ISSN 2713-0525
eISSN 2713-0533

KUTAFIN LAW REVIEW

Volume 13 Issue 1 2026

Issue topics

DIGITAL TRANSFORMATION IN CRIMINAL JUSTICE AND LABOR LAW

NEW CHALLENGES FOR INTERNATIONAL LAW

SHORTCOMINGS OF THE MODERN ANTI-DOPING SYSTEM

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KUTAFIN
LAW REVIEW

Volume 13 Issue 1 2026

Founder and Publisher — Kutafin Moscow State Law University (MSAL), Moscow, Russian Federation

ISSN 2713-0525 eISSN 2713-0533

Publication Frequency	4 issues per year
Registered	Federal Service for Supervision in the Sphere of Communications, Information Technologies and Mass Media Certificate PI No. FS 77-80833, dated 7 April 2021. Published since 2014
Website	https://kulawr.msal.ru/
Editorial Office contacts	kulawr@msal.ru + 7 (499) 244-88-88 (# 555, # 654)
Publisher contacts	Kutafin Moscow State Law University (MSAL) 9 Sadovaya-Kudrinskaya St., Moscow 125993, Russian Federation https://msal.ru/en/ msal@msal.ru + 7 (499) 244-88-88
Printing House	Kutafin Moscow State Law University (MSAL) 9 Sadovaya-Kudrinskaya St., Moscow 125993, Russian Federation
Subscription	Free distribution

Signed for printing 31.03.2026. 238 pp. 170 × 240 mm. An edition of 150 copies

CONTENTS

DIGITAL TRANSFORMATION IN CRIMINAL JUSTICE AND LABOR LAW

Vladimir I. Przhilenskiy
Theoretical and Methodological Foundations of the Concept of Digital Transformation in Criminal Proceedings 1

Petr P. Ishchenko
Criminal Justice Errors and Information Technology 23

Adnan Qasem, Mohammad Jafar Habibzadeh, Seyed Doraid Mousavi Mojab
The Proportionality of House Arrest with Electronic Monitoring and Individual Freedom of the Accused: A Comparative Study between French and Iranian Law 51

Kirill L. Tomashevski, Irina A. Filipova
Metamorphoses of Labor Law Subjects in AI-driven World 81

NEW CHALLENGES FOR INTERNATIONAL LAW

Tareq Al-Billeh, Shahd Morad
Controls for the Use of Cyber Weapons in the Light of International Humanitarian Law: What are the International Efforts to Legally Regulate Cyber Weapons? 100

Pavel E. Baryshkov, Alexander M. Solntsev
The 1976 Apia Convention on the Conservation of Nature in the South Pacific as the Basis for Regional Environmental Cooperation in Oceania: Evolution, Challenges, and Prospects 136

Ngo Huu Phuoc, Vu Kim Hanh Dung
Challenges for the International Community in Implementing The 1982 United Nations Convention on the Law of the Sea 166

SHORTCOMINGS OF THE MODERN ANTI-DOPING SYSTEM

Anastasia A. Gali, Alexander A. Orlov
The Doping Cases of Jannik Sinner and Iga Swiatek: Issues of Balance of Interests and Fair Adjudication in the Modern Anti-Doping System 187

NATIONAL PROBLEMS IN IMPLEMENTING CONSTITUTIONAL LAW

Mahmood Noori Motleb
State of Emergency in a Caretaker Government (Iraq Constitution of 2005) 216

DIGITAL TRANSFORMATION IN CRIMINAL JUSTICE AND LABOR LAW

Article

DOI: 10.17803/2713-0533.2026.1.35.001-022

Theoretical and Methodological Foundations of the Concept of Digital Transformation in Criminal Proceedings

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Abstract: The article addresses issues related to the necessity of developing a concept for the evolution of Russian criminal proceedings under conditions of digital transformation of society and state, as well as theoretical and methodological problems associated with defining the digitization of the national judicial system. A detailed analysis is conducted on contemporary socio-philosophical, sociological, managerial, and legal theories that could serve as a basis for solving these tasks. The author identifies and describes explanatory capabilities of several modern theoretical constructs, namely the theory of sociotechnical systems, communicative action theory, theory of social construction of reality, justice theory. Additionally, self-learning organizations theory, game theory, and decision-making theory are also examined. Various strategies for using concepts such as goal setting, systems, lifeworld, communication, legitimation, justice, efficiency, formulas, and principles proclaimed through the application of these theories during conceptualization are justified.

Keywords: sociotechnical systems; communicative action; lifeworld; construction of reality; decision making; justice; effectiveness

Cite as: Przhilenskiy, V.I., (2026). Theoretical and Methodological Foundations of the Concept of Digital Transformation in Criminal Proceedings. *Kutafin Law Review*, 13(1), pp. 1–22, doi: 10.17803/2713-0533.2026.1.35.001-022

Contents

I. Introduction 2
II. Sociotechnical Systems Theory 3
III. The Court as a Sociotechnical System 6
IV. Theory of Communicative Action 11
V. Theories of Social Construction of Reality 14
VI. Justice Theory, Game Theory, Decision-Making Theory 17
VII. Conclusion 20
References 20

I. Introduction

In his endeavor to formulate a concept of digital transformation in the criminal justice system, the author reflected upon the theoretical and methodological foundations that could form its basis. Obviously, this does not refer to technical issues lying within the realm of information and communication technologies, which require separate discussion. However, there is much in the areas of philosophical, cognitive, sociological, legal, management, economic, and even psychological knowledge that could provide a foundation for such conceptualization. Among the theoretical frameworks that immediately come to mind in connection with the above are the theory of sociotechnical systems, the concept of social construction of reality, and the theory of communicative action. Interdisciplinary methodology naturally serves as the core method. Moreover, from a methodological perspective, special attention should be given to the justice theory, game theory, and decision-making theory.

The theory of sociotechnical systems will help to construct the logic and calculate logistics for managing the process of digital transformation in criminal proceedings. The use of the concept of social construction of reality will enable forecasting the main parameters of the

social reality that inevitably emerges from the created administrative management system as well as the aforementioned sociotechnical system. Reliance on communicative action theory arises from an awareness of the importance of addressing a complex goal-setting system, which is inevitable within sociotechnical systems. This issue gains particular significance due to the specifics of the court as a sociotechnical system oriented not only towards efficiency but also justice. From this binary goal-setting stems the necessity of studying the current stage of theoretical research on the notion of justice, including game theory and decision-making theory applications. It seems unnecessary to provide additional justification for turning to interdisciplinary methodology — heterogeneous subjects combining technical, social, anthropological, legal, economic, and other dimensions are planned to be theoretically examined at all stages.

II. Sociotechnical Systems Theory

Here we can see an ideal case of a sociotechnical system because the interaction between office equipment, infocommunications technologies, individuals, and professional social groups cannot be adequately described either in technical, legal, organizational-management, or sociological terms. Multiple individuals, including victims, defendants, witnesses, judges, investigators, operatives, experts, and IT specialists interact with computers and networks both individually and collectively. At the same time, these computers, networks into which they are connected, accumulated data arrays, and digital or digitized traces left at crime scenes function separately, rather than forming purely technical systems, entering together with individuals and collectives into sociotechnical systems of judicial proceedings (Sergeev, 2022).

The term *sociotechnical systems* was not created through philosophical reflection or methodological analysis. Instead, it emerged as a result of improvements in managerial practice back in mid-twentieth century thanks to Eric Trist and Ken Bamforth. Employees of a London-based design-research institute specializing in scientific labor organization, management, and rationalization attempted to address issues

arising in British coal mines' operations and difficulties in developing effective instructions for personnel.

Eric Trist and Ken Bamforth criticized the previous approach based on technological imperative, viewing humans merely as extensions of machines or nonoperational appendages to them. According to earlier understanding of human-machine interaction, all human work was reduced to following precise instructions dictating button-pressing or lever-pulling actions. To overcome this imperative, they turned to Ludwig von Bertalanffy's ideas, according to which people were required to think and make more complex decisions across all levels beyond what could be prescribed by any instructions (Gintciak et al., 2024).

In the paradigm of sociotechnical systems, a human was first conceptualized as a resource requiring development and an active collaborator with other actors. Initially, people appeared in sociotechnical systems as a separate subsystem described using behavioral-social psychology terminology. This subsystem connects with the technical subsystem encompassing artifacts or objects defined in machine operation and functionality terms, as well as with the economic subsystem the activities of which are framed in terms of effectiveness. Sociotechnical systems can schematically be depicted as an "acorn" consisting of two parts. There is one activity (a), such as practical interventions accompanied by corresponding studies. Certain organized structures, like symbolic or material-technical ones, are designed and then implemented; then these symbolic and material-technical structured organizations integrate into another activity (b), similarly organizing it (Shchedrovitsky, 1992, p. 49).

The author of this visualization wrote about the complex and heterogeneous nature of sociotechnical systems, stemming from their nonlinear interaction pattern. The complexity of sociotechnical systems compels developers to consider not just the existence of two interacting and interdependent levels — the social and technical — but also an entire elemental interaction system, wherein individual elements of social and technical natures blend sequentially into a heterogeneous yet flexible ensemble governed by systemic principles. Subsystems emerge, assuming moderating or coordinating roles relative to these elements. G.P. Shchedrovitsky specifically emphasizes the unique role played by

the projected activity system, which governs both social and technical systems while itself becoming subject to governance. "This second component of the sociotechnical system is the projected activity system, i.e., the one we are trying to manage. Thus, in the 'upper' part of the 'acorn' we create certain structured arrangements and incorporate them into the 'lower' activity, imposing them as a distinct form. In other words, we constantly engage in some sort of activity over activity, and I believe this situation ultimately gives rise to the task of control in its refined form" (Shchedrovitsky, 1992, p. 51).

G.P. Shchedrovitsky emphasized that the topic of sociotechnical systems should evolve independently — not as an add-on to theories of management or engineering-driven automatic regulation, despite ongoing attempts to do so. The founder of the methodological movement argued against cybernetic models and regulatory theories formulated in cybernetic terms with their schemes of direct and feedback loops serving as foundational frameworks for developing concepts of sociotechnical interaction. "Our objects, G.P. Shchedrovitsky asserted, are Natural/Artificial systems since they possess, firstly, a natural life component, secondly, an artificial component resulting from being enveloped and assimilated by other activity systems, and thirdly, a resultant factor along which movement actually occurs and must proceed" (Shchedrovitsky, 1992, p. 50).

Gradually, the focal point of authors investigating sociotechnical systems shifted toward areas of technological innovation, knowledge-intensive industries, and particularly large-scale IT project design. "The evolution of socio-technical theory can also be reviewed in terms of the focus on socio-technical designs and interventions. For instance, over time socio-technical research has involved the integration of numerous perspectives, deviating from the original organizational focus. In the Information Systems and ICT fields, for example, Morris states that sociotechnical systems literature can be grouped based on several dominant perspectives including, but not limited to, the social sciences, organizational sciences, engineering, and complex systems viewpoints" (Abbas and Michael, 2025). At the same time, others focused on dynamic characteristics of these entities, exploring processes of transition, transfor-

mation, or reproduction of systemic qualities within the context of resilience and multilevelness (Geels, 2010).

Thus, under the sociotechnical systems, we refer to systems in which interactions occur among elements of social and technical nature. Within these systems, people, statuses, roles, and institutions become interconnected with technical devices, software, information-communication technologies, and networks. Optimization of designing sociotechnical systems hinges upon synchronously accounting for requirements of technical and economic efficiency alongside humanitarian aspects such as fairness, freedom of choice, responsibility, realization, and even existential concerns.

III. The Court as a Sociotechnical System

When developing algorithms for use at various stages of legal proceedings, questions arise that require the application of sociotechnical systems theory. Viewed as a sociotechnical system, the court raises the issue of legal compatibility. "Legal compatibility differs from legality in the way that legal compatibility not only strives for compliance to lawful statutes and regulations, but also takes the compliance with higher-order legal goals into account. The following areas were considered to be of importance for legal compatibility: avoiding personal reference in data, ensuring information security, enabling freedom of decision, increasing transparency, ensuring traceability, and increasing usability. The areas are partially linked with each other. A conflict exists between the avoidance of personal references and ensuring traceability. The results help explain legal compatibility with regard to applications on a theoretical basis" (Hoffmann et al., 2015, p. 112).

It is intriguing how Hoffmann distinguishes between legal goals at two levels: primary-level goals and higher-order goals. Primary-level goals, according to Hoffmann and his coauthors, involve preventing legal consequences — neither individual nor collective members of the sociotechnical system should violate laws, although common sense suggests that legal liability might be shared between a machine and an individual or group. Essentially, this implies distributing legal account-

ability between developers of infocommunications technology and users thereof (Brazevich and Zavaritskaya, 2016).

Higher-order legal goals may entail achieving justice, upholding legality, protecting human rights, etc., implying that new infocommunications technologies' implementation should minimally avoid diminishing justice, legality, and human rights protection. In this context, technological innovations would justify themselves by boosting organizational-legal or financial-economic efficiency in courts and investigations. However, the ultimate objective remains digitization aimed at producing fairer judicial rulings, strengthening rule of law, and enhancing human rights protections. For instance, new technologies allow making accusations more evidence-based, reducing rates of judicial error, and increasing punishment inevitability, among other benefits.

The initial phase of introducing infocommunications technologies is an informational one which involves creating a unified informational environment. It begins with establishing databases accessible via the Internet, linking employees of investigatory bodies and courts at all levels into a community where members freely communicate and exchange documents and essential information. Gradually, it manages to channel the efforts of judges, investigators, and software developers into creating platforms whose unification essentially transforms a multitude of legally connected, yet still fairly autonomous, judicial bodies into a complex, integrated sociotechnical system through the Online Justice service.

A decision to establish this platform was made less than five years ago, and today the project's implementation gathers momentum as regional and district courts actively test it. Through Online Justice, citizens can submit pre-trial claims without leaving home, expedite claim submission to judges, or obtain divorce if their spouse resides elsewhere.[1] Federal Law No. 267-FZ dated 8 August 2024 (Amendments to the Criminal Procedure Code of the Russian Federation), which came into effect on 5 February 2025, guarantees detainees held in detention centers the right to meet with defense attorneys remotely via video-

[1] Guide: How to file a pre-trial claim from home (spoiler: not by email); Speeding up the process of submitting a claim to a judge; How to get a divorce if your spouse lives in another region? (https://pravosudieonline.ru/poleznye-stati/).

conferencing services. Organizing such connections presents significant technical, legal, and administrative challenges, which the introduction of Online Justice aims to resolve.

The second stage of digitalization (or digital transformation) in court proceedings can be referred to as a period when all its stages become so algorithmized that direct human involvement — be it investigators, prosecutors, lawyers or judges — is no longer necessary. Concepts such as "digital court" or "smart court" arise, where the entire case cycle is transferred into a digital environment. This becomes possible not only due to the introduction of digital platforms but also through active engagement of artificial intelligence systems for their maintenance. Many experts see here an opportunity to reduce the likelihood of judicial errors or increase the independence of courts (Burdina and Chizhov, 2023). However, they warn against excessive enthusiasm regarding digitization of legal processes, identifying challenges posed by this approach to established balances between branches of power and even principles of justice.

The second stage raises significantly more questions because the very idea of transferring powers to machines, algorithms, computer programs — even if these are called AI — conflicts with many theorists' and practitioners' understanding of the nature and essence of judicial authority. As E.V. Burdina and V.N. Kornev assert, "a revolutionary method of delegating decision-making authority to AI falls short of the task to protect rights, only to result in a damage to fundamental values of judicial power well beyond any economic benefit. A full and uncontrolled delegation of the decision-making authority from a human judge to AI is incompatible with the nature of judicial power. With technologies opposing the fundamental values of justice as fair trial, there is a need to regulate the extent and forms of control over the use of artificial intelligence as well as formulate relevant prohibitions" (Burdina and Kornev, 2024, p. 124).

If we consider the judiciary as a sociotechnical system, it is easy to identify all the main characteristics of such systems. Firstly, there is joint optimization of social and technical aspects rather than mere adjustment of technology to the tasks of judges and investigators, let alone searching for applications of certain devices, software, and algorithms

within traditional legal procedures. It entails a new conceptualization, still grounded in ideas of legality and fairness, but whose implementation must be rethought and redesigned from scratch since neither technological nor social solutions exist yet — they need to be created. Thus, significant administrative and social resources previously spent on reducing subjectivity in judicial decisions or protecting human rights could now be saved, while comparable costs may become necessary to neutralize a "machine error" or cognitive dissonance.

Secondly, common sociotechnical systems are designed to achieve specific goals, meaning that balance between technical efficiency, social effectiveness, adherence to lawfulness, and equity depends not just on initial capabilities but also on goal setting mechanisms.

Finally, thirdly, sociotechnical systems should demonstrate adaptability via self-learning — a prerequisite for ensuring complex interactions among people, technologies, and the surrounding environment. The theory of self-learning organizations became a landmark event in management theory and practice, though applied exclusively to business entities, leaving institutions like courts or prosecutor's offices largely out of focus. Meanwhile, introducing changes into laws, regulations, instructions, algorithms, or programs represents part of organizational self-learning process (Tayursky and Belova, 2014).

Lawmakers and enforcers, judges and investigators, engineers and programmers are compelled to seek new forms and models of interaction between humans and computers or improve existing ones. "1) Use of digital guidelines and methodological recommendations for collecting evidence and verifying its reliability and consistency based on specially developed mathematical models, as well as enabling audio and video recordings at various stages of investigation, starting from crime scene inspection up until detention and interrogation of suspects; 2) utilization of AI technologies to support interrogations, including a natural language processing system providing diagnostic criteria for evaluating statements made during questioning (absence of contradictions, contextualization, etc.); 3) employing AI tools in criminal trials, including systems capable of displaying evidence presented in courtrooms and identifying similar cases adjudicated in the past" (Dragilev et al., 2022, p. 57).

