entre les acteurs politiques et économiques, ainsi que divers systèmes interconnectés, financiers, politiques, administratifs, technologiques, logistiques, marketing, sociaux et environnementaux.

Pour confirmer cela, le chercheur Isemberg a identifié six bases sur lesquelles peut reposer l'écosystème entrepreneurial: 1. Culture appropriée / 2. Système politique proactif / 3. Disponibilité de ressources financières / 4. Ressources humaines qualifiées / 5. Marchés développés / 6.

[20] GH Mead, *L'esprit, le soi et la société*, Edition P.U.F, Juin 2006, p34.

[21] W. Bygrave and M. Minniti, «The social dynamics of entrepreneurship», Entrepreneurship theory and practice, Spring, United States, 2000, p26.

[22] Moore James, «Predators and prey: a new ecology of competition», Harvard Business, Review, Vol 7, N°13,1993, United States, pp75-86.

Infrastructure intégrée. Ainsi, l'application de ces mécanismes et caractéristiques à la manière dont se forme l'entreprise indigène, dans le contexte tunisien, peut conduire à de nombreux résultats, d'autant plus que le concept d'écosystème ou d'environnement d'accompagnement, est devenu l'une des conditions nécessaires et cruciales pour le succès de l'action entrepreneuriale. En effet, la supériorité d'une entreprise par rapport à une autre, est généralement attribuée principalement à l'élément d'environnement d'accompagnement stimulant.

Il est à noter que le modèle d'écosystème, ne peut pas être reproduit, car chaque contexte local a son authenticité, et ses spécificités, tout comme chaque période temporelle a son propre écosystème.

Malgré la disponibilité d'un écosystème, l'action entrepreneuriale est considérée par certains comme une forme « d'opportunités d'affaire », au bon moment, au bon endroit, et dans les circonstances appropriées. Ainsi, nous sommes face à un modèle analytique différent, qui considère que ces opportunités résultent d'un déséquilibre sur le marché économique, en raison de l'inefficacité ou du déséquilibre du modèle économique. C'est exactement ce qui se passe en Tunisie, où le modèle économique libéral et néolibéral est en crise profonde, en raison de l'augmentation du chômage, et des inégalités flagrantes, entre les classes et les régions. Cela a contraint les acteurs politiques à créer un modèle économique parallèle, à savoir le projet des entreprises indigènes, dans une tentative de rétablir l'équilibre, et d'assurer une distribution équitable de la richesse.

Dans ce contexte, l'idée de créer ce modèle économique alternatif a représenté pour de nombreuses communautés, une opportunité d'affaire, notamment face aux avantages financiers, aux exonérations fiscales, et à d'autres formes de facilitation offertes par les institutions de l'État. Cependant, la saisie de ces opportunités et leur traduction sur le terrain restent le fruit d'un résultat de construction sociale, qui découle des interactions et des échanges intensifs, entre l'acteur et l'environnement social, porteur de ces opportunités[23]. Ainsi, l'opportunité est cette rencontre entre un contexte structuré, et des individus capables de représenter l'action entrepreneuriale, ou elle peut être considérée comme une confrontation, entre l'incertitude naturelle de la situation du marché, et l'incertitude artificielle, portée par l'acteur, selon l'approche d'analyse stratégique de Michel Crozier*.

Avec cette déconstruction et ce détail du paradigme du contexte, on peut dire qu'il est pertinent d'adopter certains de ses modèles analytiques, pour comprendre les entreprises indigènes, tant ce paradigme privilégie les dimensions locales, et les contextes économiques locaux dans la formation des actions entrepreneuriales, tout comme l'organisation des entreprises indigènes. Parallèlement, nous avons accumulé un ensemble de recherches de terrain concernant le phénomène entrepreneurial dans le contexte tunisien, notamment dans la région du Sahel tunisien, et nous avons conclu à la centralité des facteurs de contexte, et de communauté locale, dans la formation et la durabilité de l'entrepreneuriat. Par exemple, la propagation des établissements touristiques dans le Sahel tunisien, a conduit à un large mouvement entrepreneurial, et à l'émergence d'une culture entrepreneuriale au sein du tissu social local, produisant une spécificité entrepreneuriale, pour certaines familles, qu'elles soient spécialisées dans le secteur touristique, ou dans d'autres actions entrepreneuriales Cependant, les données du contexte local en Tunisie, ne se limitent pas seulement à l'intensité de l'activité économique, et à la profondeur de l'expérience entrepreneuriale. La formation et la durabilité des expériences entrepreneuriales, sont parfois déterminées par la capacité de l'acteur entrepreneurial, à établir des relations informelles de clientèle, et à les exploiter pour le succès de son entreprise. Cela fait que de nombreuses initiatives entrepreneuriales ne sont pas le fruit d'une véritable accumulation d'activités, d'expériences et de données locales, aussi cruciales soient-elles, mais relèvent plutôt d'une

[23] Nystrom Harry, «Creativity and entrepreneurship in creative action in organization», Edition, Cameron Ford Dennis Gioia, 1995, p23.