Without a doubt, developing a governance system will proceed step-by-step. The first phase involves digitizing judicial processes considering them as mechanical structures, whereas the second phase aims to implement opportunities afforded by viewing the court as an organic system capable of self-organization and learning. Mechanical structures feature rigid and unambiguous connections between elements arranged according to hierarchical principles. Each element has clearly defined and strictly specified tasks regardless of whether the organization's structure follows project-based or matrix principles. Organizations with mechanical structures typically have clear work algorithms, tasks being highly uniform and formalized. Organic structures allow high degrees of freedom in decision-making. Functions and responsibilities might shift dynamically between individual employees and whole departments (Murrell et al., 2009).

Digitizing justice requires law enforcement officials to assess potential mismatches between the courts functioning as an administrative-bureaucratic system versus a social one. A court as a social system fits mechanically and organically into other societal systems. Social tensions may mature outside the legal framework, leading individuals to turn to courts seeking resolution, which function both bureaucratically and socially. Digitization risks exacerbating conflicts between these two modalities.

The issue of correspondence between the letter and spirit of the law acquires particular relevance. Although both concepts are metaphors, they concisely capture the essence of the problem when the formal side of law diverges from its substance, i.e., the original intent of lawmakers. This topic is truly vast, but the active integration of information-communication technologies places it in a new context — internal convictions of judges maintained substantial presence of humanity throughout all stages of litigation, limiting pressure exerted by formality. Inevitable reduction of common sense and everyday consciousness in the course of digitization poses the question about unity of spirit and letter as one concerning congruence of meaning and intention. This question demands additional research.

IV. Theory of Communicative Action

Emerging in the sixties of the twentieth century, the Theory of Communicative Action combined numerous philosophical traditions and scientific concepts once deemed incompatible and actively competing in the realm of theoretical knowledge. Its author Jürgen Habermas managed to reconcile Marxist ideas, interpretive sociology, phenomenology, structural functionalism, analytical philosophy, and speech act theory. He built his theory upon Marx's concept of social interest, thematicized in line with Weberian distinction between purposive-rational and value-rational action. Husserl's notion of lifeworld was integrated with Parsons' theory of social systems, resulting in a sophisticated formula of society as both a system and a lifeworld. Particularly important were Wittgenstein's and Searle's insights into language as a special kind of activity — it was precisely this approach that enabled Habermas to construct semi-sociological, semi-linguistic models of verbal influence exercised by some social actors over others and to reconceptualize social interaction as communicative (Kimelev, 2021). All these developments contributed to extensive use of theories and methods of communicative action in jurisprudence.

In analyzing the sphere of judicial proceedings, the theory of communicative action provides an opportunity to identify and describe mechanisms for using language and nonverbal means to achieve mutual understanding and coordinate actions among judges, attorneys, prosecutors, and other participants in the trial process. Without applying this toolkit, discussing the fairness of judgments rendered by courts makes little sense. Therefore, employing the theory of communicative action in jurisprudence allows us to perceive social reality beyond static public relations, norms, and sanctions, as classical sociology prescribes. Understanding the judicial process as a communicative process, along with highlighting communication goals and methods aimed at achieving consensus, creates possibilities for activating explanatory resources from sociology, logic, argumentation theory, valuation, and related disciplines.

Thus, among the key ideas of the theory of communicative action applicable to judicial practice, one can include the orientation towards rationality, where communication participants are willing to argue their positions and accept arguments from others without reducing everything to pursuit of personal interests alone (Baklanov and Baklanova, 2025). This is facilitated by distinguishing instrumental and communicative rationality, wherein each participant acts not solely in their own interest but also in the interest of the collective endeavor, which is essential for realizing the objectives of justice. Significant emphasis is placed on conditions for achieving mutual understanding, which goes far beyond merely exchanging information or directives. Such communication requires goodwill from participants, expressed in readiness for dialogue, openness, and willingness to fully or partially acknowledge another party's position. Two crucial aspects of comprehending the judicial process emerge: orientation toward reaching consensus and necessity of critical evaluation. Communication in judicial proceedings will succeed only if it contributes to achieving consensus regarding facts, legal norms, and fair resolutions, thereby transforming consensus-building into a vital component of social integration and maintenance of public order.

The function of critical assessment safeguards the communicative process of judicial proceedings from imposition of any single viewpoint, a risk that always presents during litigation, thus preventing achievement of shared understanding and agreement. Without a doubt, this theory has limitations in this analysis — there is actually no objective of reaching consensus in criminal procedure. Consensus might result from negotiation, yet procedural cognition does not — and cannot — have such an aim, given that application of Russian Criminal Code provisions necessitates precise establishment of factual circumstances surrounding the offense committed. Any doubt, owing to the presumption of innocence, either requires proof, refutation, or interpretation favorably to the defendant. Hence, consensus differs markedly from civil disputes, where the objective lies in proving guilt, which must occur under one of several prescribed scenarios. Consequently, discussions within criminal procedure focus on feasible standards of proof: either "preponderance of evidence" (relative to civil disputes) or "beyond reasonable doubt" (regarding assertions of guilt and content of charges).

While the former standard aligns somewhat with communicative technologies, the latter imposes authoritative and imperative requirements on investigator and judge alike. It is precisely this standard that digital technologies, including AI programs, should ensure compliance with.

The theory of communicative action offers novel explanatory and design possibilities in the field of decision-making process analysis. Reconstructing the capacities for information exchange and argumentation among participants in the judicial process is of utmost importance. This concerns not only efficiency but also impeccable observance of the accused person's right to present arguments in defense, coupled with technological facilitation of the duty incumbent upon investigators and courts: a) to verify defense arguments; b) to refute them by introducing irrefutable evidence into the case, rather than relying on alternative opinions and arguments akin to those used in regular communication; c) if unequivocal refutation proves impossible, then account for defense arguments when defining the scope of accusation, rejecting its unsupported parts or interpreting doubts in favor of the accused, provided remaining uncertainties remain irreconcilable. See Art. 14, Para. 2 of the Russian Code of Criminal Procedure.

Jürgen Habermas raised the issue of juridification of social life, linking it with the search for relationships between system and lifeworld. He highlighted the significance of preserving the lifeworld and preventing its colonization by the system through the growth of written law. Analyzing Max Weber's work on the interplay between law and morality amidst the increasing complexity of formal organizations, he focused attention on the communicative specificity of legitimation processes. "Modern compulsory law is uncoupled from ethical motives; it functions as. a means for demarcating areas of legitimate choice for private legal persons and scopes of legal competence for officeholders (for incumbents of organized power positions generally). In these spheres of action, legal norms replace the prelegal substratum of traditional morals to which previously, in their meta-institutional role, legal norms had reference. The law no longer starts from previously existing structures of communication; it generated forms of commerce and chains of command suited to media of communication. In the process, traditionally customary contexts of action oriented to mutual understanding

get shoved out into the environments of systems. Using this criterion, we can locate the boundaries between system and lifeworld, in a rough and ready way such that the subsystems of the economy and the bureaucratic state administration are on one side, while on the other side we find private spheres of life (connected with family, neighborhood, voluntary associations) as well as public spheres (for both private persons and citizens)" (Habermas, 1987, p. 263). In this regard, it remains critically important to maintain the harmonizing function of the judiciary in balancing the relationship between morality and law, system and lifeworld. If, prior to the digital era, this challenge was addressed through reliance on the institution of internal conviction of judges, in today's digital reality, new mechanisms of interaction must be found (Baklanov and Baklanova, 2025). However, the primary task remains unchanged, it is to prevent separation between the system and lifeworld.

V. Theories of Social Construction of Reality

The theory of social construction of reality emerged in the second half of the 20th century at the intersection of phenomenology, Marxism, and constructivism, formulated primarily by Peter Berger and Thomas Luckmann. This theoretical construct complements epistemological and design approaches to understanding society as communication. For a long time, the concept of reality was associated with the belief that something exists independently of human thought or consciousness. Gradually, however, theorists began to realize that attempts to describe a reality independent of humans ultimately failed. An interim solution involved separating reality into objective and subjective components within one's mind, although this division gave rise to further difficulties.

A new phase in addressing the concept of reality came with the emergence of epistemological and social constructivism. Their core assertion is that reality is constructed through the processes of cognition and social interaction. Despite this claim, the original meaning of the term remained intact: constructed realities do not simply reflect creative imagination but stem from active exploration or even transformation of the external world. Berger and Luckmann's unique contribution

lies in positing that social reality arises through the creation of societies themselves, and nature is not conceived as an antithesis to society but rather as an integral part of it, emerging later than social roles and institutions. Thus society itself is seen as the outcome of interactions among individuals and groups, giving rise to systems composed of meanings, actions, perspectives, roles, and norms. The reality formed through interaction undergoes continuous habituation, institutionalization, legitimization, and objectification. Everyday practices sediment ("solidify") into stable structures that resemble objects or objective facts, guiding subsequent activities of individuals.

From a conceptual standpoint, the examined theory posits that interaction inevitably engenders typifications, which gradually assume the role of commonly accepted norms. A second pivotal consequence of interaction is institutionalization — norms arising from typifications transform into social institutions, thereby establishing social order. Legitimacy of social orders in these societies hinges on systems of knowledge, as knowledge serves as a mechanism for attributing meaning to institutions and integrating them into widely recognized value systems. Ultimately, the legitimation of social norms and values gives rise to what is conventionally termed objective reality. "Legitimation as a process is best described as a 'second-order' objectivation of meaning. Legitimation produces new meanings that serve to integrate the meanings already attached to disparate institutional processes. The function of legitimation is to make objectively available and subjectively plausible the 'first-order' objectivations that have been institutionalized. While we define legitimation by this function, regardless of the specific motives inspiring any particular legitimating process, it should be added that 'integration,' in one form or another, is also the typical purpose motivating the legitimators" (Berger and Luckmann, 1966, p. 110).

Legal reality constitutes a type of socially constructed reality, following the same underlying patterns governing the construction of any other type of reality: economic, cultural, or mundane. Indeed, judicial proceedings represent a distinct domain of social and human existence where individuals and collectives engaged in the legal process face the task of constructing a legally valid reality acceptable to other members of society. For the proper functioning of the social system, it is crucial

to convince the maximum number of participants and observers of the fairness of the judgment reached by the court — a persuasive effort falling within the realm of communicative action, contrary to the dictates of instrumental reason.

Employing the theory of communicative action alongside the theory of social construction of reality enables us to grasp how essential it is for judges, attorneys, and other stakeholders in legal proceedings to enhance and deepen their socio-communicative competencies, encompassing skills such as listening, engaging in dialogue, participating in group deliberations, and fostering mutual understanding. However, in the context of digitalization, the complexity and intricacy of this task multiply exponentially, directly impacting assessments of the legitimacy of justice. The construct of "mutual understanding" assumes central importance here: digitalization may introduce deviations from "reality," potentially disregarding defendants' testimonies as inherently flawed sources of information. Nevertheless, this fundamentally contravenes Art. 14, Section 2 of the Criminal Procedural Code: the issue is not mutual understanding per se, but rather the capacity of Artificial Intelligence to comprehend the content of information, compare it with already available data, evaluate its legal and defensive significance, assess the obligation to take this information into account when drawing conclusions, and develop algorithms mandating investigators to follow these procedures. There is no room for concessions rooted in "mutual understanding" or socio-communicative approaches: "I understand you, but you must also understand me."

Meanwhile, the application of this theory is particularly valuable given the growing volume, complexity, and heterogeneity of written law, which amplifies its influence on social structures, institutions, and practices. It would not be an exaggeration to state that legal reality becomes constitutive for social reality, with social institutions increasingly dependent on the regulatory functionality of legal norms and institutions (Zakharova, 2025). Admittedly, the content of these structures and institutions, as well as their performed functions, remain constant; however, operational modes are shaped directly by normative legal regulation.

VI. Justice Theory, Game Theory, Decision-Making Theory

John Rawls' theory of justice could play a distinctive role in the project of digitalization. Its uniqueness lies in an innovative theoretical foundation that combines traditional philosophical reflections on justice, virtue, goodness, etc., conducted within the genre of thought experiments, with modern analytical tools employed in contemporary economics, such as game theory and managerial decision-making theory. Consequently, this theoretical construct is intriguing not only for its substantive content and explanatory capabilities, but above all for the experience gained from utilizing this instrumentarium in theoretically describing and designing judicial, law-enforcement, and legislative practices.

As well known, in criminal proceedings, the fairness of a court sentence is typically assessed by proportionality between punishment duration and the severity of the crime committed. To this definition, the fairness of the legal process itself is added, determined in accordance with societal features and corresponding legislation. For instance, in a class-based society, equality before the law is denied legislatively, whereas democratic states proclaim such equality. Additionally, one may discuss the implicit recognition by most societal members of the right to violate laws, especially if such violations are perceived as unfair but effective. Notably, Jean-Jacques Rousseau cast doubt on the possibility of genuine equality before the law between rich and poor during the Enlightenment era, while Karl Marx and his followers categorically rejected this notion a century later. Fundamental modern ideas, such as the social contract theory, natural law, and human rights, consequently came into question.

John Rawls utilized game theory and decision-making theory to salvage the concept of contractarianism, requiring him to recognize compatibility within his theory between formal equality (the first principle) and real inequality (the second principle). The first principle pertained to so-called freedoms, while the second urged minimizing actual inequalities by redistributing benefits in favor of the least advantaged: "First: each person is to have an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme

of liberties for others. Second: social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage, and (b) attached to positions and offices open to all" (Rawls, 1999, p. 53). To proclaim these two principles, which from the perspective of classical theory appear contradictory, one must equip oneself with the exact methodological apparatus discussed above.

Yet, how can decision-making theory and game theory be applied to formulate a concept for the evolution of criminal justice in the context of society's and state's digital transformation? Following the algorithm of a thought experiment, John Rawls constructed a hypothetical mental model where each individual finds themselves in an initial position equally distant from the various roles they might assume in society (their social status) and, subsequently, from the portion of goods and resources they can claim or anticipate receiving based on that status. Separated from the future by a veil of ignorance, each individual hopes for a distribution they consider fair, whether it adheres to the principle of "equal shares for all," "proportional to input and effort," or even "from each according to their abilities, to each according to their needs." Transition then takes place to the actual condition, which never completely embodies any of the possible principles. However, Rawls' proclaimed principle of "justice as fairness" permits reconciliation between expectation and reality, as no one can alter their situation for the better from the initial state, and institutions must be structured in a manner that compensates for the resulting disparities (Zakharova and Przhilenskiy, 2019).

Regarding access to justice, all these theoretical-hypothetical considerations prove equally relevant and effective. Elements of game theory are employed by the author of the justice theory to illustrate that finding optimal strategies in conflict situations involving intersecting interests of multiple parties requires not linear but multi-vector rationality. Mathematical modeling of people's decisions and actions during their interaction, taking into account mutual consideration of interests and calculation of multicomponent goal-setting incorporating adversaries' potential moves, is indispensable for this purpose.

This type of modeling ideally suits reproduction of judicial process algorithms, where three principal players are involved: the *prosecution*, to which victims and their representatives belong; the *defense*, com-

prising suspects, defendants, and their advocates; and the court. These constitute the first circuit, which must incorporate victims, defendants, and others, as they play a decisive role in case proceedings. The second circuit includes witnesses, experts, specialists, translators, and other contributors supporting this activity. Within these two circuits, players or conflict participants pursuing their respective interests replicate an algorithm of move exchanges (decisions taken immediately in response to opponents' decisions), which can similarly be reproduced within a computer simulation framework.

The Big data methodology allows even relatively low-powered computers to calculate all possible courses of action for participants, compare them, and select the optimal option. The only caveat is that each decision is based not purely on cold calculations but also on the will of each actor, their emotions, inner beliefs, and subjective evaluations. None of these factors can be simulated, and there is no intention to substitute victims or defendants with virtual counterparts unless it relates specifically to training simulators. A player's plan of action, determining behavior in any conceivable gaming situation, can be derived from the strategy they articulate. The final outcome of the game — that is, winning or losing — is calculated based on mutual evaluation of all participants' strategies and comparative analysis thereof.

Decision-making theory is extensively applied to analyze court operations. Its tenets help illuminate issues related to selecting the best-fitting rationale for a judge's ruling, which must be argued and objective. With the aid of this theory, criminal proceedings acquire systemic character, especially crucial in complex cases where numerous factors must be considered using a unified methodology of evaluation. This aspect gains particular significance in collegial courts, where decision-making directly relies on judges' capability for productive communication. Behind a court verdict stands not merely a collective drive for consensus at any cost, but rather a situation where all judges are able to trace logical sequences of arguments and endorse a draft decision aligned with their inner convictions. Decision-making theory is invaluable in instances of legal uncertainty, when choosing the best decision rests on accounting for the risk of insufficient substantiation. Nonetheless, when a decision is required, its availability is preferable to its absence.

VII. Conclusion

It is therefore acknowledged that, alongside technical and legal challenges, the adaptation of criminal proceedings within the context of society's and state's digital transformation — as well as the process of their own digitalization — is accompanied by the necessity to address a multitude of social, socio-psychological, and administrative-managerial problems. Addressing these issues calls for mobilizing considerable theoretical and methodological resources of contemporary social-philosophical and sociological knowledge capable of explaining the possibilities and limits of intervention in established arrangements for organizing and administering justice, forecasting the trajectory of forthcoming transformations. Furthermore, it is essential to explore the feasibility of designing specific modifications in social, legal, and technical realities, as the convergence of social, legal, and technical systems cannot be left to chance.

There are still many questions and doubts. Can a program integrate all possible strategies that arise spontaneously, subjectively, often uniquely, and momentarily within a case? Moreover, can we even speak of strategies when they are not explicitly articulated but secretly formed and remain uncertain and undeclared? Numerous legal professionals believe that this facet of the process defies digital formalization. At minimum, an AI algorithm must incorporate all plausible responses of level-one participants to the diverse range of behaviors exhibited by their counterparts in competitive investigations. Whether this can be achieved remains to be seen over time.