* Michel Crozier,(1922 – 2013), sociologue français, il est le principal concepteur de l'analyse stratégique et de l'action collective en sociologie des organisations.

forme d'opportunités d'affaire, ce qui est le modèle analytique qui reflète la réalité de nombreuses initiatives entrepreneuriales dans le contexte tunisien.

2-3 La question de l'entrepreneuriat à la lumière du paradigme du processus et sa relation avec l'organisation des entreprises indigènes

Parmi les paradigmes qui peuvent être adoptés comme approche pour comprendre l'organisation des entreprises indigènes, on trouve celui du «paradigme du processus», qui a émergé dans les années 1990, face aux paradigmes de « l'entrepreneur » et du « contexte » en tant que le plus complet pour étudier le phénomène entrepreneurial. Parmi ses principaux théoriciens, on trouve Gartner[24], qui le considère comme une variable indépendante dans le domaine de l'entrepreneuriat, ce qui signifie que sa valeur se manifeste par sa capacité d'influence. Il est à noter que l'application de la variable processus varie chez les chercheurs: certains l'utilisent pour décrire les conditions de création de l'entreprise, d'autres pour la manière de reproduire ou de restructurer l'organisation de l'entreprise, et d'autres encore mettent l'accent sur la manière de saisir les opportunités au cours du parcours de l'entreprise.

Le facteur déterminant pour les partisans de ce paradigme, est que la croyance en l'idée d'organisation entrepreneuriale, et sa défense sont plus importantes que le groupe qui la fonde. En d'autres termes, le principal défi réside dans la variable temps et la durabilité de l'organisation. Ainsi, l'approche par le processus, considère l'entrepreneuriat comme un processus relationnel et séquentiel, un mélange d'attitudes proactives, de prévisions et de dynamique organisationnelle. Étant donné que l'entrepreneuriat conduit souvent à la création d'une nouvelle identité, l'émergence d'une organisation reflète un processus spécifique d'activité, d'exploitation et de valorisation des opportunités. Comprendre et interpréter l'organisation des entreprises indigènes à la lumière de cette approche, révèle certaines intersections, car l'approche par le processus suppose la saisie et la valorisation des opportunités entrepreneuriales, présentes dans l'environnement local. Cela est également vrai pour les entreprises indigènes, qui reposent principalement sur l'évaluation et la valorisation des ressources et des richesses locales. Cependant, la différence réside dans le fait que l'approche par le processus, suppose que la formation de l'entreprise représente un processus existant, que l'on souhaite développer ou modifier, et non un point de départ pour l'entrepreneuriat, tout comme l'indique l'organisation des entreprises indigènes.

L'action entrepreneuriale, selon les partisans du paradigme du processus, est un échange mutuel entre les acteurs de l'entreprise et la production de valeurs. Plus l'acteur entrepreneurial parvient à produire de valeurs, à atteindre des objectifs, à connaître une ascension sociale, et à acquérir un statut social, plus il acquiert un pouvoir entrepreneurial. Cette interaction se construit et se développe dans le cadre d'un processus spécifique.

Étant donné que le système entrepreneurial, est constitué de chaînes interconnectées en interaction, entre l'acteur entrepreneurial et l'environnement, ainsi que dans la production de valeurs, et en relation avec un contexte spécifique, où le facteur temps constitue une dimension incontournable, l'observateur attentif du processus de formation des entreprises indigènes, dans le contexte tunisien actuel, se heurte à une contradiction entre ce qui est supposé par les partisans du paradigme du parcours, qui préconisent des étapes et des phases précises, pour façonner une nouvelle identité entrepreneuriale. En effet, la plupart des initiatives des entreprises indigènes sont restées rapides et influencées par des contextes idéologiques et familiaux, souvent opportunistes et mimétiques, plutôt que de s'appuyer sur des processus réfléchis, et des analyses approfondies de l'environnement local dans ses différentes composantes.

[24] Alain Fayolle, « Entrepreneuriat et processus: faire du processus un objet de recherche et mieux prendre en compte la dimension processus dans les recherches », CIFEPME, Montpellier, 2004, p3.

D'après les concepts centraux du paradigme du processus, on trouve la notion de temps en relation avec sa perception, sa mesure et son expérience, ainsi que les périodes de fondation, d'innovation et de révision. Dans le cadre de la création d'une entreprise, il est utile de déterminer à quel moment nous pouvons dire que le processus d'innovation a commencé, à quel moment nous pensons que la phase d'innovation est terminée, et à partir de quel moment nous pouvons qualifier un individu d'entrepreneur. Par conséquent, la valorisation du temps, et l'évaluation de sa véritable valeur sont des processus très importants pour le succès et la durabilité du projet. En revanche, de nombreuses études de terrain ont confirmé que les Tunisiens, en général, ne possèdent pas une culture de valorisation du temps. En effet, la culture de l'investissement du temps libre reste faible dans le tissu social tunisien, ce qui signifie que le facteur temps, dans la création d'entreprises indigènes, ne sera pas une priorité. De plus, la transition d'une phase à une autre, dans le processus de construction, et de développement de l'entreprise, sera souvent marquée par de nombreux déséquilibres, en raison du non-respect des spécificités et des exigences de chaque phase, Un des principaux théoriciens du paradigme du processus, noté que l'action entrepreneurial est un processus de création d'une organisation structurée, orientée vers l'atteinte d'objectifs spécifiques. «Gartner»[25] préfère parler de l'émergence de l'organisation, plutôt que de sa fondation, car il considère que le passage de l'idée à l'action nécessite de surmonter des obstacles, ce qui signifie qu'il existe un processus entrepreneurial, qui commence par la formation et se transforme ensuite en organisation.

CONCLUSION

La phase de condensation théorique, et de construction des concepts, et des idées est décisive, pour comprendre les phénomènes sociaux. C'est elle qui donne au chercheur la capacité d'utiliser au mieux les concepts, et de bien les maîtriser, en harmonie avec les contextes historiques, et les circonstances épistémiques. Dans ce cadre, nous avons tenté d'ancrer le concept d'entreprise indigène dans son contexte conceptuel et épistémologique, en vue d'atteindre une approche théorique appropriée. En examinant les principales approches théoriques, et les modèles analytiques qui ont travaillé sur les organisations entrepreneuriales, nous avons conclu que l'organisation des entreprises indigènes, classées parmi les entreprises sociales, peut être étudiée principalement sous l'angle de la pensée entrepreneuriale sociale, qui comprend également plusieurs paradigmes. Cependant, il est essentiel d'aborder ces paradigmes avec une perspective sélective et prudente, en utilisant les concepts ou les modèles analytiques, qui répondent à la nature de l'organisation des entreprises indigènes, loin de tout transfert méthodologique arbitraire. En général, parmi les paradigmes qui peuvent être adoptés pour comprendre, et interpréter les entreprises indigènes, on trouve le paradigme du **«contexte local» comme élément fondamental dans la formation et la durabilité des organisations entrepreneuriales**, en raison des possibilités qualitatives qu'il offre, d'un sens commun, d'une mémoire entrepreneuriale, et d'un « écosystème ». Ce dernier représente un espace local intégré, caractérisé par une interaction fructueuse, entre les acteurs économiques, et les autres intervenants de la communauté locale, ainsi qu'une infrastructure et une technologie appropriées. En d'autres termes, la présence d'un écosystème confère souvent au contexte local une marque économique distinctive, le rendant attractif et stimulant.

On peut utiliser aussi le paradigme pour comprendre la question du temps dans l'action entrepreneuriale. Selon les résultats de recherches antérieures sur l'action entrepreneuriale en Tunisie, il a été constaté que le facteur temps est souvent marginalisé dans le contexte social tunisien. En effet, le comportement entrepreneurial tunisien, est généralement marqué par l'improvisation, le fait de brûler les étapes et une mauvaise adaptation aux exigences du processus temporel. En

[25] Versterate Thierry, « La création d'entreprise par les chercheurs de la fonction publique: exploration des dimensions appelés par la loi sur l'innovation », N°99-587, Juillet 1999, Rapport pour le CNRS, 2003, p13.

conséquence, le modèle analytique connu sous le nom d' « opportunités d'affaire » dans la structure des actions entrepreneuriales, semble être le plus adapté, et en harmonie avec le phénomène entrepreneurial en Tunisie, notamment en ce qui concerne la nature de la formation des entreprises indigènes.

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Conclusions

Strategic Reflections for the EU and Its Neighbours in an Era of AI Transformation and Multi-Level Geopolitical Pressures

DR. MIHAELA DACIANA NATEA[1], DR. MARIA COSTEA[2], DR. SIMION COSTEA[3]

A TRANSFORMING EUROPEAN STRATEGIC ECOSYSTEM

The contributions assembled in *L'Europe Unie – Special Volume 23/2025* reveal a European strategic environment undergoing profound, simultaneous transformations. The Union, its neighbours, and its global partners confront a convergence of systemic pressures: disruptive technological innovation, legal and ethical challenges in digital governance, widening financial vulnerabilities, and resurgent geopolitical competition shaped by Russian aggression, instability in the wider neighbourhood, and the impact of Mediterranean social and political change.

Across all chapters, a common thread emerges: **Europe's resilience depends on strengthening technology governance, consolidating democratic cultures, and building coherent geopolitical strategies grounded in historical understanding and institutional credibility**. While the drivers of instability differ—from algorithmic opacity to hybrid warfare, from fintech-driven inequalities to unresolved security guarantees—the solutions converge around robust legal frameworks, institutional trust, and strategic depth.