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Received 23.08.2025
Revised 17.09.2025
Accepted 20.09.2025

Article

DOI: 10.17803/2713-0533.2026.1.35.023-050

Criminal Justice Errors and Information Technology

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Abstract: Criminal justice systems sometimes err; such errors occur in every country, regardless of variations in legal and judicial systems and despite measures implemented to prevent them. Erroneous decisions are usually called unreasonable. This is not entirely true, because court decisions, irrespective of later reassessment, are evidence-based conclusions that represent the decision-maker's belief about the circumstances of the case. Gettier cases, which challenged the definition of knowledge as justified true belief, are not only an unresolved puzzle in analytic epistemology but also serve as a model for the common errors that arise in criminal fact-finding. The analysis of the origin and structure of knowledge underlying judicial decisions undertaken on the basis of this model makes it possible to identify the dangers associated with the mechanism of formation of coherent procedural narratives that determine the content and orientation of judicial discourse. The requirement of comprehensiveness, completeness and objectivity of establishing the circumstances of the case, fixed earlier in Art. 20 of the Criminal Procedure Code of the RSFSR (1960), was an important mechanism for preventing such mistakes and its "dismantling" in the current criminal procedure law made modern justice more vulnerable. New information technologies are increasingly penetrating into law enforcement and judicial activities, create opportunities for searching, analysing and presenting information that are many times greater than the human ones. In a certain sense, these are machines for the rapid construction of coherent justifications that are not balanced by the same automatic mechanisms to ensure the correspondence of the obtained results. Therefore, new technologies and their impressive capabilities for searching and process-

ing information amplify the risk of error and, in this respect, constitute a danger.

Keywords: criminal proceedings; procedural proof; justification; conviction; justified true belief; procedural decision; judicial error; Gettier's problem; coherence; correspondence

Cite as: Ishchenko, P.P., (2026). Criminal Justice Errors and Information Technology. *Kutafin Law Review*, 13(1), pp. 23–50, doi: 10.17803/2713-0533.2026.1.35.023-050

Contents

I. Introduction 24
II. Gettier's Cases as a Model of Judicial Error 26
III. Coherence and Correspondence of the Results of Judicial Proof 32
IV. Justification of Procedural Decisions and New Information Technologies 38
V. Conclusion 47
References 48

I. Introduction

Unfortunately, criminal proceedings the purpose of which is to punish the culprit and acquit persons innocent of committing crimes sometimes make mistakes. Mistakes happen everywhere regardless of the country, the specifics of the legal and judicial systems, guarantees and procedures established by law.

According to American researchers, about 4.1 percent of death sentences imposed in the United States are erroneous (Gross et al., 2014, pp. 7230–7235). The statistics of court decisions overturned or amended by the inspecting appellate and cassation instances in almost any country in the world are able to confirm this thesis with even more significant figures. Judicial errors happen despite all the measures taken to prevent them, giving food to lawyers, checking judicial institutions as well as inspiration to writers and screenwriters who are not averse to entertaining the public by painting human tragedies.

Not only judges make mistakes, but also detectives, investigators, prosecutors and lawyers. A considerable share of the blame for judicial errors can also be attributed to them serving as professional par-

ticipants in the criminal process who convinced the court to make an erroneous decision. Therefore, for brevity, throughout this discussion "judicial error" will denote errors in the justification of procedural decisions made by all professional participants in criminal proceedings.

Errors in judicial fact-finding take various forms: they may stem from conclusions that are inconsistent with the actual circumstances of the case, from violations of criminal procedure or improper application of criminal law, or from unjust sentences manifesting as either excessive leniency or undue severity of the punishment imposed (Pashin, 2007, pp. 42–47). There are various classifications of judicial errors, but we are not interested in accidental subjective errors resulting from non-compliance with established procedures or a misunderstanding of the law. They are easily eliminated in the revision stages of court decisions initiated after sentencing. Another thing is errors in establishing the factual circumstances of the case arising from insufficient or incorrect assessment of evidence. Higher courts often just do not have the capacity to correct them. Being limited only to the written materials of the case, they sometimes do not even have the opportunity to see them.

R.S. Belkin termed errors occurring in the cognition of objects' essences, properties, and attributes, in the relations among them, and in the evaluation of meaningful cognition "gnoseological" and divided them into two categories:

Factual (objective) — demonstrating a distorted perception of the relationships among objects in the objective world. Logical — demonstrating violations of the laws and rules of logic, involving incorrect application of logical techniques and operations.

Since empirical methods of cognition also do not exclude errors, R.S. Belkin also distinguished errors in actions (operational errors) caused by violations of the prescribed sequence of procedures in the process of investigating a crime or expert research, deviations from the methodology of their implementation, misuse or use of unusable means, etc. (Belkin, 2001, pp. 172–173).

G.A. Zorin also identified psychological errors, encompassing a broad range of mistakes in the perception, interpretation, and descrip-

tion by the investigator of objects, phenomena, events, actions, and their parameters and characteristics (Zorin, 2000, pp. 271–272).

It should be recognized that the problems of substantiation of procedural decisions and judicial errors made in establishing the actual circumstances of the case in Russian criminology and criminal procedure science have been developed quite well. They are described, classified on various grounds, their causes and procedural consequences are investigated. However, for the most part the methodological basis of these studies remained the gnoseological approach inherited from Soviet science, which has not only undoubted advantages, but also its drawbacks. By examining the case *"a posteriori,"* it is possible to determine exactly who, where, and what kind of mistake has made. However, in this "search for the guilty" the reasons for its commission usually remain in the shadows.

The scientific discourse that has developed on the basis of the gnoseological approach does not answer the question: why and how does the subject of proof have an erroneous conviction about the existence of disputed circumstances of the case and the validity of the decisions he made? The answers that are usually given to these questions are subjective, casuistic, and often contain a circle in the reasoning: "some kind of a judge (prosecutor, investigator) made a mistake because he made some mistakes." Meanwhile, if we talk about the formation of a forensic methodology of judicial proceedings, especially when considering a criminal case by a court with the participation of jurors, then the issues of formation of conviction, as the basis of decisions, acquire special importance. To solve these issues, one should turn to epistemology, which unlike gnoseology, focuses not on the relationship of the subject of knowledge to its object, but on the study of knowledge as such: its essence, structure, criteria for the demarcation of scientific knowledge and metaphysics, etc.

II. Gettier's Cases as a Model of Judicial Error

In case of cancellation or modification of the sentence, it is usually said that the court's decision was completely or partially unfounded. This statement is better understood as a rhetoric trope than an accurate

statement of fact. A procedural decision, particularly a judicial decision, is invariably justified in one way or another, on the basis of evidence and logical reasoning. These are the requirements that the law imposes on procedural decisions. Accordingly, justification is present even if the decision is later shown to be erroneous. Moreover, the available evidence and its cumulative persuasive force are always sufficient, in the view of the judge rendering the judgment, to convince not only that judge but also all subsequent readers of the decision, including judges sitting on appellate or reviewing courts.

According to L.E. Vladimirov, a prominent pre-revolutionary theorist of judicial proof, criminal-judicial reliability underlying a court decision consists in a confluence of probabilities drawn from the evidence that leads the judge to an inner conviction that the past event under consideration occurred. At the same time, this inner belief should be of such strength "[...] in which a prudent person already considers it possible to act in cases where the fate of his own and his highest interests depends on resolving the issue of the reliability of the facts that determine the very act of determination" (Vladimirov, 2000, pp. 5, 65–73). What is the basis of this conviction? Of course, that is the knowledge of the circumstances of the case based on evidence.

However, V.I. Przhilensky believes that the court can be the subject of judgment without being the subject of cognition (Przhilensky, 2013, p. 358). It should be recognized that this is possible only where the criminal case is examined under a special procedure, namely with the consent of the accused to the charges against him or upon the conclusion of a pre-trial cooperation agreement with the prosecutor. The agreement is not a method of evidentiary substantiation, but only a formal procedure that allows, under certain conditions, to "remove" the problem of proving in order to save procedural costs. In all other cases, the judge does not have the right to resolve the case on the merits without substantiating the decision he made with evidence. Jurors are not required to do this explicitly and in writing but they are no exception either. Their inner conviction about the circumstances of the case and the guilt of the defendant is formed under the influence of research and evaluation of evidence during the judicial investigation. Even the slightest indication that prospective jurors may harbor prejudices regarding

the case under consideration is regarded by the parties as grounds for a motion to strike for cause.

The study of judicial practice, especially the decisions of the revising instances, shows that erroneous decisions also have factual and rational grounds. Moreover, both correct and erroneous decisions are often justified by the same evidence. In these cases, it is usually said that "a higher instance gave a different assessment of the circumstances of the case." An assessment is likewise a judgment grounded in knowledge of the case, the author of which is convinced of its truth.

The definition of knowledge in terms of its constituent components in epistemology is called knowledge analysis. Most epistemological theories agree that knowledge is a Justified True Belief. That means that in order to recognize a certain belief as knowledge it is necessary and sufficient to be true and justified.

However, this very successful definition was questioned by E. Gettier's article "Is Justified True Belief Knowledge?" In his short (only three pages) article, he gives two simple cases that show that the definition of knowledge as a Justified True Belief does not contain sufficient conditions for any proposition to be considered someone's knowledge (Gettier, 1963, pp. 121–123). Thus, in analytical epistemology, the Gettier problem which has not been solved to this day arose. Since the cases of Gettier are little known to a wide legal audience, we consider it necessary to summarize them here.

Case I

Let us assume that Smith and Jones are applying for some work at the same time. Smith has good reason to believe that Jones will get the job and Jones has ten coins in his pocket. For example, Smith has a strong evidence for this because the head of the company assured him that Jones would be chosen in the end and Smith himself counted the coins in Jones' pocket ten minutes ago. From this, he concludes that the one who has ten coins in his pocket will get the job.

But let's imagine that Smith, and not Jones, gets the job without knowing it. And, also, without knowing it, Smith himself has ten coins in his pocket. In this case, the statement that the one who has ten coins in his pocket will get the job remains true despite the fact that it is derived from the original conjunctive proposition which turned out to be

false. In addition, Smith is convinced that this is true and his conviction is justified. But it is also obvious that Smith *does not* know that this statement is true. Since it is true by virtue of the number of coins that are in Smith's pocket while he does not know how many coins are in his own pocket and bases his conviction on the basis of the number of coins in the pocket of that Jones in respect of whom he is falsely convinced that he is the person who will get the job.

Case II

Let us suppose that Smith has a strong reason to be convinced that (f) Jones has a Ford car. He is convinced of this, for example, because Jones has always had a car, and always a Ford for as long as Smith remembers and also that Jones had just offered Smith a ride and was driving a Ford himself. Let' now imagine that Smith has another friend, Brown, about whose whereabouts Smith knows absolutely nothing. Smith randomly chooses three places and builds the following three propositions:

(g) Jones has a Ford, or Brown is in Boston,

(h) Jones has a Ford, or Brown is in Barcelona,

(i) Jones has a Ford, or Brown is in Brest-Litovsk.

Let us suppose that Smith has strong evidence for the following propositions constructed by him follow from (f) and accepts (g), (h) and (i) on the basis of (f). Smith correctly deduced (g), (h) and (i) from a proposition for which he has a good reason. Smith therefore has reason to be convinced of each of these three propositions but of course he has no idea where Brown is.

But let us imagine that the following two conditions take place. Firstly, Jones does not own a Ford, but he drove a rented car. And secondly, by sheer chance which is completely unknown to Smith, Brown is indeed in Barcelona. If these two conditions exist then Smith does not *know* what (h) is true, even though (i) (h) *is* true, (ii) Smith is convinced that (h) is true, and (iii) Smith is justified in believing that (h) is true (Gettier, 1963, pp. 121–123).

To solve the Gettier problem some epistemologists proposed introducing additional conditions into the definition of knowledge under consideration, such as: causal connection (Goldman, 1967), the correct order of justification (notion of warrant) (Plantinga, 1993), reliability

(Goldman, 1976) or more complex conditions (Chisholm, 1989). Other scientists (Cohen, 1999; Williamson, 2000) rejected this project and proposed their own concepts of knowledge (Demin, 2019a, pp. 117–118). Despite the lively scientific discussion, the Gettier problem has not yet found a solution satisfactory for everyone.

Of course, Gettier's cases are deliberately formulated in such a way as to cast doubt on the definition of knowledge as a Justified True Beliefs. They describe situations in which the subject is convinced of a position having reason to believe it to be true after which the conditions are changed so that this position turns out to be true, but only by coincidence (Zagzebski, 1994, pp. 65–73). Such situations may seem farfetched but they are quite common in investigative and judicial practice.

For example, the crime might be committed by A. or B. The investigator has reason to believe that A. committed the crime and A. has a characteristic sign — a tattoo on his right arm. He also knows that A. was previously convicted of a similar crime, has no alibi, behaves suspiciously, and at the crime scene a witness saw a man with a tattoo on his right arm. From this, the investigator makes a reasonable conclusion that the crime was committed by someone who has a tattoo on his right arm. But let's imagine that the crime was committed by B., who has the same tattoo, but for some reason the investigator is not aware of this.

In this case, as in the first case of Gettier, the proposition that the crime was committed by a man with a tattoo remains true despite the fact that it was derived from the original conjunctive proposition which turned out to be false. The investigator is convinced that this provision is true and has grounds for this. But he does not know that this conviction of his is true since it is true due to the presence of B's tattoo, which the investigator does not know about. His conviction is based on the presence of a tattoo on A. who in fact was not involved in the crime.

Situations of the second type are also not uncommon. For example, B. who was previously convicted of theft was again detained for stealing from C. During a personal search, a watch stolen from C. was seized from him. However, the investigator accuses B. not only of stealing from C. but also three more thefts committed in the same way from nearby residents D., E. and F. Let's suppose, B. is being persuaded to admit guilt in committing all these crimes in order to be able to file a

petition for consideration of his case in a special order and receive a less severe punishment. Having studied the criminal case the judge has a good reason (evidence) to believe that (f) the previously convicted B. committed theft from C. However, further in the charge against B. there are three following propositions:

(g) the previously convicted B. committed theft from C. and he also committed theft from D.,

(h) the previously convicted B. committed theft from C. and he also committed theft from E.,

(i) the previously convicted B. committed theft from C. and he also committed theft from F.

The judge sees that each of these propositions follows from (f) and accepts (g), (h) and (i) on the basis of (f). He understands that the investigator in drawing up the plot of the accusation deduced (g), (h) and (i) from proposition (f) for which he had grounds, and himself comes to the same conclusion. However, there is no direct evidence of B. stealing from D., E. and F., in addition to his admission of guilt. It may well turn out that B. did not commit theft from C.: he bought a watch on the street and he was persuaded to admit guilt. However, he *did* commit the theft from E. In this case, the judge finding B. the guilty person does not actually know that (h) is true despite the fact that it is true but at the same time has grounds for such a conviction. At the same time curiously, both true (h) and false conclusions (g) and (i) have the same grounds.

Consideration of a criminal case in a special order is possible only with the consent of the accused with the charge against him and does not involve the examination of evidence. Therefore, it is very likely that B. will be convicted of all these crimes, despite the fact that he did not commit three of them. However, another option is also possible: pointing to the seller and proving that he really bought the watch stolen from C., or refuting proposition (f) in another way (for example, proving his alibi), and refusing to admit guilt, B. can avoid criminal liability altogether including for the crime he actually committed.

It should be noted that Gettier's cases have an interesting feature: in them, the coherent truth is subjected to a correspondence test and does not pass it. Moreover, this happens despite the presence of fac-

tual argumentation in the substantiation of the refuted provisions. All this is very similar to the situation of judicial proving, when the totality of available evidence, among which there are indisputably established facts, generates such a conviction of the court which decisively compels it to act, but does not guarantee the correctness of the decision. This is how errors occur.

III. Coherence and Correspondence of the Results of Judicial Proof

The methods of obtaining knowledge and the standards of its justification in various fields of human activity are different. The court reaches its destination only when it brings to justice those guilty of committing crimes and acquits all those whose guilt has not been established "beyond any reasonable doubt." The high requirements for standards of proof in criminal proceedings are also due to the consequences of considering the case: the imposition of punishment always entails significant restrictions on the rights and freedoms of the convicted person, and it is extremely important for society that punishment overtakes the *really* guilty of committing a crime. At the same time, everyone, the state, society and individuals understand by "reality" as exactly what actually took place. Such an understanding of the results of judicial evidence is part of everyday consciousness and justice is carried out not only to protect the interests of the state but also for ordinary people. In their opinion, the resolution of a criminal law conflict on other terms reduces the authority of the court. In epistemology, the correspondence of the asserted position to reality is called the classical or correspondent definition of truth.

The object of judicial discussions is a crime and the circumstances of its commission are facts to be established. Therefore, in the practice of proving the substantiation of facts is most appreciated when it works with a reliable logic of reasoning and ensures that the established circumstances correspond to the actual state of affairs. Even the subjective side of the crime is often established with the help of facts.

However, the court cannot perceive the circumstances of the past directly. It is forced to get to know them by examining evidence: ob-

jects, documents, expert opinions, protocols of investigative actions, i.e., material and ideal traces of a crime, including those subjected to research by specialists using tools. The forms of investigative protocols are maximally adapted to accurately record the results of an empirical study. In order to exclude errors and ensure the correctness of the reflection of the statements made, observed actions, phenomena and facts, they provide for mandatory indication in them not only the course and results of the actions committed but also the conditions in which they were carried out, such as: date, time, place, temperature, illumination, involved participants in criminal proceedings, specialists, used materials and equipment, etc. Investigative actions must be carried out by a specially trained and prepared employee who has legal authority to do so. Violation of these requirements entails the inferiority or even inadmissibility of the results obtained when using them in evidence. All collected evidence must also be fundamentally verifiable and refutable ("falsifiable" in the terminology of K.R. Popper); unverifiable statements are not evidence (Para. 2 of Part 2 Art. 75 of the Criminal Procedure Code (CPC) of the Russian Federation).

However, the consideration of the case is a practical activity. The court does not need to look for the "absolute" truth and generally establish circumstances that are irrelevant to the resolution of the case. The court should be 100 % or "beyond any reasonable doubt" convinced only of those fairly simple[1] issues that it is obliged to resolve. At the same time, "reasonable doubts" should not be only the result of speculative reasoning by any of the participants in the process but should have factual grounds.