The volume's interdisciplinary lens—drawing on law, economics, history, political science, sociology, and anthropology—confirms that European security in the digital age is not reducible to military or technological capabilities alone. Instead, it emerges from the intersection of **normative regulation, socio-economic inclusion, historical memory, and geopolitical alignment**.

I. AI, Cybersecurity and the Changing Conditions of Digital Trust[4]

The first chapter of the volume demonstrates convincingly that **artificial intelligence is no longer a sectoral issue**, but a **structuring condition** of contemporary governance, democracy and security.

The analysis of **digital trust in game development through AI** extends this logic into a sector often underestimated in policy debates. The gaming industry is not marginal: it is a laboratory of

[1] Mihaela Daciana Natea, Professor Habil, UMFST, ORCID https://orcid.org/0009-0006-0104-6459;
Web of Science Researcher ID AAB-4991-2020; NATEA MIHAELA DACIANA (Author) – 4 – Web of Science Core Collection , Scopus ID: 57213608762 Scopus preview – Scopus – Search for an author profile Natea, Mihaela Daciana – Author details – Scopus Preview Scopus preview - Scopus - Author Feedback Wizard
Mihaela Daciana Natea (Bolos) – Google Scholar
ResearchGate: Mihaela Daciana Natea
Zenodo: CONCLUSIONS
[2] Dr. Maria Costea- Senior Researcher, Romanian Academy, "Gheorghe Șincai" Institute for Social Sciences and the Humanities, Târgu-Mureș . ORCID: https://orcid.org/0009-0006-7201-645X
WoS ResearcherID: JWP-2948-2024;
Google Scholar Maria Costea – Google Scholar
ResearchGate Maria COSTEA
[3] Dr Simion Costea, Professor Habil, UMFST, ORCID: Simion COSTEA (0000-0002-9751-9225) – My ORCID
WoS ResearcherID: JWP-3111-2024, Scopus Author ID: 57203747337
GND: 1014266807, ISNI: 0000000356061972 , ZENODO, GOOGLE SCHOLAR, RESEARCH GATE , HAL
[4] See also: Natea, Mihaela Daciana; Costea, Simion (eds), *EU Law and Politics at the Crossroads: Navigating the Complexities of AI, Digitalization, Data Protection, Security, and Radicalization (L'Europe unie/United Europe, Paris, 20/2023, special volume),* Cluj-Napoca: Napoca Star, 2023. DOI 10.5281/zenodo.15182658

immersive environments, behavioural data extraction and real-time interaction on a massive scale. By asking how AI can both enhance and undermine digital trust in games, the article points to a broader lesson: **trust is not a by-product of innovation; it is a precondition for sustainable digital markets.**

Defining the components of digital trust—transparency, fairness, data protection, content moderation, accountability—within an empirical framework that includes case studies and EU hard and soft law, the study implicitly warns that **Europe may lead in creation but lag in distribution and monetisation if trust deficits persist**. For the EU's neighbours, which often host development studios or serve as testing grounds while lacking robust regulatory infrastructures, this question becomes existential: they may either align themselves with European trust standards or slide into a fragmented digital landscape dominated by extraterritorial platforms and opaque business models.

The paper on **Deepfake Threats and EU Law: Navigating Disinformation, Cyber Violence, and the Risks of Digital Manipulation"** situates itself at the intersection of Chapter I and Chapter III: **AI-assisted manipulation as a vector of disinformation and cyber violence**. Deepfakes do not simply threaten personal reputations; they **erode the evidentiary foundations** of public life, creating structural uncertainty about what is real, especially in election contexts or conflict zones. The volume therefore, establishes a continuum between:

- technical vulnerability disclosure;
- trust frameworks in consumer industries like gaming;
- and the **weaponisation of AI-generated content**.

The paper on **brain–computer interfaces (BCIs)** extends the discussion beyond conventional privacy concerns. By connecting the human brain directly to external devices, BCIs raise questions about **neurorights, cognitive liberty, identity, and integrity**. The author argues that existing human rights categories—freedom of thought, privacy, bodily integrity—are strained by these technologies, which blur the line between internal mental life and externalised data.

For the EU and its neighbours, this is not speculative philosophy. Medical applications of BCIs are already being explored; military and dual-use research is not far behind. If the EU aspires to be a **normative power in AI and neurotechnology**, it cannot stop at data protection; it must articulate **substantive standards on mental autonomy** and dignified use of neurotechnology. Neighbouring states will have to decide whether to adopt these standards, align with other regulatory models, or fall into a grey zone of experimental practices without robust legal guarantees.

Finally, the study on **biohacking** reveals another frontier where **regulation, ethics and innovation collide**. By examining DIY biology practices and community labs in Europe and Latin America, the authors show that biohacking can both **empower local communities** and **amplify risks**: biopiracy, exploitation of indigenous genetic resources, environmental externalities, and cybersecurity gaps in biological data and connected devices. The article's crucial contribution is to demonstrate how instruments like the GDPR intersect with biohacking—not only in terms of data, but also in relation to **knowledge governance and benefit-sharing frameworks**.

For the EU and its neighbours, this confirms that **AI transformation is entangled with broader socio-technical movements**, which cannot be policed solely through high-level regulations. A multi-level governance approach must recognise grassroots innovation while preventing the instrumentalisation of biohacking for exploitative or destabilising purposes.

In sum, Chapter I demonstrates that **AI transformation reshapes trust, vulnerability, identity, and rights at a systemic level.** The EU and its neighbours are not merely regulating devices; they are redefining the basic conditions under which citizens can still believe in institutions, in information, and in the continuity of their own mental and bodily integrity.

2. Digital Governance and the New European Regulatory Paradigm

The studies in Chapter II illuminate a critical dimension of European resilience: the governance of data, artificial intelligence, and financial technologies. Three overarching conclusions arise.

2.1. Data Protection as a Structural Condition for Innovation

Fintech's transformative potential—algorithmic lending, digital wallets, automated savings, and mobile-first financial inclusion—is dependent on trust, transparency, and enforceable rights. The research demonstrates that:

- GDPR remains the cornerstone of digital constitutionalism in Europe.
- Data protection does not restrict innovation; it **enforces the conditions under which innovation becomes socially legitimate**.
- Regions with weak data governance experience higher risks of algorithmic discrimination, digital exclusion, and predatory lending.

As multiple papers note, fintech can democratize financial access *or* extend inequalities depending on the normative frameworks governing personal data. The conclusion is clear: **GDPR and the EU AI Act form the normative backbone of responsible digital finance**.

2.2. Sensitive Data and the Ethical Foundations of European Law

The study on Article 9 GDPR shows that sensitive personal data constitute not mere informational categories but **moral and constitutional constructs**. Their misuse affects identity, dignity, and equality. The reversal of the justification burden—demanding that processors justify necessity—embeds an ethical architecture into EU law that distinguishes European governance from that of other global actors.

This approach strengthens:

- human-rights-based policymaking,
- non-discrimination safeguards,
- democratic legitimacy in the digital sphere.

In a geopolitical context where authoritarian regimes use data as an instrument of control, the EU insists that **data governance reflects a model of democratic ethics**.

2.3. Financial Literacy, Behavioural Anchors, and Socio-Economic Inclusion

The findings of the empirical study on financial perceptions reinforce Europe's long-standing recognition—also echoed in OECD policies—that **financial literacy is a structural component of social resilience**.

Income, saving practices, financial goal-setting, and initial perceptions significantly influence stability. Meanwhile, motivation, employment status, and deferred payments play weaker roles.

These results highlight that:

- Successful financial education must operate cognitively (knowledge), attitudinally (confidence), and behaviourally (habits).
- EU and OECD frameworks remain relevant and empirically validated by Romanian evidence.
- Structural vulnerabilities can be mitigated through behaviourally informed public policy.

Together, the contributions in Chapter II demonstrate that Europe's digital transformation must be anchored in **legal clarity, ethical rigor, behavioural insight, and institutional trust**.

3. Democracy and Geopolitics: Continuity and Rupture in Russian Power Projection[5]

[5] See also: Natea, Mihaela Daciana; Costea, Maria; Costea, Simion. *EU Security and Multicultural Societies. Dealing with a Russian Empire Revival*, Paris, L'Harmattan, 2024. Natea, Mihaela Daciana; Costea, Simion (eds), *EU Law and Politics at the Crossroads: Navigating the Complexities of AI, Digitalization, Data Protection, Security, and Radicalization (L'Europe unie/United Europe, Paris, 20/2023, special volume),* Cluj-Napoca: Napoca Star, 2023. DOI 10.5281/zenodo.15182658 . Natea, Mihaela Daciana; Costea, Simion (eds), *The EU foreign and security dilemmas in a challenging world (L'Europe unie/United Europe 19/2023, special volume)* Cluj- Napoca: Napoca Star, 2023

Chapter III provides a multi-layered examination of Russian behaviour in Europe—from hybrid interference to historical military occupations, and from informational operations to failed security guarantees in Ukraine.

3.1. Historical Continuities of Russian Hybrid Interference[6]

The study on Russian electoral interference demonstrates that the Soviet/Russian playbook has displayed remarkable **continuity across a century**:

- cultivation of influence networks,
- narrative manipulation,
- exploitation of political polarisation,
- coordinated disinformation campaigns.