In the vast majority of cases, the courts cope with this task. Therefore, there is no need to share scepticism about the fundamental possibility of knowing the circumstances of the case, which some lawyers have "borrowed" from epistemologists in order to use it to criticize the concept of objective truth (Maslennikova, 2018, pp. 35–45; Pastukhov, 2018, pp. 155–156). Scepticism is a very "toxic" argument, because it allows us to doubt everything, in any means of knowledge, including

[1] They are indeed so, since we summon "lay people from the public" to testify in court.

those advocated by these scientists, and in the very possibility of justice. However, each of us has at least empirical reasons to trust our senses under certain conditions of perception as well as our abilities for rational thinking. Therefore, the procedure established by law and ensuring normal conditions of perception during the production of investigative actions, reliable methods of expert research, etc. give us confidence in the conformity of the knowledge we have received with reality. The freedom to evaluate evidence, the adversarial nature of the process and the obligation to question and verify everything also contribute to this. The knowledge of the circumstances of the case by the court, the results of which correspond to the actual state of affairs is practically achievable. In this regard, it is peculiar to consider how the problem of Gettier is solved in criminal procedural proving.

The ascertainment of the real picture of an incident can indeed be a difficult task, especially when the evidence is incomplete, testimony is contradictory and witnesses are unreliable. And here, an assessment of their coherence to the established circumstances provides significant assistance in constructing and verifying various narratives promoted by the parties to the trial within the framework of the general judicial discourse.

Coherence, which in criminal proceedings is called justification by a "coherent body of evidence," is very important both in the disclosure and investigation of crimes, and in judicial proof. In a certain sense, it is the main technological principle and even the "engine" of the investigation. When starting an investigation, the investigator always moves from the unknown to clarifying the situation and then to a reasonable true (at least in his opinion) conviction about the circumstances of the case. He always tries to put the circumstances known to him into a coherent, consistent set — a "picture of what happened," looking for relevant information in the world around him and trying on all new facts and information to the explanatory or accusatory narrative (generalized version or probabilistic model of what happened), which as a result develops in his head. And coherence is the main rule for the formation of this narrative which, depending on the circumstances of the case, subsequently becomes the plot of the prosecution and then the content of the court verdict or the motivating part of another procedural de-

cision (for example, the refusal to initiate criminal proceedings or its termination).

The new information received by the investigator, coherent with the circumstances of the incident under investigation known to him, strengthens the credibility of this narrative; if not coherent, it requires an explanation. At the same time, the coherence of the acquired knowledge to the established facts ensures that it corresponds to reality. In the absence of explanations that make it possible to eliminate the inconsistency of evidence that has arisen, and thereby restore the coherence of the established narrative the credibility of the second one decreases. If incoherent information is confirmed by other facts during verification a new narrative, competing with the original one, containing a different explanation of what happened, becomes possible. The persuasiveness of the knowledge presented and justified in the previous narrative decreases at the same time. If new facts indicate that the original narrative does not correspond to the actual state of affairs i.e., its non-correspondence (for example, confirmation of the suspect's alibi) then it is abandoned and the investigation goes in a different direction, building a different, internally consistent narrative. In order to establish the circumstances to be proved "beyond any reasonable doubt" the investigator is obliged to check all versions and eliminate the possibility of "competing" narratives, i.e., to come to the only possible explanation of what happened.

The barrister acting for the defence goes the same way. He is limited in his ability to independently obtain evidence, but is not limited in his ability to study the case materials and makes petitions for their addition. Studying the evidence collected by the investigator, he also builds his own consistent picture of what happened but having different goals and freedom to evaluate evidence he usually creates a different narrative based on the same facts. If he manages to find suitable explanations for all the established circumstances, his narrative becomes such well-founded and convincing as the prosecution's version.

The judge justifying his decision based on the results of the trial solves the same problem and in the same way: all the considered evidence must form a "coherent set" convincingly explaining what happened and establishing the circumstances to be resolved in the verdict.

Evidence that is "incoherent" with the rest of the evidence must have explanations that agree with the overall picture. The absence of such explanations gives rise to reasonable doubts that, if they cannot be eliminated, must be interpreted in favour of the defendant as required by the principle of presumption of innocence.

Thus, the validity of a court decision by a coherent set of examined evidence is not only a requirement of the law but also its inherent property. It is coherence that creates the narrative underlying the judgment and makes it a valid true conviction. It is the coherence of argumentation, as the cases of Gettier show that makes opinions convincing, including erroneous opinions.

B. Russell noted that the existing set of facts could be coherent in more than one system of statements (Russell, 1907, pp. 28–49). Any practicing investigator, judge, prosecutor or barrister has repeatedly seen (and done it themselves) how an alternative and consistent version of the circumstances of the case can be built on the same evidence as the version of the procedural opponent that contradicts it. The things go even worse when with the help of impeccable procedural procedures a "coherent body of evidence" can be created consolidating the results of an accidental mistake or deliberate police provocation, turning it into an insurmountable basis for an unjust decision. Situations when a person who finds himself "at the wrong time and in the wrong place" becomes a victim of justice are found not only in detective novels and films — unfortunately, they also happen in reality.

The way to reduce the possibility of such errors is known and it is quite simple. Holism, as the approach underlying the coherent theory of truth, requires complete knowledge of the subject. The incompleteness of knowledge is filled with plausible or speculative reasoning, leads to mistakes like hasty generalizations which are easy to avoid if there is sufficient information. Returning to Gettier's cases, it is reasonable to ask: would Smith's reasoning have changed if he had counted the coins in his own pocket in the first case, or if he had found out from Jones if he had a Ford and called Brown to find out where he was in the second one? Obviously, knowing these circumstances would make his convictions much more reasonable.

Therefore, a practical solution to the problem of such errors is to ensure maximum completeness of information (primarily factual) about the object of judgement with the nomination and verification of all possible alternative versions. As a result, there must be one that according to the laws of logic must be true.

Thus, the conviction of the court, "forcing him to act," is the certainty that his knowledge of the circumstances of the case under consideration is true. This conviction is true if it corresponds reality. For such a conviction of the court, which entails making a decision "beyond any reasonable doubt," it is necessary not only to have factual grounds and the correct construction of logical conclusions. The facts known to the court (information about the facts) must be established in a proper manner, excluding doubt about their reliability. It is also important that these facts are sufficient for a comprehensive review of the case. Compliance with the rules of logical argumentation in the process of proof is certainly important. However, this is not enough: the reliability of the conclusion cannot be higher than the arguments justifying it. Therefore, it seems correct to establish a ban on justification in procedural proving by speculative, i.e., not based on facts, reasoning. Even formally correct conclusions following from any theory, model and chain of consecutive conclusions can be accepted for proving only if they are empirically confirmed. The result of the proof should be not just a well-founded but the *only possible* narrative confirmed by the "consistent totality" of the available evidence.

The causal theory of E. Goldman (1967) is convincing due to intuition about the existence of a causal gap between the empirical state of affairs and what the bearer of a true conviction thinks about it in Gettier's cases (Demin, 2019b, p. 64). These conditions are precisely aimed at "filling" this gap with the maximum number of facts available for obtaining about the object of knowledge and building on the basis of their consistent totality the only possible reasonable conviction which will be knowledge. Not absolute but sufficient to resolve the case "beyond any reasonable doubt." With due observance of these rules there is nothing more to be required for the administration of justice.

The arguments above show that the requirement for the comprehensiveness, completeness and objectivity of establishing the circum-

stances of the case by the court, the prosecutor, the investigator and the person conducting the inquiry, fixed earlier in Art. 20 of the Criminal Procedure Code of the RSFSR (1960), was a necessary and epistemologically justified principle of criminal procedural proving. There is no such principle in the current Criminal Procedure Code (CPC) of the Russian Federation. Only "traces" of it remain in certain norms of the criminal procedure law: Part 4 Art. 152 contains an indication of the need for completeness and objectivity of the investigation when conducting it at the location of the accused or most of the witnesses; in Part 2 Art. 154 the comprehensiveness and objectivity of the investigation are indicated as necessary conditions that must be provided when allocating a criminal case to a separate proceeding; in Part 1 Art. 330 of the CPC of the Russian Federation, the right of the parties to file a petition is fixed on the dissolution of the jury due to its inability to reach an objective verdict. And that is it! The principle itself was crossed out of the law in an unsuccessful attempt to strengthen the competitive nature of the criminal process. However, like any necessary thing, it is still actively used by all professional participants in criminal proceedings. Judges refer to it in their decisions, prosecutors and investigators are guided by it and lawyers use it in their complaints. And it is necessary precisely in order to reduce the possibility of errors, including those convincingly justified by a consistent set of collected evidence.

It would be possible to reduce the risk of such errors by introducing a lawyer's investigation however the possibility of a lawyer independently obtaining evidence is currently blocked by the mandatory formal requirements for their admissibility.

IV. Justification of Procedural Decisions and New Information Technologies

The fourth industrial revolution taking place right before our eyes (Schwab, 2016), and especially the development of technologies for receiving, processing and transmitting information are radically changing the entire habitual way of life of society. In this regard, there is reason to ask: will new digital information technologies change anything in judicial proof? Will they allow us to avoid, or at least reduce the number of mistakes made by justice?

The answer to the first of these questions is obvious: the digitalization of legal proceedings is in full swing and it is impossible to stop it. Technologies have changed the habitual human environment: numerous video cameras, electronic code readers, the "Internet of Things," "Big data," artificial intelligence, neural networks and other software and technical innovations of the modern world constantly identify a previously "unnoticeable" individual, record and predict almost all his actions, including that they have not yet performed and even desires, sometimes not yet realized. All this, in a crime investigation situation, generates an unprecedented amount of potentially evidentiary information.

Information processing and retrieval technologies, including those based on the use of Big data and artificial intelligence, are quite capable of making all this information, including initially presented in an implicit form, available to law enforcement and justice agencies. Criminal proceedings in electronic format are already practiced in many countries and electronic evidence is used almost everywhere. Professional participants in court proceedings are already using programs that help select judicial practice or predict a court decision based on its analysis. The possibility of using artificial intelligence to identify and investigate crimes is not only actively discussed by scientists but is already being implemented in practice. Undoubtedly, new information technologies will change the existing ways of obtaining, preserving, analysing and presenting judicial evidence within a few decades. But will they make justice infallible?

The practice of using computer information systems in law enforcement agencies gives little reason for such hopes. And the grounds for such doubts arose not now but almost immediately as soon as the information presented by computers began to influence the made decisions. Back in the 70s, American researchers noted the problems caused by the use of the first police computers at that time.

Thus, J.J. Murphy from the University of Cincinnati in 1975, researching the problems associated with the use of completely new computer technologies in the activities of the American police at that time, describes a number of cases where incorrect or outdated information obtained from a computer led to unjustified police actions and erro-

neous judicial decisions. Thus, in the case of *Temple v. Meadows*, the plaintiff was stopped by the police for a minor traffic infraction. Patrol officers checked his data on a computerized file and received a response that the plaintiff was wanted, armed and considered dangerous. Based upon this information, later learned to be false, the patrol officers drew guns, handcuffed the plaintiff and imprisoned him for a short period.

In the other case, *District of Columbia v. Banks*, patrol officers questioned Banks while he was standing next to his bicycle. After contacting the computer accounting through the dispatcher, they received a response about the existence of an arrest warrant for Banks for fifteen parking violations. Although Banks maintained his innocence and asserted that he neither drove nor possessed a license, he was arrested, convicted, and fined. Subsequently, by hiring a lawyer, Banks was able to prove in a new trial that he had no connection with any of the automobiles involved in the violations.

In the third case, the dealer informed the police that his automobile was stolen. The description of the car and the plate were immediately submitted to local and national computer records. The car was found by the owner himself a nine days later. The police computer units were immediately notified, but for some inexplicable reason did not delete the car theft records from local and national records. Fifteen hours after that, the applicant was spotted by a police patrol driving a car with license plates that were listed as stolen in computer files and arrested.

John J. Murphy reasonably believes that when making decisions, a policeman should rely on all the information available to the police, and limiting the justification of his actions by computer information always carries the possibility of error. At the same time, he sees the main reason for such errors in the use of outdated, untimely updated computer information (Murphy, 1975, pp. 15–20).

Timely updating of information registered in police information systems is, of course, extremely important, but the rate of "aging" of this information sometimes significantly exceeds the technical capabilities of its updating. Thus, a person who unknowingly steals a car from a person registered in the police information system as a dangerous armed criminal runs the risk of being shot while trying to escape driving it during detention, since the information about the owner of this car ob-

tained from the computer, identifies him in the eyes of the policeman in this way.

The policeman here finds himself in a situation similar to those described in Gettier's cases, when his well-founded beliefs, for reasons unknown to him, are not true. Of course, the nature of the actions of the persecuted person, the police experience, his assessment of the situation and the extreme lack of time to make a decision in the context of persecution, etc. are important here. However, supplementing his existing picture of what is happening with coherent computer information, which, however, was critically outdated at the moment of the automobile theft and could not be corrected or verified, can become the "trigger" of a situation with tragic consequences.

While half a century has passed since the described events, information technology has made a giant leap forward. But is there any reason to consider this example as just a "childhood disease," a disadvantage peculiar only to the period of the formation of computer technologies in the field of combating crime, which took place once upon a time in the United States, but was overcome and remained in the past? Law enforcement and judicial practice show that the problem has not gone away and it concerns not only American police officers.

In February 2023, hydrologist A. Tsvetkov was detained at Moscow Domodedovo Airport as his appearance was similar to the unknown suspect of committing four murders in the Moscow region more than 20 years ago. The reason for the detention was the data of the face identification system installed at the airport, which found a partial (55 %) similarity of his face to the portrait of the alleged murderer drawn up from the words of witnesses back in 2002.

The information was confirmed by the testimony of Alyoshin who concluded a pre-trial agreement and actively cooperated with the investigation. As a result of the accusation based on the "consistent totality" of artificial intelligence data and the testimony of an unscrupulous witness confirmed during the confrontation, A. Tsvetkov remained in custody for 10 months until his alibi was proved (Balayan and Shturma, 2024).

Such a long period of stay in the pre-trial detention facility directly indicates that the decision to detain A. Tsvetkov and the subsequent

petitions of investigators before the court to extend the period of his detention in the pre-trial detention facility due to established legal procedures were repeatedly checked by the heads of investigative bodies, prosecutors and courts during this period. However, none of them, until the decision of the Zamoskvoretsky District Court of Moscow dated 11 December 2023, which released A. Tsvetkov from custody, doubted the validity of this illegal provision. Unlike the American policeman from the previous case, they had more than enough time to justify, verify and make their procedural decisions. However, all of them were influenced by a coherently grounded narrative formed by an insufficient body of evidence and, of course, the desire to solve serious crimes. There is no reason to consider such a case as the only one.

Thus, modern information technologies do not in any way interfere with the ability of coherently presented arguments, including those of a factual nature, to create and justify a false conviction of professional participants in criminal proceedings. Moreover, they are able to significantly enhance the speed and possibility of its occurrence. And there is, of course, an explanation for this.

First, even the simplest information search engines are looking for information relevant to the query that a person formulates. At the same time, the response received depends significantly on the wording of the request. The objective of the subject of the investigation is to clarify the circumstances of a particular incident which is why, consciously or not, he is looking for (and therefore receives) information related and basically confirming his version of the subject of the investigation, i.e., coherent to it. The declared principles of objectivity (fairness, impartiality) of investigation and trial are extremely important, but it is common for a person to be captured by his own convictions. As K.R. Popper correctly noted, "It is easy to obtain confirmations or verifications for almost every theory if we look for confirmations" (Popper, 2008, p. 68). At the same time, the capabilities of computer systems to search for information are many times higher than human ones. In a certain sense, these are machines (programs) specially designed to build coherent justifications for anything.

Also, it should not be forgotten that this search is carried out not in the real world around us but in an information environment the con-

tent of which may not correspond to the actual state of affairs. Computer information has different origins: it can be created by a human, completely generated and recorded by a computer, or have a "hybrid," human-machine origin (for example, automatically generated metadata for a human-created files with texts or images). Everything that is created by a human being bears the "imprint" of the features and defects of his perception, understanding and abilities, as well as his goal setting which is not always limited to the intention to accurately describe the observed events. The information generated or recorded by a computer is also not free from errors related to the improper operation of internal and external devices — input sources, as well as processing, storage, interpretation and presentation of data by the system itself. Information may "age," lose its relevance over time, may be distorted unintentionally or on purpose.

However, verification of the validity (correspondence) of a narrative based on computer information can be initiated and carried out only by a human. Moreover, this is a person who has collected the very "consistent body of evidence" and is under its influence. But the absence of such a check creates the possibility of error.

The same applies to working with "Big data." For example, by analysing numerous financial transactions carried out, for instance, on a trading platform on the Internet, in order to identify those related to the illegal sale or production of drugs, using programs designed to process "Big data," you can easily solve the problem of finding among them those whose amounts are equal or multiples of the costs of batches of narcotic products, raw materials, equipment or precursors on the black market. However, the positive result of such an analysis will not be reliable at all: there is always the possibility of a random coincidence of the desired figures with the prices of any legal goods or services. This can only be verified in fact and only a human can do it.

A lot of hopes are pinned on artificial intelligence (AI) today. The most common type of AI systems currently in use is intelligent agents. These are programs that independently perform a specific task formulated by the user (for example, searching and collecting information on the Internet). The autonomy of such agents is provided by a set of preembedded "event-action" rules, such as "if A then B" (agents with sim-

ple behaviour), or embedded models that allow systems to operate in an environment that is not fully accessible for observation. Identifying the established part of the situation with any model available to it, the system completes the inaccessible part of the picture and, accordingly, chooses a model of its further behaviour. Advanced intelligent agents are capable of self-learning: they themselves statistically analyse the results of their activities and basing on this develop new rules, change the strategy for solving tasks and even receiving "rewards" for their successful implementation select the most successful strategies.

Intelligent agents may well be used for the needs of crime investigation where the analysis of large amounts of information is required. With the development of digitalization the volume of information will grow even faster than it is now and it will be possible to analyse it only with the help of AI systems. At the same time, they still remain programs for finding information and building coherent justifications from them acting according to the task set by the user.