While technologies have evolved, the strategic objectives—weakening adversaries, fostering confusion, and undermining democratic legitimacy—remain constant. The historical approach shows that democratic states have *not sufficiently learned* from documented Soviet "active measures" of the 1980s.

The conclusion is evident: **European democracies must integrate historical memory into contemporary counter-disinformation strategies**.

3.2. The 2024 European Parliament Elections in Romania: SOE Model Persisting

The article on Romania's 2024 European elections reveals:

- the durability of the Second Order Election (SOE) model,
- persistent under-Europeanisation of political discourse, and
- structural dependence on domestic triggers for increased turnout.

Despite higher participation rates in 2019 and 2024, campaigns remained domestically focused, with European themes marginalised. The findings expose a critical democratic weakness: **European elections in Romania still fail to build genuine deliberative engagement with EU policy debates**.

This reflects broader European challenges: insufficient political socialisation, low visibility of MEP roles, and domesticisation of EU-level contestation.

3.3. The Budapest Memorandum: The Limits of Security Assurances

The re-evaluation of the 1994 Budapest Memorandum demonstrates that:

- Ukraine received assurances, not guarantees.
- The arrangement ensured denuclearisation but failed to establish deterrence.
- Grey-zone aggression (Crimea, Donbas, 2022 invasion) exploited the non-coercive nature of the document.

The consequences extend to the EU's strategic culture:

- post-2014, Europe shifted toward resilience and sanctions-based responses;
- post-2022, it accelerated defence-industrial coordination and EU–NATO convergence;
- yet Budapest's structure cannot be retroactively enforced.

The lesson is unambiguous: **European security cannot rely on political assurances alone; it requires capabilities, alliances, and enforceability**. [7]

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[6] See also: Costea, Maria, and Simion Costea. *Diplomație și actori geopolitici în epoca interdependenței complexe [Diplomacy and Geopolitical Actors in the Age of Complex Interdependence]*. Cluj-Napoca, Napoca Star, 2021. Costea, Maria, Costea Simion, "Ukraine between EU and Eurasian Regional Project in 2013", p.113-131, in *Transylvanian Review*, Vol. XXIV, Supplement No. 1, 2015 DOI: 10.5281/zenodo.15564422

[7] See also: Natea, Mihaela Daciana; Costea, Maria; Costea, Simion. *EU Security and Multicultural Societies. Dealing with a Russian Empire Revival*, Paris, L'Harmattan, 2024. Natea, Mihaela Daciana; Costea, Simion (eds), *The EU foreign and security dilemmas in a challenging world (L'Europe unie/United Europe 19/2023, special volume)* Cluj- Napoca: Napoca Star, 2023

3.4. Russian Imperial Military Presence in the 19th Century: Moscow Archival Revelations

The scholarly review of Ela Cosma's volume demonstrates:

- long-term strategic patterns of Russian intrusion in the Romanian Principalities;
- military, political, and administrative mechanisms of occupation;
- Moscow's reliance on direct control and logistical dominance;
- the value of rare archival sources in reconstructing imperial behaviour.

These documents bridge 19th-century occupation with contemporary Russian geopolitical behaviour, reinforcing the conclusion that **Russian power projection follows a consistent historical logic**.

Taken together, the contributions of Chapter III reveal that **European democracy and security are inseparable from historical memory and geopolitical clarity.**

4. The Mediterranean and the EU Neighbourhood: Identity, Tension, and Structural Change

The studies in Chapter IV examine Tunisia[8] as a micro-laboratory of Mediterranean transformation, illustrating how geopolitics, identity, migration[9], and local socio-economic strategies intersect.

4.1. Mediterraneity as a Construct, Not a Given

The notion of "Mediterraneity" emerges as an **ambiguous, contested, and political space**. The Tunisian case shows:

- asymmetries in Euro-Mediterranean frameworks,
- shifting post-2011 representations,
- the influence of migration flows on symbolic and social identities,
- the role of civil society as a corrective force.

Rather than a natural space of cooperation, Mediterraneity appears as an arena of negotiation shaped by power relations.

4.2. Indigenous Enterprises and Social Entrepreneurship

The study on indigenous enterprises argues convincingly that:

- local entrepreneurship reflects hybrid forms of social solidarity,
- conventional paradigms of entrepreneurship (actor, context, process) do not fully explain local realities,
- analytical models based on opportunity and ecosystem frameworks better capture the formation of indigenous enterprises.

This confirms broader EU–neighbourhood evidence: **local development requires adaptive models, not wholesale transfer of Western frameworks**.

Together, these contributions highlight that the EU's southern neighbourhood remains a space of profound socio-political creativity, but also vulnerability—requiring nuanced, historically informed, and culturally sensitive approaches.