However, intelligent agents can also make mistakes. The authors of the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and the Realities surrounding them (hereinafter referred to as the Ethical Charter) note that after "mastering" 200–300 rules of information analysis the logic of the system becomes inaccessible to its developers. Apparently, AI is beginning to combine human-formulated rules in its own "inhuman" way. The developers of the Ethical Charter note that modern large data processing systems do not try to reproduce the human model of cognition but create contextual statistics themselves on new amounts of data and use it for analysis without any real guarantee of excluding false correlations. At the same time, the larger the analyzed database the greater the probability of errors.[2]

The most amazing achievement of recent years in the field of AI are the so-called "large language models" (LLM) built on deep neural networks and self-learning on huge arrays of untagged textual information, the most famous of which are Eliza, GPT-4, ChatGPT, GigaChat,

[2] European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment. Adopted at the 31st Plenary Session of the CEPEJ (Strasbourg, 3–4 December 2018). Available at: https://rm.coe.int/ru-ethical-charter-en-version-17-12-2018-mdl-06092019-2-/16809860f4 [Accessed 18.06.2020].

etc. These are generative models capable of independently creating text that looks like it was written by a human. The "transformer" architecture allows them to work with natural language taking into account the context of words in sentences.

These systems demonstrate impressive success including performing various creative tasks. Not so long ago there were reports about the LLM GPT-4.5-Persona and some others overcoming Turing test an empirical test of "reasonableness" for AI systems (Jones and Bergen, 2025). This, however, does not mean the emergence of a "strong" AI that really has consciousness and is capable of independent thinking. Apparently, these systems represent the practical realization of post-structuralist ideas of J. Derrida representing "the world as a text" replacing the surrounding reality. AI is able to generate plausible narratives within a given discourse without caring at all about their correspondence to reality. This ability of LLM is certainly an achievement on the way to creating a human-like AI. However, it makes it completely unsuitable for the needs of judicial evidence. AI's inability to operate with syllogisms deprives the narratives it creates of evidentiary force.

Thus, computer systems significantly enhance human capabilities in building any coherent justifications. In the absence of proper verification of compliance (correspondence) with the actual state of affairs, they contribute to an increase in the likelihood of errors. Therefore, judicial narratives based on computer data, models, analytical algorithms and other information processing and presentation technologies should always be subjected to factual verification, especially in the presence of circumstances that are "not coherent" with them, especially those, that do not have an acceptable explanation.

To use the same computer technologies for verification, including data analysis of numerous recording devices (video cameras, electronic turnstiles, smartphones and devices with access to the mobile Internet equipped with geolocation systems, ATMs, payment and cash terminals, the "Internet of Things," etc.), in one way or another fixing traces human activity in the surrounding reality is a modern and technological idea. Such solutions are already used in law enforcement practice. For example, the Chinese "Zero Trust" system based on AI technologies designed to identify corrupt officials among civil servants could itself ac-

cess the database of aerial photographs to verify that the object listed in the contract was actually built in order to actually verify the fulfilment of concluded construction contracts (Chen, 2019).

However, such systems despite long and qualified training are not always able to provide evidentiary justifications of their conclusions and verify their correspondence to the actual state of affairs. First, because they are doomed to verify computer data with the help of computer data. These data may be intentionally falsified (which happens quite rarely), may be inaccurate and probabilistic (as in the case of A. Tsvetkov's AI-based "identification" system) but more often they are misinterpreted and endowed with meanings that they do not actually have.

Thus, computer-recorded information about the use of a credit card near the crime scene and at the time of its commission can form the investigator's confidence that its owner is a valuable witness and eyewitness to the crime. But it is unfair to exclude the possibility that the person who used the credit card is not its owner at all. Registration of a cell phone on the network in the area of operation of certain cell towers is often regarded (also by the court) as proof of the presence of its owner in the specified location. However, it may happen that another person was also using the phone at that moment. Even when receiving a response from the police Automated Fingerprint Identification System (AFIS) about the coincidence of the fingerprints found at the scene of crime with the fingerprints of the suspect, one should not forget that there are no real "copy" fingerprints in this system, but only their formalized, encoded digital models. Information loss during encoding is inevitable and therefore the probability of matching digital models is much higher than that of copy images. Therefore, the response of the information system is not enough for judicial proof — the conclusion of a fingerprint expert, i.e., a person with special knowledge, is necessary.

There are many similar examples. All of them point to the need for actual verification of information obtained with the help of modern information technologies in the investigation of crimes and, of course, in judicial evidence. This data can be even more dangerous in situations where there is no time or opportunity for such verification. In law enforcement, it is necessary to minimize the possibility of situations

where a hasty reaction to unverified computer data can lead to serious irreversible consequences.

Unfortunately, everyday problem solving using a computer inevitably creates a habit. Police officers, investigators, prosecutors, judges and lawyers are used to computers as universal tools of their work. Even detectives prefer to look for criminals and solve crimes on computers, instead of real work "in the street." However, the lack of actual verification, even of convincing conclusions based only on computer data, can lead to errors, which in criminal proceedings almost always mean someone's tragedy.

V. Conclusion

Gettier's cases not only show that the Justified True Belief is not enough to consider it knowledge. They also demonstrate that a consistent body of evidence can justify false convictions. The development of information technology opens up a lot of new opportunities for investigative authorities to obtain evidentiary information. However, they also multiply the possibilities of forming well-founded but untrue convictions of subjects of criminal proceedings.

The return to the law of the epistemologically based principle of comprehensiveness, completeness and objectivity of establishing the circumstances of the case could reduce the risk of judicial errors. When using information systems to collect evidence for criminal justice, it is necessary to take into account the need to take measures to verify that the results of information search and analysis obtained in this way correspond to the real state of affairs. Information systems that analyse data from various electronic recording devices can also be used for this purpose. But checking "machines by machines" has the same disadvantages as the conclusions being checked in this way. In our technological society, we are increasingly inclined to blindly trust the results of machine search and information analysis. But justification is an important component of knowledge. Beliefs, even those that have grounds but are accepted uncritically, without checking their validity are not knowledge but faith. But belief as the basis of criminal repression is extremely dangerous, including the belief in the omnipotence of technology.

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Received 08.10.2024
Revised 17.12.2024
Accepted 09.01.2025

Article

DOI: 10.17803/2713-0533.2026.1.35.051-080

The Proportionality of House Arrest with Electronic Monitoring and Individual Freedom of the Accused: A Comparative Study between French and Iranian Law

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Abstract: The paper is dedicated to the relevant topic of applying electronic monitoring measures to individuals who have been placed under house arrest, using the experiences of two countries — France and Iran — as case-studies. The key issue explored in the study is the proportionality criteria of this measure in relation to the suspect's or accused person's right to privacy and freedom of movement The authors conclude that French legislation establishes the principle of proportionality between the aforementioned measure and the accused's freedom of movement, as well as defines clear criteria for proportionality. In contrast, Iranian legislation does not establish the proportionality of this measure with the accused's freedom of movement, nor does it address the scope and duration of this measure at the legislative level. The authors also point out that French law requires the accused's consent to wear electronic bracelets in order to respect their dignity and ensure privacy. Iranian law does not clarify the status of the accused's consent or the consequences of failing to comply with this procedure.

Keywords: Alternative to pre-trial detention; freedom of movement; privacy; proportionality; accused's consent

Cite as: Qasem, A., Habibzadeh, M.J. and Mousavi Mojab, S.D., (2026). The Proportionality of House Arrest with Electronic Monitoring

and Individual Freedom of the Accused: A Comparative Study between French and Iranian Law. *Kutafin Law Review*, 13(1), pp. 51–80, doi: 10.17803/2713-0533.2026.1.35.051-080

Contents

I. Introduction 52
II. Definition of House Arrest with Electronic Monitoring 55
II.1. The Nature of House Arrest Order with Electronic Monitoring 55
II.1.1. Freedom-Restricting Measure 56
II.1.2. Custodial Measure 58
II.2. Implementation and Enforcement of the Electronic Monitoring Measure ... 60
III. Proportionality of House Arrest with Electronic Monitoring and the Individual's Freedom of Movement 63
III.1. Adequacy 64
III.2. Necessity 65
III.3. Proportionality in the Strictest Sense 66
IV. Proportionality of House Arrest Order with Electronic Monitoring and the Accused's Privacy 68
IV.1. The Role of Accused's Consent 68
IV.2. Home Privacy 70
IV.3. Physical and Mental Privacy 72
V. Mitigating the Adverse Effects of House Arrest Order 73
VI. Conclusion 74
VII. Suggestions 75
References 76

I. Introduction

In the early sixties of the twentieth century, Scientists from Harvard University Ralph Schwitzgebel and his twin brother Robert, in collaboration with a group of researchers at this university, invented a type of electronic monitoring technology (Gable and Gable, 2016, p. 13). It was designed for bidirectional data transfer between a central station and a volunteer, considered a juvenile delinquent who benefited from parole. It also transmitted guidance and advice messages to these volunteers to help them reform and rehabilitate while undergoing parole (Gable, 2014, p. 4). The solidity and success of this innovation in

criminal law were due to the efforts of the American judge Jack Love (Tadayon, 2008, p. 59). He liked this monitoring method after watching the Spider-Man animated movie. In 1983, in New Mexico, He ordered the installation of an electronic device on the ankles of criminals who were sentenced to house arrest to monitor their movements (Phillips, 2013, pp. 97–98). Afterward, the use of this method spread to other states, including Washington, Virginia, Florida, Michigan, California, and Alabama. In 1986, this method reached 26 states (Lehzil, 2018, p. 309). The rising success of electronic monitoring influenced European legislators, whether as a modern method of enforcing punitive actions and (freedom-restricting or depriving) penalties and leniency institutions or as an alternative for pre-trial detention. In France, the feasibility of predicting electronic monitoring was the subject of comprehensive analysis and discussions by its opponents and proponents.

In 1993, a legal movement emerged in French law to alternative electronic monitoring for pre-trial detention. Senator Cabanel, when drafting the bill on pre-trial detention, presented electronic monitoring as an ideal solution, from among twenty proposed methods, for reducing prison populations and an effective means of preventing recidivism among high-ranking officials. However, when examining the bill in 1996, the National Assembly dismissed this proposal on the grounds that it jeopardized the prestige and authority of criminal justice (Cabanel, 1996). Due to the pressure from proponents of house arrest with electronic monitoring, the French legislator was later forced to accept this establishment as an alternative for pre-trial detention under the "Law on Strengthening the Protection of the Presumption of Innocence and the Rights of Victims" known as the *Guigou Law* in the year 2000. Nevertheless, the regulation related to this institution was not practically implemented and was suspended (Masrouq, 2019, pp. 11–13). Soon after, by ratification of the Guidance and Planning of Justice Law (2002), the obligation to be present at the place of residence with electronic monitoring as an alternative to pre-trial detention became one of the requirements and obligations of judicial supervision. Pursuant to the 24 November 2009 law,[1] this measure acquired a proper status and

[1] Loi n° 2009-1436 du 24 novembre 2009 pénitentiaire JORF n° 0273 du 25 novembre 2009.

was recognized as an intermediate measure between judicial supervision[2] and pre-trial detention[3] (Plonquet, 2021, pp. 9–10).

In the French Code of Criminal Procedure, Art. 137, the legislator emphasizes the principle of innocence and the freedom of the person under investigation[4] (the accused) and stipulates that due to the necessities of the investigation or as a precautionary measure, the accused can be obligated to comply with one or more of the requirements of judicial supervision, and if these requirements are insufficient, a house arrest with electronic monitoring[5] will be issued. Finally, suppose the requirements of judicial supervision or house arrest with electronic monitoring do not suffice to achieve these goals (the necessities of the investigation or precautionary measures). In that case, the accused can be detained temporarily.

Conversely, Iranian legislators have been influenced by the formation and development of electronic monitoring in the United States and European countries, especially France. Article 62 of the Islamic Penal Code (2013) provided for placing convicts under electronic monitoring with their consent. In order to reduce discretionary prison sentences (Ta'zir) and provision of proper monitoring of the behavior of convicts according to Art. 27 of the executive bylaw of Electronic Monitoring, the Guidelines for Determining the Monitoring Range of Convicts Under Electronic Monitoring Systems was ratified by the Head of the Judiciary in 2022. Moreover, Para. (g) Art. 217 of the Code of Criminal Procedure stipulated that electronic monitoring as one of the preventive measures for accused individuals under the title "*House or designated place of residence arrest order with the consent of the accused by determining the amount of the bail through monitoring with electronic equipment or without monitoring with such equipment*" (Khaleghi, 2024, p. 250).

Given that the principle of proportionality has been highlighted in French criminal law and electronic monitoring has been considerably successful in European countries, examining Iran's approach in

[2] Contrôle judiciaire (CJ).

[3] Détention provisoire (DP).

[4] Personne mise en examen.

[5] L'assignation à résidence avec surveillance électronique (ARSE).

this area seems valuable. This paper, by using a descriptive-analytical method and library resources, identifies the nature of the house (or designated place of residence) arrest order and seeks to determine the components of the ideal model of proportionality of house arrest with electronic monitoring with the accused's individual freedom. To this end, the second section of this article will study the nature, implementation and enforcement of house arrest with electronic monitoring and its position in relation to other criminal preventive orders. The third section examines the proportionality of this order with the accused's freedom of movement. The fourth section will analyze the status of the accused's consent and agreement and how this order is proportionate to their privacy. Finally, the fifth section elaborates on the possibility of deducting the duration of house arrest with electronic monitoring from the final verdict and compensating for the inflicted damages.

II. Definition of House Arrest with Electronic Monitoring

In this section, we will discuss the nature of House Arrest with Electronic Monitoring and how it is applied and implemented in French and Iranian law.

II.1. The Nature of House Arrest Order with Electronic Monitoring

French legislator enacted house arrests through electronic monitoring, but did not define it since legislators usually pay attention to explicating the conditions and how to enforce them (Kasāsiba, 2010, p. 295). Various definitions of this order have been presented in the legal doctrine of countries. Still, as the details of the legal system governing house arrest with electronic monitoring vary in each country, these definitions change from one country to another (Masrouq, 2019, pp. 28–31). Defining the nature of such order cannot be achieved by merely providing a single definition, as being under electronic monitoring, at least under French law, can be fixed or mobile, full-time or part-time. Moreover, in French law, house arrest as an intermediate order is

only executed using electronic monitoring without awarding any bail to the accused.[6] However, under Iranian law, in the term of house arrest or the designated residence, the accused's continuous presence in that place is monitored by electronic devices or other equipment. Moreover, the commitment of the accused to appear before the judicial authority and not to leave their house or another place determined in agreement with the investigating judge, a bail is determined, which will be confiscated in case of any violation of these terms (Khaleghi, 2024, p. 250). The Iranian legislator has defined Electronic Monitoring in general as: "A method that allows the presence and absence of the accused and the suspect to be monitored remotely in locations specified by the judicial authority and within specific periods, using electronic means designated for this purpose."[7]

The question in determining the nature of the Institution of presence at the place of residence with electronic monitoring is whether this institution is considered a measure restricting freedom or deprivation of liberty. Some jurists have considered it a measure restricting freedom, given the nature of this surveillance method. In contrast, the intensity of presence at the place of residence has led some jurists to liken it to a kind of imprisonment (Robert, 2020, p. 577).

II.1.1. Freedom-Restricting Measure

Some researchers consider house arrest with electronic monitoring a restrictive measure of freedom (Anane, 2015). They refer to the French Court of Cassation Jurisprudence. In 2015, while raising the issue of harmonizing house arrest with electronic monitoring with pretrial detention in the enforcement of Art. 175 and 142-12 of the French Code of Criminal Procedure, the latter Court stated, "In French law,

[6] In Para. 2 Art. 138 of the French Code of Criminal Procedure, obligations such as refraining from leaving the territorial limit determined by the investigating judge or the judge of freedoms and detention, refraining from leaving home or residence, except for cases specified by these judges, and the prohibition of traveling to certain places or mandatory travel in neighborhoods determined by these judges.

[7] Article 26 of the Executive Regulations for method of implementing judicial supervision and preventive orders of 2016 and Para. B Art. 1 of the Executive Regulations for Electronic Supervision of 2018.

house arrest with electronic monitoring does not inherently entail 'deprivation of liberty' in the strict sense of the term. Therefore, house arrest with electronic monitoring is considered an alternative to pre-trial detention; while providing information for presenting defenses and statements, these two institutions cannot be considered identical, and the same regulations cannot be applied to them."[8]

Some judges, including the Paris Court of Appeal prosecutor, believe that house arrest with electronic monitoring has a specific regime, and the legislator should explicitly enact the rules governing this order. They claim that the enforcement of this measure outside France differs from French jurisdiction. They argue that although "*bail with electronically monitored curfew*," as implemented in England, is equivalent to house arrest with electronic monitoring in French law, it is not the same as or similar to pre-trial detention so that it can be attributed to the full duration of the custodial sentence. It is due to the fact that Art. 716-4 of the French Code of Criminal Procedure only refers to the deduction of the pre-trial detention period from the custodial sentence, and there is no mention of deducting the duration of house arrest with electronic monitoring, which is executed abroad, from the custodial sentence (Baduel, 2020, p. 25). Although this opinion is based on Art. 716-4 of the aforementioned law, it lacks validity, and the French Court of Cassation disagrees with this interpretation (Lavric, 2021).

In Iranian law, researchers have not commonly described and defined the nature of the order for house/or place of residence arrest order. Some jurists have explained Para. (g) Art. 217 of the Code of Criminal Procedure, namely: "The obligation of the accused to appear before the judicial authority when necessary, while restricting their freedom of movement at other times, in such a way that another obligation to refrain from leaving the house or designated place of residence, instead of pre-trial detention […], is also imposed on them" (Khaleghi, 2023, p. 300). They have also stated, "The purpose of this new establishment (obligation not to leave the house or place of residence) is reducing the cases of arrest of the accused due to the failure to introduce a guaran-

[8] Cour de cassation, criminelle, Chambre criminelle, 17 mars 2015, 14-88.310, Publié au bulletin, 2015.

tor or bail, or issuance of the pre-trial detention order so that while avoiding the deprivation of their liberty, their entry into the prison is also prevented" (Khaleghi, 2024, p. 250). These statements indicate that a house arrest is considered a restrictive measure of freedom in Iranian legal doctrine. This can be because the latter jurists have considered the geographical limits of enforcing this order. They have also distinguished between this order and an pre-trial detention order and considered the house/place of residence arrest order as an alternative to pre-trial detention. Therefore, they have described it as a restriction of freedom. This approach is aligned with the approach of proponents of the principles of necessity and proportionality since this perspective underlines the use of alternative and less intrusive measures. As long as a house arrest is considered an alternative to pre-trial detention and less intrusive, this order should not inherently be considered a deprivation of liberty like pre-trial detention (Chetard, 2019, pp. 370–372).