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[8] *Histoire et mémoires. Entre savoirs, interprétations et transmission Colloque international en hommage au Professeur Hedi Saidi BOOK OF ABSTRACTS / LIVRE DES RÉSUMÉS*, ed Simion Costea, coord Adel Bouzid et alii, University of Sousse (Tunisia), 17–19 April 2025. Costea, Simion, *Preface – Hedi Saidi, La Franc-maçonnerie dans la Tunisie coloniale, Saga de la loge « L'Aurore du XXe Siècle » de Bizerte (1900-1940),* Paris, Editions du Cygne, 2024, 187 pages, ISBN: 9782849247761, 2849247766, DOI: 10.13140/RG.2.2.30740.31369,

[9] See also: Costea, Maria, and Simion Costea. "Challenges of the EU in the Migrant/Refugee Crisis in 2015." In *Discourse as a Form of Multiculturalism in Literature and Communication. History and Cultural Mentalities*, ed. Iulian Boldea, 166–175. Târgu-Mureș: Arhipelag XXI Press, 2015. ISBN 978-606-8624-21-1. WOS:000450493600018. DOI 10.5281/zenodo.15712863.

5. Cross-Cutting Lessons for the EU and Its Neighbours[10]

Across the chapters, several **cross-cutting lessons** emerge.

1. **AI transformation is constitutional, not merely technical.** From digital trust in gaming to BCIs and biohacking, the volume shows that AI reshapes fundamental rights, institutional trust and the boundaries of personhood. The EU and its neighbours must therefore treat AI governance as a matter of **constitutional design**, not only of market regulation.

2. **Data protection and inclusion are inseparable.** Fintech, financial education and sensitive-data governance converge on the same point: without robust rights, transparency and accountability, digital inclusion becomes **precarious integration into opaque systems**. This applies equally to EU citizens and to neighbouring societies exposed to European regulatory influence.

3. **Security assurances without enforceable commitments are fragile.** The Budapest Memorandum case, when read alongside Russian interference, Trump's deals, Trump's 28 points in November 2025, and the archival history of Russian campaigns, underscores a hard truth: **political assurances and "soft" tools cannot replace credible deterrence**. For the EU, this demands a clearer articulation of when it is prepared to move from norms and sanctions to tangible security guarantees, especially for neighbouring states that have taken high-risk decisions aligned with European expectations.[11]

4. **Perception has become a central arena of conflict:** Deepfakes, disinformation, second-order election dynamics and long-standing active measures all point to the same diagnosis: **political authority now depends on controlling or at least stabilising informational environments.** The EU and its neighbours must invest not only in cyber-defence and platform regulation, but also in **media literacy, public-service media and resilient democratic institutions**. [12]

5. **Historical research is a strategic asset.** The Ela Cosma volume review reminds us that access to, and critical editing of, archives is not just an academic luxury; it is a **precondition for resisting revisionist narratives**. The EU should treat support for independent historical research and archival cooperation as part of its **security and democracy toolkit**.[13]

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[10] See also: Natea, Mihaela Daciana; Costea, Maria; Costea, Simion. *EU Security and Multicultural Societies. Dealing with a Russian Empire Revival*, Paris, L'Harmattan, 2024. Natea, Mihaela Daciana; Costea, Simion (eds), *EU Law and Politics at the Crossroads: Navigating the Complexities of AI, Digitalization, Data Protection, Security, and Radicalization (L'Europe unie/United Europe, Paris, 20/2023, special volume),* Cluj-Napoca: Napoca Star, 2023. DOI 10.5281/zenodo.15182658. Natea, Mihaela Daciana; Costea, Simion (eds), *The EU foreign and security dilemmas in a challenging world (L'Europe unie/United Europe 19/2023, special volume)* Cluj- Napoca: Napoca Star, 2023.

[11] Mihaela Daciana Natea, Veronica Zaharagiu, Lucian Săcălean, Simion Costea (eds).Resilient Multicultural Societies in the Face of Hybrid Threats, București: Eikon, 2025 Mihaela Daciana Natea, „From Education for Democratic Culture to Education for Resilience. Are they Different in Building Competences to Combat Disinformation?", in L'Europe Unie, France, nr 19/2023: *The EU Foreign Policy and Security Dilemmas in a Challenging World*

[12] See also: Natea, Mihaela Daciana; Costea, Maria; Costea, Simion. *EU Security and Multicultural Societies. Dealing with a Russian Empire Revival*, Paris, L'Harmattan, 2024. Natea, Mihaela Daciana; Costea, Simion (eds), *EU Law and Politics at the Crossroads: Navigating the Complexities of AI, Digitalization, Data Protection, Security, and Radicalization (L'Europe unie/United Europe, Paris, 20/2023, special volume),* Cluj-Napoca: Napoca Star, 2023. DOI 10.5281/zenodo.15182658, Natea Mihaela Daciana, **„**Fabricating truth: from a hybrid war to political fake news. Study case on Romanian illiberal parties' discourse in the context of the Ukrainian war", *Civil Szemle*, Special Issues V/2023, pp. 155-168, Natea Mihaela Daciana, „The European Knowledge-Security Nexus: Science Diplomacy as a Policy Tool Against Hybrid Threats", *Europolity-Continuity and Change in European Governance*, nr6/2025. Natea Mihaela Daciana, *Disinformation crossing borders. The Multilayered Disinformation Concerning the War in Ukraine*, L'Harmattan, Paris France, 2022. Natea, Mihaela Daciana; Costea, Simion (eds), *The EU foreign and security dilemmas in a challenging world (L'Europe unie/United Europe 19/2023, special volume)* Cluj- Napoca: Napoca Star, 2023