II.1.2. Custodial Measure

Advocates of this approach believe that, given its daily implementation, the French law has not provided distinct regulations for house arrest with electronic monitoring. The French legislator has not recognized any distinction between enforcing this order full-time or part-time. It is noteworthy that, pursuant to Para. 2 Art. 142-5 of the French Code of Criminal Procedure, an individual subject to house arrest can leave the designated place at times determined by the judge. Of course, the geographically prohibited area where an individual subject to house arrest is not permitted from visiting or imposed places related to the main place of residence can be regulated (Bitton, 2021).

The European Union and French laws make a clear distinction between restrictive measures of freedom and custodial measures. The Court of Justice of the European Union (CJEU), in its judgment of 28 July 2016, in Para. 1 Art. 26 of Order No. 2002/584, stated, "[…] Although, given the nature of the house arrest and possible ancillary obligations, including monitoring of the person in question using

an electronic bracelet,[9] the obligation to report to the police authorities at specified times on a daily basis or several times a week, and the prohibition of applying for travel documents; the coercive nature of this measure is undeniable. But, in principle, such an order cannot be compared to detention as defined in Para. 1 Art. 26 of Order No. 2002/584. However, the sum of these obligations, depending on their type, duration, effects, and enforcement methods, are coercive so that the same negative effects on liberty as the effects of detention. Consequently, they can be considered as 'detention'."[10]

Considering the aforementioned judgment, the French Court of Cassation stated, "The concept of 'detention' essentially refers to a deprivation of liberty, but does not necessarily take the form of imprisonment. Therefore, it seems important to verify the measure in question to determine whether it, given its type, duration, effects, and implementation methods, is so severe that it naturally leads to depriving the person in question of their liberty to the same degree as imprisonment. Thus, the French Court of Cassation has equated house arrest with electronic monitoring to pre-trial detention for the purpose of attributing its full duration to a custodial sentence, even if it is carried out part-time" (Cour de cassation, criminelle, Chambre criminelle, 17 mars 2021, 20-84.365, Publié au bulletin, 2021).

Accordingly, we cannot deduce that the legal system governing house arrest with electronic monitoring is subject to the regulations of pre-trial detention. One can take the competent authority for extending the order for house arrest with electronic monitoring as an example. The French legislator has promulgated, "House arrest with electronic monitoring order is issued with justified reasons by the investigating judge or the judge of freedoms and detention […]." The French Court of Cassation has interpreted, the authority to issue or extend the house[11] arrest with electronic monitoring lies with both the investigating judge (JI) and the judge of freedoms and detention (JLD). The broad jurisdiction of these two judicial bodies suggests that after one of them decides

[9] Bracelet électronique.

[10] CJUE, 28 Juillet 2016, Aff. C-294/16 PPU, JZ Contre Prokuratura Rejonowa Łódź — Śródmieście, 2016.

[11] Alinéa 2 de l'article 142-5 du C.P.P.

to take a measure, it is always possible for the other authority to issue an order to extend it, and there is no "hierarchy"[12] between these two judges or "parallel jurisdiction"[13] between the initial decision and its extension. However, house arrest with electronic monitoring is presented both as a measure similar to and an alternative to pre-trial detention. Nevertheless, the rules of jurisdiction in each case are very different. In this regard, no exclusive jurisdiction has been provided for the judge of freedoms and detention to extend the house arrest with electronic monitoring.[14]

Despite the substantive and inherent differences between the two legal institutions, these regulations indicate that house arrest with electronic monitoring is equivalent to pre-trial detention. However, house arrest with electronic monitoring is not equated with general or unconditional pre-trial detention; it is rather limited to specific cases. This equation is more based on the effects and consequences of house arrest with electronic monitoring than on its nature (Recotillet, 2022). Consequently, regardless of the degree and extent of the deprivation of liberty that is inherent in house arrest with electronic monitoring, its severity, effects, and consequences require the application of some of the regulations, where appropriate, of the pre-trial detention regime to this measure. In essence, house arrest with electronic monitoring, whether it leads to a slight or severe deprivation of liberty, should guarantee the rights of the accused, as it seems that house arrest with electronic monitoring is a complex measure that might entail effects and characteristics of pre-trial detention.

II.2. Implementation and Enforcement of the Electronic Monitoring Measure

The question of the technology used to implement the electronic monitoring measure always arises. In France and Iran, similar electronic technologies are used to monitor the movements of the accused and

[12] Hiérarchie.

[13] Parallélisme de compétence.

[14] Cour de cassation, criminelle, Chambre criminelle, 3 octobre 2012, 12-84.863, Publié au bulletin, 2012.

suspect, and they do not contain any cameras or audio recorders. In the event of a House Arrest with Electronic Monitoring, the device consists of a box installed in the home and a grey, hypoallergenic bracelet that attaches to the person's ankle. The box is connected to a power outlet, which allows the bracelet to be monitored at home, and is equipped with a handset, which will enable it to be contacted by the central monitoring unit.[15] In addition, it also has a touch screen that allows the person under surveillance to view the restrictions imposed on them in terms of place and time. If this measure is imposed in specific locations outside the home, in addition to wearing the bracelet and placing the box at his residence, the person under electronic monitoring must carry with him every time he leaves the house a device called a "mobile unit,"[16] a phonea dedicated to this purpose and allows the person's location to be permanently geolocated (Plonquet, 2021, pp. 12, 50; Poostchi and Darabi, 2024, pp. 116–119).

Regarding the mechanism for implementing this measure, in France, the decision to place a person under Electronic Monitoring is taken at the pre-trial stage by the investigating judge or the judge of liberties and detention. Before final approval of the decision, the judge must ensure the technical feasibility of this measure.[17] And to this end, the judge seeks the assistance of the Penitentiary Integration and Probation Service.[18] Then the electronic monitoring agent[19] installs the electronic devices in preparation for the implementation of the measure, and the proper implementation of this measure is monitored by employees and consultants working at the Penitentiary Integration and Probation Service. According to the Methodological Guide for Electronic Monitoring, "When the obligations imposed on the person under Electronic Monitoring are violated, warnings are issued for behavioral violations,[20] which mainly include failure to adhere to the established travel schedules (late entry, early exit), intentional damage

[15] Pôle de centralisation (PC).
[16] Unité mobile (UM).
[17] Alinéa 3 de l'article 142-6 et Alinéa 3 de l'article 142-6-1 du C.P.P.
[18] Service pénitentiaire d'insertion et de probation (SPIP).
[19] Agent de surveillance électronique (ASE).
[20] Alarmes comportementales.

to the equipment (transmitter and receiver), or interference with their technical operation."[21] The rule given to the person under Electronic Monitoring on the day the electronic device is installed is that every warning must be justified. The electronic monitoring agent prepares notes on behavioral warnings via a special software application known as the "Probation and Integration Program" and sends them to both the responsible Counsellor at the Penitentiary Integration and Probation Service[22] and the judge responsible for implementing the measure, so that the latter can examine the justifications of the person placed under electronic monitoring (Plonquet, 2021, p. 22). If he accepts the justifications, the Electronic Monitoring measure will continue, and if he rejects it, the accused or suspect will be brought in, and a pre-trial detention order may be issued against him.[23]

In Iran, the decision to place a person under Electronic Monitoring is made by the investigating judge or, in some cases, the public prosecutor.[24] When the competent judge intends to take this measure, he obtains the accused's approval and sends a request to the Electronic Monitoring Center to ensure that this measure can be implemented in the locations he has designated. The accused is then sent to this center to have the electronic device installed by the electronic monitoring agent, and the supervisor monitors the implementation of this measure at all times. In cases where a person under Electronic Monitoring is forced to breach the obligations and duties imposed on him, he must obtain prior approval from the competent judicial authorities if he can do so. If this is not possible, he must prove the state of necessity to the competent judicial authorities. Undoubtedly, establishing the state of necessity exempts the person under Electronic Monitoring from liability.[25] In addition, according to Iranian law, any sabotage or disruption of electronic devices by a person under electronic surveillance, whether intentional

[21] Circulaire interministérielle Du 28 Juin 2013 Relative Au Guide Méthodologique Sur Le Placement Sous Surveillance Électronique — Légifrance, 2013, pp. 38, 47.

[22] Conseil pénitentiaire d'insertion et de probation (CPIP).

[23] Alinéa 3 de l'article 142-8 et alinéa 3 de l'article D32-11 du C.P.P.

[24] Art. 217 C.C.P.

[25] Art. 3, 24 and 25 of the Executive Regulations for Electronic Supervision of 2018.

or negligent, obligates that person to pay compensation for the damage caused to these devices. In such cases, supervisors and those responsible for implementing this measure must inform the judicial authorities that issued it to take the necessary action.[26]

The bottom line is that the techniques used in France and Iran are very similar, as are the mechanisms for implementing and maintaining the measure and the cases in which a person under electronic monitoring is forced to breach their obligations and duties. However, it should be noted that the Iranian legislator did not specify the alternative measure that should be taken if the person under Electronic Monitoring breaches his obligations and duties, and did not explicitly stipulate the adoption of a decision for pre-trial detention in such cases. This is because the legislator did not specify the position of electronic monitoring measures among the various preventive measures.

III. Proportionality of House Arrest with Electronic Monitoring and the Individual's Freedom of Movement

House arrest with electronic monitoring, full-time or part-time, is a coercive measure restricting the accused's right to freedom of movement. The legitimate objectives, such as protecting society and victims' rights and ensuring the efficiency of investigations and criminal proceedings, generally justify this coercive measure. They are considered equal to the accused's freedom of movement regarding importance and dignity. Therefore, using house arrest with electronic monitoring may lead to a conflict between the rights and interests of the parties to a criminal case. European jurists, especially Germans, have utilized the principle of proportionality to resolve this issue (Sauvé, 2018).

The German model of proportionality employs multiple criteria in a hierarchical order to examine proportionality. The Federal Constitutional Court first used it in the "Pharmacy Case"[27] in an order issued

[26] Art. 27 and 28 of the Executive Regulations for method of implementing judicial supervision and preventive orders of 2016 and Art. 12 of the Executive Regulations for Electronic Supervision of 2018.

[27] L'affaire des pharmacies.

on 11 June 1958.[28] The first criterion is that the measure infringing on rights and freedoms should serve a legitimate purpose. A legitimate purpose is considered a prerequisite and an external pre-condition for establishing proportionality. The next step is to determine whether the measure is suitable to achieve the intended objective and capable of realizing it, and whether it is necessary in that it imposes the least possible impairment on rights and freedoms. Ultimately, even measures that are suitable and necessary must also satisfy proportionality in the strict sense (Van Drooghenbroeck, 2019, pp. 35–40).

Per the preliminary article of the French Code of Criminal Procedure, "coercive measures[29] that a suspect or a person subject to prosecution may face [...] shall be strictly subject to procedural rules and proportionate to the seriousness of the alleged crime and must not infringe the human dignity." Although the principle of proportionality is not enacted as a guiding principle in Iranian law, the legislator has underlined the necessity of observing proportionality in judicial supervision and criminal orders, including house arrest, proportionate to the nature and gravity of the crime, the severity of the punishment, and other circumstances.[30]

III.1. Adequacy

Adequacy[31] refers to the aptitude for restrictive rights and freedoms measures to achieve their goals. Thus, if the decision-maker is confident that a house arrest with electronic monitoring truly seeks a legitimate objective, they should also examine the existence of a minimal causality[32] between the house arrest and the intended objective, ensuring that this means providing the aptitude to achieve the intended goal. Therefore, examining the criterion of adequacy is not limited to

[28] German Case. Foreign Law Translations. Texas Law. (n.d.). Retrieved 12 April 2025. Available at: https://law.utexas.edu/transnational/foreign-law-translations/german/case.php?id=657.

[29] Les mesures de contraintes.

[30] Art. 218, 219, 247, 250, and 254 of the Iranian Code of Criminal Procedure.

[31] Adéquation.

[32] Lien de causalité minimal.

the mere existence of a causal relationship between the means and the end. Still, the quality of this relationship also matters. Namely, house arrests with electronic monitoring should be able to fully or partially achieve the desired goals because a certain error margin is expected when examining the adequacy of measures that infringe on rights and freedoms. Hence, the decision-maker accepts adequacy if the measure's effectiveness is generally and probably proven, even if its adequacy is not proven definitively. In contrast, inadequacy may stem from a partial deficiency in the nature of such measure, and conversely, it may have a minor and marginal effect (Chetard, 2019, p. 364).

The French Code of Criminal Procedure emphasizes the adequacy of criminal preventive measures and the promulgation of their legal and factual considerations,[33] which is also emphasized by the judicial precedent (Pradel, 2019, p. 1131). An order issued by the French Court of Cassation prescribed: "Factors such as the defendant's dangerous history, violating the previous judicial supervision, and insufficiency of guarantees for their presence are not sufficient to justify not using house arrest with electronic monitoring; rather, judges shall explicitly elaborate on the legal and factual considerations regarding the inherent inadequacy of house arrest with electronic monitoring."[34] The Iranian Code of Criminal Procedure, Art. 250, highlights the justification and adequacy of preventive order and judicial supervision, indicating the requirement to determine the actual adequacy of the house/place of residence arrest order for achieving the desired objectives of such order.

III.2. Necessity

However, some researchers acknowledge that necessity, as one of the criteria of the principle of proportionality, is identical to what is discussed in substantive criminal law (Harithi, 2021, p. 8). In fact, necessity, as one of the criteria of the principle of proportionality, entails a different nature and application in issuing preventive measures. Therefore, it is determined by choosing measures with minimal in-

[33] Alinéa 1 de l'article 137-3 du C.P.P.

[34] Cour de cassation, criminelle, Chambre criminelle, 19 avril 2023, 23-80.873, Publié au bulletin, 2023.

terference with individual rights. According to the above definition, a method should be selected with the least interference with individual rights and the most adequate to achieve such goals (Hajimolla and Mohammadi, 2021, pp. 34–35). Thus, some jurists have called it "internal necessity"[35] to distinguish the necessity of the principle of proportionality from other types of necessity (Ghazwani, 2022, p. 23).

The wording of Art. 137 of the French Code of Criminal Procedure stipulates the need to consider the necessity of house arrest with electronic monitoring. As a result, house arrest with electronic monitoring can only be issued on the grounds of investigative necessities or as a preventive measure only in cases of insufficient judicial supervision measures.

In Iranian law, the principle of the necessity of establishing preventive measures is well grounded. According to para. 1 of the Single Article Act on Respect for Legitimate Freedoms and Protection of Citizen Rights, enacted in 2004, law enforcement officers are obligated to [...] avoid additional and unnecessary arrests (Ashoori and Saffari, 2023, pp. 9–10). Therefore, if the requirements and commitments of judicial supervision stipulated in Art. 247 of the Code of Criminal Procedure or other minor measures specified in Art. 217 of the latter can achieve the conflicting goals, utilizing house arrest is deemed unnecessary, intrusive, and violates the principle of proportionality.

III.3. Proportionality in the Strictest Sense

In addition to the need for establishing the adequacy and necessity of a restrictive measure on rights and freedoms, it should also be proportionate in its strictest sense.[36] These criteria require assessing the effects and consequences of imposing such a restriction to ensure that it is not excessive compared to the surrounding circumstances of a certain case. In addition, the importance of the goal and the expected benefits of such restriction of rights are evaluated properly for optimal exercise of competing rights (Alexy, 2012, pp. 467–469; 2014, pp. 55–58).

[35] Nécessité interne.

[36] Proportionnée au sens strict.

In our opinion, in addition to the obligation of considering the principle of proportionality, the legislator must also provide the means of compliance with this principle for law enforcement officials. To this end, competent authorities should be given many powers since house arrest with electronic monitoring is a temporary measure that should be continuously reviewed and reassessed. In other words, proportionality in the strictest sense should also be observed in decision-making and during implementation.

Article 142-5 of the French Code of Criminal Procedure stipulates: "House arrest with electronic monitoring may be issued, without a request or at the request of the person concerned, if the accused faces a misdemeanor punishable by imprisonment of fewer than two years or a more severe penalty." Suppose the accused is suspected of committing a crime punishable by more than seven years of imprisonment, for which social-judicial prosecution is considered. In that case, this obligation may be carried out in accordance with the regime of placement under mobile electronic monitoring.[37] In all these cases, according to Art. 142-7 of the Code of Criminal Procedure, house arrest is ordered for a period that cannot exceed six months. During the investigation, it can be renewed for the same period several times, provided that the total duration of placement under electronic monitoring does not exceed two years.

In the Iranian legal system, the legislator has not observed the determination of the extent and duration of house arrest at the legislative level (Rajab, 2017, pp. 75–77). It seems that the offenses subject to this measure and its maximum term are left to the broad discretion of the competent judges. This issue may lead to abuse of this measure and violation of the principle of judicial security for citizens. In Iran, despite the issuance of the Executive Regulations for method of implementing judicial supervision and preventive orders in 2016, the competent authorities have not worked seriously and noticeably to provide the necessary infrastructure and equipment to implement this measure. Electronic Monitoring measures are generally limited to some vital regions, such as the capital. The appropriate environment and necessary

[37] Alinéa 3 de l'article 142-5 C.P.P.

equipment have not yet been provided in remote areas to implement this decision. Therefore, Electronic Monitoring in Iran has not been widely welcomed by judges due to its limited implementation in some geographical regions. In light of current legal texts, the determination and extension of the period is left to the judge. Accordingly, there is nothing to prevent a judge from taking this measure for a period exceeding the periods specified for pre-trial detention, which contradicts the philosophy and essence of Electronic Monitoring as an alternative measure to pre-trial detention, which must be characterized by a short duration. In our opinion, the term of house/place of residence arrest order should not exceed the duration of interim detention.

IV. Proportionality of House Arrest Order with Electronic Monitoring and the Accused's Privacy

Dissenters of house arrest with electronic monitoring exaggerate in claiming that house arrest with electronic monitoring poses greater harm to the accused and violates several of their fundamental rights. It is due to infringing on the accused's freedom and undermining their home, physical, and psychological privacy; thus, it can be considered a more severe measure than pre-trial detention. Hence, many European laws have set the condition of "consent"[38] for enforcing this order. This section addresses the position of the accused's consent and agreement. It examines the opponents' view on infringing the accused's privacy rights in house arrest with electronic monitoring, as the principle of proportionality aims to protect competing rights and freedoms.

IV.1. The Role of Accused's Consent

Legislators have introduced the condition of "consent" under the influence of said criticisms to establish proportionality between this measure and the accused's privacy. For example, the French legislator, in Para. 2 Art. 723-8, the Code of Criminal Procedure, has emphasized respecting human dignity, integrity, and the privacy of the individual during the implementation of this measure as well as obtaining the ac-

[38] Consentement.

cused's consent to install electronic tagging, and also imposed an obligation of notifying the accused that the device will not be installed without their permission. However, refusing this installation will be considered a violation of their obligations. It will result in the cancellation of house arrest with electronic monitoring and putting the accused in pre-trial detention.[39] Furthermore, according to Art. 142-12 of the Code of Criminal Procedure, this provision applies if the accused is placed in pre-trial detention and the competent authority decides to impose house arrest with electronic monitoring as an alternative for pre-trial detention.

Although the Iranian legislator enacted the "consent of the accused," it has not sufficiently elaborated on the status of this consent and the consequences of the accused's disagreement. A number of Iranian jurists believe that "Para. 1 Art. 217 of the Code of Criminal Procedure on the sanctions for non-compliance with the order mentioned in Para. (g), which implementation was subject to the approval of the relevant bylaw, is not enforceable. Evidently, the phrase 'consent of the accused' in Para. (g) refers to the 'designated place of residence.' Seemingly, since 'commitment' is a legal act and requires free will and without any coercion and compulsion, in case of the order mentioned in Para. (g), a bail should be issued instead […]" (Khaleghi, 2023, p. 301).

Under Iranian law, to further explain the status of the accused's consent, one can ask: in French law, why is the accused's consent limited to the installation of the electronic device? And does it imply their consent to house arrest with electronic monitoring itself? In French law, it looks like the accused's consent to the installation of the electronic device should not be construed as consent to the implementation of house arrest with electronic monitoring itself. Although the accused's refusal of electronic monitoring may result in the nonissuance of such an order, these two forms of consent should not be regarded as the same. The accused's consent to the order itself may lead to assuming that, subsequently, the accused will be barred from requesting release or appealing against this order since they initially consented to it. Furthermore, consent to the order puts it out of the scope of coer-

[39] Alinéa 4 de l'article 142-5 du C.P.P.

cive measures, and the principle of necessity and proportionality can no longer apply. Conversely, the French legislator has required the accused's consent to the installation of the electronic device so that the installation of the electronic bracelet or anklet would not be considered as a physical sanction. In contrast, in cases of domestic violence where the punishment is less than five years of imprisonment, the legislator has enabled the accused to use the regime of placing under mobile electronic monitoring.[40] Concurrently, it has provided for the installation of a remote protection device to protect the victim,[41] but it has made obtaining their explicit consent a condition.[42] Even though the victim is not obligated to be under house arrest with electronic monitoring, their consent for installing the remote protection device must be obtained to respect their dignity and privacy. Thus, in French law, the accused's consent for installing the electronic monitoring device is provided to respect their dignity, integrity, and privacy.

IV.2. Home Privacy

Since house arrest with electronic monitoring leads to the transformation of the accused's home into a detention center, the opponents of this method have questioned the place of enforcing this measure. Since the house is the symbol of the individual's privacy, while the detention center is a more public and populated place. How can a home be transformed into a detention center?! If the person dealing with pain and suffering in their home during the implementation of this order ever forget these feelings afterward?! (Otani, 2009, p. 157). They also criticize the accused's consent claiming that their consent cannot be real and effective because unwillingness inevitably leads to a more severe preventive measure. Thus, such consent is considered defective and tainted. Real and effective consent is achieved based on awareness and free will, not on coercion and compulsion caused by the possibility of a more severe preventive measure (Ben Zarqa, 2020, p. 37).

[40] Art. 142-12-1 du C.P.P.

[41] Dispositif de téléprotection.

[42] Article D32-30 du C.P.P.

Although this perspective is somewhat logical, it can still be moderated. Many restrictive measures on rights and freedoms have side effects and are not limited to violating the right or freedom in question. A potential measure, in addition to restricting a right or freedom, indirectly and incidentally undermines other rights and freedoms as well. Of course, it is good to distinguish the application of home electronic monitoring from monitoring in the place of residence since applying this order within a specific geographical area, such as a place of residence, is not subject to this criticism. Hence, it does not ivade home privacy. In these cases, using the principle of necessity and proportionality and providing appropriate guarantees prevent indirect violation of rights and freedoms. Notably, in 2019, the French legislature enacted the principle of necessity and proportionality of restrictive privacy measures as a guiding principle. Moreover, if the accused violates their obligations, strict and detailed regulations should be provided for entering their home, and the manner of home inspection and search by officials should also be organized. Despite the possibly defective consent of the accused, freedom of will is not completely eliminated. Seemingly, these opponents have not sought to protect the sanctity of the accused's home but rather intend to protect the prestige of criminal justice and repressive measures such as pre-trial detention.

It should be noted that the suspect or accused's consent to wear the electronic anklet is not sufficient in itself, because French law also requires the consent of some persons, such as the property owner and the joint tenant (Devresse, 2013, p. 376). In other words, if the suspect or accused is not the sole owner or tenant of the property, French law requires the host person to also consent to the installation of electronic devices on the property. Article R57-14 of the French Code of Criminal Procedure states, "Written consent must be obtained from the owner or leaseholder(s) of the premises where the receiver is to be installed." However, under French law, the consent of family members, especially children, or other co-residents other than tenants or owners, is not required (Plonquet, 2021, p. 47). In Iranian legislation, the legislator was content to mention a provision stipulating that Electronic Monitoring should not be carried out in a manner that conflicts with the privacy

of individuals,[43] but did not provide details regarding obtaining the consent of the property owner, joint tenant, or family members. This often leads judges to neglect the consent of the property owner or joint tenant and family members because this condition is not mentioned in the legal texts.

IV.3. Physical and Mental Privacy

Following the increased use of electronic monitoring technology in the United States and European countries, empirical research and medical experiments on the harmful physical and psychological effects of house arrest with electronic monitoring on accused individuals, especially in cases where the accused has a physical or mental illness or is elderly, have received attention (Tully et al., 2014, p. 6). Physicians and psychiatrists believe that being under electronic monitoring has detrimental and irreparable effects on the bodily integrity and mental state of the accused. A group of psychiatrists even stated that the harmful effects of this measure are more severe than those of pre-trial detention are and have recommended that the duration of being under electronic monitoring be limited to a short period (Ghanim and Rakaizi, 2017, pp. 35–36).

This criticism is also unfounded and cannot prevent the enactment and implementation of this order. The reason is that legislators usually assume the necessity of conducting medical tests to preserve the accused's physical integrity and mental state (Mazmoumi, 2020, pp. 885–886). Article (D32-6) of the French Code of Criminal Procedure stipulates "When examining to issue such an order, the investigating judge or the judge of freedoms and detention informs the accused of the possibility of conducting a continuous medical examination to ensure that the implementation of this order does not harm their integrity and health."[44] Although Iranian law has not provided for a medical examination of the accused for being under electronic monitoring prior to issuing this order or during its implementation, nevertheless,

[43] Art. 14 of the Executive Regulations for Electronic Supervision of 2018.

[44] Article D32-6 du C.P.P.

in Art. 250 of the Code of Criminal Procedure, the legislator has emphasized the need for the proportionality of preventive measure with the mental and physical conditions and age [...]. Looking at the indicators of mental and physical condition from the accused's perspective, it can be inferred that the decision-making authority must consult a medical specialist due to incompetence in assessing the mental and physical conditions of the accused. In our opinion, it would have been better if the legislator had explicitly provided for a medical examination before issuing the house arrest and during implementation if required.

V. Mitigating the Adverse Effects of House Arrest Order

A comparative analysis of the legal systems in various countries indicates that if the duration of house arrest with electronic monitoring is not subtracted from the sanctioned award, it is unlikely that this order will be effective or that accused persons will be motivated to accept it. Furthermore, since this measure is continuous and as the state-centric approach in criminal proceedings diminishes, legislators increasingly focus on addressing the harms associated with house arrest with electronic monitoring (De la Bâtie, 2013, pp. 13–27).

The French legislator has adopted a more progressive stance in Art. 142-11 of the Code of Criminal Procedure by allowing the duration of house arrest with electronic monitoring to be deducted from the custodial sentence. This article stipulates: "House arrest with electronic monitoring, in terms of deducting its full duration from the custodial sentence, is similar to pre-trial detention, in accordance with Art. 716-4." Conversely, Iranian law has not incorporated insights from European practices; instead, it merely stipulates the obligation for the accused to remain at their home or place of residence without adequately addressing the implications or consequences of such measures or enacting detailed regulations for deducting the duration of this order from the custodial sentence. Iranian legal approach dissuades individuals from accepting house arrest, which ultimately exacerbates the criminal preventive measures and undermines their proportionality.

To mitigate the damages caused by house arrest with electronic monitoring, the French legislator has established provisions in Art. 142-

10 of the Code of Criminal Procedure: "In the event of a final decision of non-prosecution,[45] release,[46] or acquittal[47] of a person who was subject to house arrest with electronic monitoring, they are entitled to compensation for the damages suffered, under the conditions stipulated in Art. 149 to 150." In contrast, while Art. 171 of the Iranian Constitution mandates compensation for material and moral damages resulting from judicial errors, misinterpretations, or application on a certain case, the ordinary legislator has failed to enact necessary regulations to compensate for the damages incurred due to house arrest.

VI. Conclusion

House arrest with electronic monitoring is a compound measure that essentially constitutes a restriction of freedom. However, concerning its characteristics, effects, and consequences, it is better understood as a custodial measure akin to pre-trial detention. The proportionality of house arrest with electronic monitoring to the accused's freedom of movement necessitates adherence to the criteria of adequacy, necessity, and proportionality in the strictest sense. The Iranian legislator has acknowledged the adequacy and necessity of this measure but has not addressed the criterion of proportionality in a strict sense. Furthermore, it has refrained from specifying the circumstances under which this measure may be applied and its maximum terms. Conversely, French law emphasizes the importance of respect for the accused's dignity, integrity, and privacy by requiring their consent to install electronic tagging. Of course, refusal to install the device is deemed a violation of their obligations. It results in the cancellation of house arrest with electronic monitoring and placing the accused in pre-trial detention. Iranian law has not outlined the status of the accused's consent and the implications of non-acceptance of the measure in Para. (g) Art. 217 and remains ambiguous. Additionally, while French law allows for deducting the duration of house arrest with electronic monitoring from the custodial sentence, the Iranian legislator has overlooked this pro-

[45] Non-lieu.

[46] Relaxe.

[47] Acquittement.

vision. Moreover, the French legislator has established compensation for damages incurred due to house arrest with electronic monitoring and aligned it with the compensation provisions for pre-trial detention. Conversely, the Iranian legislator has failed to address such compensation for the damages resulting from the house/place of residence arrest order.

VII. Suggestions

The principle of proportionality regarding restrictive measures on individual freedom warrants greater attention. By employing this principle, we can regulate the encroachment on personal privacy by the public authority in a manner that ensures proportionality serves as a strategy for protecting individual rights and freedoms. Legislators should adhere to the principle of proportionality at the legislative level and realize the importance of judicial security for citizens. Consequently, the scope of the house arrest with electronic monitoring and the maximum period of this measure should be explicitly articulated in detail. The wording of Para. (g) Art. 217 of the Iranian Code of Criminal Procedure is ambiguous and necessitates a review by the legislator drawing upon the experiences of European countries. Such revision can clarify the relationship between house arrest and other criminal preventive measures, as well as the status and role of the accused's consent and the sanctions for non-consent. To mitigate the adverse effects and consequences associated with house arrest with electronic monitoring, the Iranian legislature should provide for the deduction of the period of electronically monitored house arrest from any custodial sentence and for compensation for damages resulting from the imposition of this measure. Based on the foregoing, we recommend incorporating the following provisions into Iranian law.

The following text shall be added to the end of Art. 217 of the Code of Criminal Procedure: "The decision to place the person under Electronic Monitoring is issued for three months, which may be extended provided that the total periods in the pre-trial stage do not exceed half the period specified for pre-trial detention. If the Electronic Monitoring situation is applied after the implementation of pre-trial detention

for the same incidents, the total periods may not exceed the maximum periods stipulated for pre-trial detention. If pre-trial detention is imposed instead of Electronic Monitoring due to the accused or suspect's breach of their obligations or duties, the total period may not exceed the maximum period stipulated for pre-trial detention, plus half the period stipulated for managing the situation under electronic monitoring. If a person subject to electronic monitoring is placed under pre-trial detention due to a breach of his obligations or duties and has previously been subject to pre-trial detention, the total periods may not exceed the maximum periods stipulated for pre-trial detention and placement under electronic monitoring together."

The phrase "placement under electronic surveillance" shall be added to the end of Art. 255 of the Code of Criminal Procedure which relates to compensation for pre-trial detention, so the compensation provisions shall also apply to this measure.

The following text shall be added to the end of Article 515 of the Code of Criminal Procedure: "The measure of placing a person under Electronic Monitoring is considered similar to pre-trial detention in terms of deducting periods from the sentence issued."

The following text shall be added to the Executive Regulations for Electronic Supervision of 2018: "Written consent must be obtained from the accused or suspect, the property owner, the joint tenant, and adult family members residing with the accused or suspect and in case of domestic violence, the consent of the husband or wife must be obtained to install electronic monitoring devices in the home."

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Received 22.11.2024
Revised 27.12.2024
Accepted 29.12.2024

Article

DOI: 10.17803/2713-0533.2026.1.35.081-099

Metamorphoses of Labor Law Subjects in AI-driven World

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Abstract: The relevance of the paper stems from anticipated transition of contemporary digital society and the platform economy from Society 4.0 to Society 5.0, characterized by the increasing integration of physical and virtual environments and the expansion of metaverse technologies. This transformation raises fundamental questions regarding revolutionary changes in labor law, including the emergence of digital legal relations, digital subjects of labor law, and qualitatively new phenomena within the institutions of the special part of labor law. The research objective is to pose the problem of digital subjects (quasi-subjects) of labor law and to comprehend the metamorphoses that occur with employees and employers in AI-driven world. During the research, a set of general and special scientific methods was used: dialectics, concrete historical, sociological, comparative legal and system-functional methods, as well as forecasting and logical techniques. Principal results include the substantiation of metamorphosis occurring between the employer and employee in the platform economy and a new concept of digital workers and digital employers as potentially significant subjects of labor law, who will gradually displace classical workers, employees and employers under the transition to Society 5.0 in AI-driven world. The authors substantiate new doctrinal definitions and elements of the legal status of a digital worker and a digital employer. They forecast the

development of legal regulation of new digital entities (quasi-subjects) of digital employment relations in Society 5.0.

Keywords: digital labor platform; platform worker; employee; employer; digital employer; digital worker; AI; subjects of labor law

Acknowledgements: The study was financially supported by Grant of the Russian Science Foundation No. 25-28-00511, https://rscf.ru/project/25-28-00511/.

Cite as: Tomashevski, K.L. and Filipova, I.A., (2026). Metamorphoses of Labor Law Subjects in AI-driven World. *Kutafin Law Review*, 13(1), pp. 81–99, doi: 10.17803/2713-0533.2026.1.35.081-099

Contents

I. Introduction 82
II. Methodology 84
III. Discussion and Results 84
III.1. Digital Labor Platforms and Algorithmic Management in Relations Involving Platform and Traditional Employees 84
III.2. New (Quasi-) Subjects of Labor Law Emerging from the Growing Impact of AI on the Labor Sphere 90
IV. Conclusion 94
References 95

1. Introduction

The domain of labor law subjects is traditional for the science of labor law. This issue has been examined quite extensively since the second half of the twentieth century. Among the European legal scientists who examined this issue are H. Sinzheimer (1976), J.-M. Verdier (1978), O. Kahn-Freund (1983), J. Bidden (1992), and M. Weiss (2022) among others. At the same time, prominent Soviet researchers of labor law subjects include N.G. Aleksandrov (1948), B.K. Begichev (1972), I.O. Snigireva (1983), A.S. Pashkov and V.G. Rotan (1986), etc.

Research on the subjects of labor law and their representatives has also been conducted in the early twenty-first century, including at the monographic level, by J. Prassl (2015), V.A. Vasilyev (2011), M.A. Dra-

chuk (2009), V.V. Fedin (2005), and L.V. Zaytseva (2015). At the same time, the above researchers — probably, except J. Prassl — focused mainly on the legal status of traditional subjects such as an employee, employer, and trade unions (or their associations). Less attention was paid to employer associations, the unemployed, apprentices and trainees, state employment agencies, and bodies supervising the observance of labor law.

These subjects, as participants in labor and related relations during the industrial era, continue to play an important role in relations under examination. In addition, traditional labor law subjects are adapting to rapidly evolving labor and related relations influenced by digitalization (Tomashevski, 2020).

As society transitions to the post-industrial era and the digital and platform (gig) economy emerges as part of the 4th Industrial Revolution associated with Industry 4.0, new quasi-subjects of labor law have begun to appear, including digital labor platforms and platform workers. As Society 5.0 is being formed, the sphere of labor and employment faces a growing role of generative artificial intelligence (AI), neural networks, intellectual robots, and cyborgs. The blurring of the boundary between the real and virtual worlds poses an ambitious new challenge for legal scholarship: to substantiate the concept of digital labor law subjects as participants in digital labor relations. The universal adoption of AI has significantly affected labor markets and poses a threat to the employment prospects across numerous occupations, as noted by many leading economists (Korinek and Stiglitz, 2019, p. 350) and legal scientists (Aloisi and De Stefano, 2022). In turn, this may lead to gradual complete substitution of traditional labor law subjects by emerging quasi-subjects and, in future, by new legal subjects (digital entities) endowed with AI.