[13] *Histoire et mémoires. Entre savoirs, interprétations et transmission Colloque international en hommage au Professeur Hedi Saidi BOOK OF ABSTRACTS / LIVRE DES RÉSUMÉS University of Sousse (Tunisia), 17–19 April 2025,* Napoca Star 2025.

This special volume does not offer comforting narratives. It reveals a European and neighbourhood landscape where **AI transformation, financial digitalisation, geopolitical rivalry and socio-economic fragility** intersect in complex and sometimes destabilising ways.

Yet the collective message is ultimately one of **qualified optimism**. The contributions show that the EU and its neighbours possess **intellectual, legal and institutional resources** to respond: robust data-protection principles, emerging AI regulation, deep historical expertise, vibrant civil societies and innovative local economies.

6. Europe at a Strategic Crossroads

The special volume[14] demonstrates that Europe stands at a decisive moment. The convergence of AI transformation, digital vulnerabilities, Russian aggression, and Mediterranean tensions compels the EU to articulate a coherent, future-oriented strategic vision.

Three overarching imperatives emerge:

1. **Strengthen resilience through law, ethics and civic culture:** The EU's distinctive model—rooted in rights, transparency, and normative clarity—remains its strongest defence against authoritarian pressures.
2. **Integrate historical depth into strategic policymaking:** From 1848 to 2024, European security challenges reveal recurrent patterns; understanding them provides foresight.
3. **Deepen cooperation with neighbours:** Whether in the Eastern Partnership or the Mediterranean, Europe's security architecture depends on inclusive, credible, multi-layered partnerships.

Ultimately, the volume affirms that European resilience is not a static condition but a **dynamic process of adaptation**, requiring vision, institutional courage, and the capacity to learn from history.

The challenge is one of **coherence and political will**. Technological governance must be integrated with security strategy, financial regulation with social policy, and neighbourhood frameworks with genuine recognition of partners' agency. If the EU and its neighbours can internalise the lessons articulated in this volume—about trust, rights, perception, power and memory—they may yet transform an age of AI and multi-level geopolitical pressures into an era of **more resilient, dignified and genuinely shared European futures**.

[14] This special volume is one of a series, including also:
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Faculté Libre de Droit, 60 Boulevard Vauban BP 109, 59016 Lille Cedex France
Tel. 0320159688, E-mail: international@icl-lille.fr
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Bucuresti, Al.Privighetorilor nr.1A Sector 1
Telefon: 0213175523, int 17170
Email: office@cnai.ro

Faculte Libre de Droit Institut Catholique de Toulouse
31 Rue de la Fonderie BP31068 Toulouse Cedex 7
Tél: 05 61 36 81 22 Fax: 05 61 36 81 37
E-mail: secr.univ2@ict-toulouse.asso.fr

Mouvement Européen Nord
219 bis, bd de la Liberté, BP 1134, 59 012 Lille Cedex, France
Tél. : 03 20 52 72 89, Fax : 03 20 97 73 60, E-mail: mouveuropeen@wanadoo.fr
http://www.mouvement-europeen.org/section/

Association «Confrontations» (Paris, France)
4 Place de Valois 75001 Paris, Tel. 0033142605241,
E-mail: courriel@confrontations.fr
www.confrontations.fr

University of Medicine, Pharmacy, Sciences and Technology of Târgu-Mureș,
Gheorghe Marinescu Street no 38, Târgu Mureș, 540139, România
Tel.: +40 265 215.551, Fax: +40 265 210.407
E-mail: rectorat@umftgm.ro , www.umfst.ro/en/home.html

Babeş-Bolyai University
Faculty of European Studies
1, Mihail Kogalniceanu Street
RO-400084 Cluj-Napoca 0264 40.53.00 0264 59.19.06
www.ubbcluj.ro

Tallinn Law School at Tallinn University of Technology
Akadeemia tee 3, 12618 Tallinn, Estonia
Tel.: 003726202430 Fax: 003726202429
E-mail: tls@ttu.ee, www.ttu.ee/tallinn-law-school

Université de Beira Interior (Portugal)
Convento de Sto. António, 6201-001 Covilha
Tel:+351(275)319700 Fax:+351(275)319057, www.ubi.pt

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3. Institute of Research in European Studies (Romania)

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