Although the legal subjectivity (personality) of AI systems remains highly contested (Filipova and Koroteev, 2023; Channov, 2022), the authors advance the following *hypothesis*. With the emergence of strong AI (AGI), which may occur within five years, it may become necessary to legislatively recognize the legal subjectivity of AI-based digital labor platforms, intelligent robots, embodied virtual agents, and other digital

entities; to endow them with the legal status of either an employee or an employer; and to clarify the labor law status of cyborgs.

The objective of this paper is to state the problem of digital subjects (quasi-subjects) of labor law and to analyze the transformations affecting employees and employers in the AI-driven world.

II. Methodology

In preparing the paper, the authors employed a methodology grounded in dialectic method, as well as general scientific methods including system analysis, the system-functional method, scientific forecasting, and modeling. The latter two methods were applied extensively in forecasting and modeling new subjects of labor law expected to emerge under the influence of AI technology and the further transition from Society 4.0 to Society 5.0. The research also incorporates a set of specific scientific and specialized methods of inquiry, including the concrete-historical, comparative-legal, and formal-legal methods, as well as logical analysis and statistical techniques. An interdisciplinary approach is emphasized, as the issues surrounding the use of AI in labor, functioning of digital platforms, organization of platform labor and their algorithmic management require not only expertise in labor, civil and information law, but also an understanding of digital technologies and contemporary technological developments. This approach enables a systemic examination of labor law issues related to the transitions experienced by labor law subjects in the context of society's digital transformation.

III. Discussion and Results

III.1. Digital Labor Platforms and Algorithmic Management in Relations Involving Platform and Traditional Employees

Over the past 10 years, platform employment and algorithmic management have become prominent topics in labor law scholarship. This is evidenced by numerous reports from the ILO, ETUI, edited monographs, international conferences and congresses, and academic articles in leading journals addressing this theme.

The growing importance of platform labor was highlighted by ILO Director-General Gilbert F. Houngbo at the 113th Session of the International Labor Conference in June 2025, noting that "The ILO estimates that digital labour platforms account for 3 to 5 per cent of employment in most countries, creating both work opportunities and also challenges in terms of working conditions and quality of employment."[1] Another ILO report prepared for the same session, presents a somewhat different estimation of platform labor worldwide: "The results of official surveys suggest that in most countries the prevalence of work on platforms that connect businesses or clients to workers is still in the low single digits, with percentages ranging from 0.5 per cent in Chile to 4 per cent of total employment in the Philippines."[2] Meanwhile, according to Rosstat data for 2023, platform employment is relatively widespread in Russia, accounting for 4.6 % of total employment (Zabelina and Sergeeva, 2024, p. 19). At the same time, the global trend toward a growing share of platform labor is undeniable, underscoring the need for legal regulation to ensure decent working conditions for this category of workers.

As early as in 2016, a British J. Prassl and an Austrian M. Risak studied the legal nature of platform employment in their article (Prassl and Risak, 2016). They proposed reviewing the notion of an employer within the concept of a "functional employer," with their functions split between several subjects. Under platform employment, it may be difficult to decide who the employer is and how the functions are distributed between the platform administrator and the client. The researchers proposed five key functions to determine the employer: emergence and termination of labor relation, receipt of work results, provision with work and payment for it, management of the enterprise, and management outside the enterprise.

[1] Jobs, rights and growth: Reinforcing the connection (Report of the Director-General). First item on the agenda. Report I(B). International Labour Office, Geneva, 2025. Pp. 17–18.

[2] Realizing decent work in the platform economy. International Labour Conference, 113th Session, 2025. Report V(1). Fifth item on the agenda. International Labour Office, Geneva, 2024. P. 21.

An interesting question is whether AI systems are already involved into labor relations under conditions of digitalization. This is illustrated by the example of platform labor, in particular crowdwork on Amazon Mechanical Turk, which requires platform workers not to "use robots, scripts, or other automated methods to perform Services." Similarly, *CrowdFlower* does not allow using "Internet bots, web robots, bots, scripts and any other form of artificial intelligence" (Aloisi and De Stefano, 2018, p. 20). As one can see, digital platforms are not interested in imposing the tasks of a human as a platform employee upon their possible digital assistants (robots, chatbots and similar digital AI-based tools).

An attempt to scientifically substantiate the definitions of a digital platform, a freelance platform, and a work-on-demand platform was made by A.A. Linets in his monograph. He also tried to identify the signs of labor relations in the interrelations between a gig worker, a platform, and a labor consumer (Linets, 2024, pp. 202–205).

Some researchers have examined practices of algorithmic management based on AI systems, which are exerting an increasing influence on the sphere of labor, both by improving and by worsening the working environment. They paid special attention to how these AI systems influence employees regardless of their employment status (platform, distant, combined, or traditional hired labor). Some researchers focused on the risks these AI systems pose for labor conditions and labor rights, including discrimination, privacy violation, elimination of trade unions, and threats to labor safety and labor hygiene (Aloisi and Gramano, 2019; De Stefano and Taes, 2022, p. 33). Others, having compared sociological data from eight EU countries and Japan, note that changes in the working environment following the introduction of AI technologies cannot be explained solely by technological features but are also associated with how corporations respond to AI (Iwatsuki, 2025). In our opinion, this latter conclusion is persuasive, since employees' perceptions of AI systems introduced into labor and related relations largely depend on the consequences, including labor-law consequences, of the decisions proposed by algorithms, for example, the ways in which employee monitoring may affect working conditions, remuneration, and employers' personnel decisions.

Several recent researches mark the growing imbalance between the role of an employer, typical for labor law, as an owner of production assets able to run their business independently, and a limited autonomy during negotiations of companies that tend to corporate digital technology ecosystems (Rainone, 2025). However, there is no acceptable decision to this problem so far in either labor law or EU competition law.

The most pressing issue in modern labor law is that of unbiased algorithms and algorithmic discrimination (Wang et al., 2024; West et al., 2019). This issue poses a threat to job applicants, employees, and platform workers in the course of their work. In the context of the topic under study, we should note that, according to most legislations worldwide, in all cases of discrimination due to algorithmic management, a liable person is an employer, i. e., the one who introduced AI into personnel management, but not its initial developer. This said, legislation might indicate criteria so that people "in" and "after" the algorithmic management cycle could reject conclusions or decisions proposed by the algorithm, without fearing disproportionate consequences (Adams-Prassl et al., 2023, p. 150).

The issues of algorithmic management are rather fragmentarily regulated in most legislations worldwide. However, there are positive examples of legislative solutions, with the most comprehensive and tough example demonstrated by the European Union (EU).

The EU General Data Protection Regulation[3] (GDPR), in force since 25 May 2018, contains specific provisions on automated decision-making and profiling that are especially relevant to exclude or minimize algorithmic discrimination during algorithmic management, including the labor sphere. According to Art. 22 of GDPR, the data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling that produces legal effects concerning him or her or similarly significantly affects him or her.

Directive (EU) 2024/2831 of the European Parliament and of the Council on improving working conditions in platform work entered into force on 1 December 2024 and it must be transposed by the 27 Member

[3] General Data Protection Regulation. Complete guide to GDPR compliance. Available at: https://gdpr.eu/article-22-automated-individual-decision-making/ [Accessed 29.06.2025].

States by 2 December 2026. The Directive contains Chapter III devoted to algorithmic management in platform work (Art. 7–15). In particular, Art. 7 of the Directive introduced a number of restrictions on personal data processing using automated monitoring systems or automated decision-making systems; Art. 8 provides for evaluating the data protection impact; Art. 9 requires transparency regarding automated monitoring and decision-making systems, etc.

Pursuant to Art. 1(a) of Directive (EU) 2024/2831, a "digital labour platform" means a natural or legal person providing a service that meets all of the following requirements: (i) it is provided, at least in part, at a distance by electronic means, such as by means of a website or a mobile application; (ii) it is provided at the request of a recipient of the service; (iii) it involves, as a necessary and essential component, the organisation of work performed by individuals in return for payment, irrespective of whether that work is performed online or in a certain location; (iv) it involves the use of automated monitoring systems or automated decision-making systems. Hence, in relations with platform workers such a platform can be qualified as an employer with the relevant legal status.

In Australia, China, and Japan, norms concerning the inadmissibility of algorithmic discrimination are reflected, to some extent, in soft law instruments, including programmatic documents and ethical principles governing the use of AI. To compare, the USA lack federal acts in this sphere, but they have an established legal framework to fight discrimination through civil rights laws, which can be applied to algorithmic bias. Besides, the USA has a tradition of judicial protection and precedent law, which, according to some researchers, may adapt to new technological challenges (Wang et al., 2024).

Returning to the issue of identifying the employer in platform and other atypical forms of employment, the following observations may be made. In our view, for an entity to qualify as an employer, it must primarily possess legal personality (subjectivity), that is, legal capacity. Second, it must establish labor relationships, at least, with one employee. To identify the established labor relationships, one may use the features provided in Clauses 11–13 of ILO Recommendations 198 "On

labor legal relationship" of 1996,[4] as well as those regulated in national legislation of a certain state. For example, legal definitions of labor relations are set out in Art. 15 of the Russian Labor Code (2001), Art. 1(21) of the Kazakhstan Labor Code (2015), and Art. 1(65) of the Kyrgyzstan Labor Code (2025). In some cases, these elements, though not expressly provided for in labor legislation, are developed through judicial practice, including case law, as in Great Britain and the United States.

According to both the EU legislation (Digital Services Act and Digital Markets Act), and the current legislation of EAEU member states, digital platforms are not yet viewed as subjects of law, but only as technological products. Legal persons possessing them are operators of digital platforms. Accordingly, digital platforms are not endowed with civil or labor legal personality (subjectivity). For this reason, the courts considering labor disputes on requalifying civil-labor relations with the self-employed into labor legal relations often conclude that an employer is a legal person or an entrepreneur, who is a partner of the digital platform operator entering into actual legal relations with the platform employee.

As to whether a digital labor platform may be regarded as an employer, the diversity of platform work models and of foreign legislative and judicial approaches to their classification precludes a definitive answer at present. At the same time, we are inclined to answer in the negative. A digital labor platform is, essentially, a complex computer program (application) adapted for mobile devices that allows finding clients and executors of works and services and establishing connections between them. These relations can be qualified as labor ones, if platform employees perform such work systematically and receive regular payments via a specific platform (there is economic dependence on the platform) with a certain algorithmic control and management on the part of the platform operator or its partner. However, the part of the employer in this labor relationship is still not the digital labor platform, but the legal or physical person possessing it, administering it and introducing it into their activity (Motina et al., 2024, p. 126).

[4] Employment Relationship Recommendation, 2006 (No. 198). Available at: https://normlex.ilo.org/dyn/nrmlx_en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312535 [Accessed 26.06.2025].

Nevertheless, legislation admits the technique of a legal fiction, when, functioning on the basis of advanced AI, is endowed with the rights of a legal person, for example.

III.2. New (Quasi-) Subjects of Labor Law Emerging from the Growing Impact of AI on the Labor Sphere

Today, employer traits mainly attach to platform operators; as AI advances, the platforms themselves will acquire clearer quasi-subjectivity. Platform operators will delegate managerial functions to AI systems while retaining ultimate control. After certain types of AI systems obtain quasi-subjectivity, legal liability will be distributed between them and the legal persons in whose interest the relevant AI system functions. If the intellectual platformization of the economy extends to the labor sphere, digital employers are likely to proliferate. In our opinion, in future, digital employers may be digital labor platforms functioning on the basis of intellectual automation of recruiting, managing, and payment, and interacting with employees in the virtual environment.

Alongside with digital employers, digital employees will emerge. As the role of AI grows worldwide, the significance of AI working force will also increase, meaning AI systems substituting or complementing human labor. AI working force includes both cyber-physical AI systems (intellectual robots, autonomous vehicles), and virtual AI systems (digital twins, including AI digital avatars and embodied virtual agents).

The potential subjectivity of cyber-physical AI systems has been noted since at least 2016, when the European Parliament's Committee on Legal Affairs commissioned research by the Department for Citizens' Rights and Constitutional Issues into European civil norms concerning robotics. Finally, on 16 February 2017, the European Parliament approved a Resolution on civil-legal norms in robotics.[5] It mentioned a proposal to recognize a special legal status of an electronic person (*electronic personhood*) for complex robots making autonomous decisions.

[5] European Parliament Resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2013(INL). Available at: http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2017-0051+0+DOC+XML+V0//EN [Accessed 28.07.2025].

The objective was to create opportunities for imposing responsibility on robots for harm, for example, caused by an unmanned vehicle. A 2016 report, which underlay the said resolution, explicitly indicated the risk of dehumanization associated with the spread of such AI systems. The experts who made the report opposed recognizing robots as legal subjects, so that, as they said, not to allow equaling the natural and artificial intelligences.[6]

Today, all jurisdictions recognize AI systems as objects, not subjects of law. However, the discussion on the probable legal subjectivity of AI systems continues, and its acuteness increases with the development of AI. A key prerequisite for recognizing AI systems as legal subjects is that they attain cognitive capacities comparable to those of humans. Given that experts believe that this level can be achieved in about 5 years, the issue is sure to stay on the agenda. In particular, it is proposed to endow AI systems with a special legal status (for example, as was mentioned above, to distinguish "electronic persons" as an absolutely new category of legal subjects or to endow AI system with limited legal capacity within civil law relations by creating a category of "electronic agents"). If certain AI systems get civil legal subjectivity, then the next stage will be to recognize labor subjectivity, as cyber-physical AI systems are already "working" alongside with people.

Advancing cyber-physical AI requires progress in materials science and related technologies, which has so far lagged behind developments in the virtual domain. Consequently, as AI agents advance, virtual AI systems are attracting increasing attention. The leap in the development of virtual AI systems (due to generative AI), which is observed today, shows that these AI systems perform a growing amount of intellectual tasks that before could be only performed by human employees.

Embodied virtual agents are the likeliest candidates for recognition as legal subjects — or at least quasi-subjects — because they exhibit greater autonomy than other virtual AI systems. Unlike digital avatars that act as a person's "digital body" under that person's control

[6] Règles européennes de droit civil en robotique. Étude. Bruxelles: Departement thematique C: Droits des citoyens et affaires constitutionnelles, 2016. Available at: http://www.europarl.europa.eu/RegData/etudes/STUD/2016/571379/IPOL_STU%282016%29571379_FR.pdf [Accessed 28.07.2025].

(even when created to represent a real individual), embodied AI agents are becoming increasingly autonomous and are designed to cooperate closely with their human counterparts (Zhang et al., 2024). Given that AI systems will achieve the level of strong artificial intelligence (AGI) in the near future, the created "digital persons," both having and not having real prototypes, will become part of daily routine, including labor sphere. The joint work of people with such virtual AI agents, substituting some employees, will be a rather widely spread phenomenon. The prototypes of such "cyber-colleagues" today are generative artificial experts, "intended for cooperation between a human and artificial intelligence in working with knowledge" (Sowa and Przegalinska, 2025, p. 2101).

This suggests the emergence of "digital workers," i.e., AI systems that possess agency and can automatically perform various working tasks and ensure processes in the digital environment. The key characteristics of a digital worker including autonomy; the possession of intellectual functions comparable with or exceeding human capabilities (including capabilities to learn, adapt to the existing conditions, etc.); ability to execute these functions continuously during a long time, ability to integrate with other AI agents and other types of AI systems; easy interaction with people. Given that the proportion of the workforce comprised of AI systems is likely to increase under current trajectories of societal development, and that these systems' functional capabilities will expand, particularly with respect to intellectual tasks, the question of granting legal status to AI systems will become increasingly salient.

Besides AI systems, AI-enhanced people will increasingly influence the labor sector. This may be both about using "smart" exoskeletons allowing increased physical load unavailable for people without them, and neuroprotheses and neuroimplants. This means not relatively simple neuroimplants or neuroprotheses (like cochlear implants), but complex neural AI devices, partially changing the very nature of a human, turning one into a cyborg. Today, the humanity is standing at the threshold of this event. In time, some people will be able to prolong their lives or increase their capabilities by choosing cyborgization, i.e., uniting oneself with an AI system. This is confirmed by achievements in development and introduction of neural chips, which have transited into the

practical stage showing positive results of integration between a human brain and AI. Such integration will finally enable humans to solve tasks that were previously inaccessible.

Theorists estimate approximately 15 years until the widespread adoption of cognitive enhancement devices contingent on overcoming certain legal, technical, and biological obstacles (Boufidis et al., 2025) and approximately 50 years until the attainment of complete brain — AI symbiosis free of significant risk. However, representatives of developer companies insist on an about two-fold reduction of the time necessary (Martins et al., 2019). In April 2025, Neuralink opened an international patient registry for people with paralysis of all four limbs who are willing to volunteer in ongoing clinical trials of neural interfaces that enable users to control a computer with their thoughts.[7]

The trend to cyborgization of people is growing with the technological progress. Some "technologically enhanced people" will appear forcibly, as medicine finds solutions to restore the organism functions or prolong life; others will *cyborgize* because of the desire to "upgrade" themselves and complement their organism resources by acquiring capabilities exceeding those of a usual person. This advantage of cyborgs will be of interest for employers, i.e., it will influence the labor sector (Filipova, 2024, p. 757).

The spread of complex neuroprotheses and neuroimplants will require providing a special legal status to people integrated with AI systems, i.e., distinguishing the legal status of a cyborg, including labor sphere. This is necessary to provide the rights of a person united with the AI system and to protect the rights of other people. Cyborg employees will have to be distinguished as a special group to avoid discrimination. The latter is difficult to identify when using technologies allowing to both restore the disturbed human functions and to provide new opportunities giving additional advantages (Koops et al., 2013).

The participation of cyborgs in labor relations requires the consolidation of a number of special rights and obligations in labor legislation. One of these rights is the employee's right to keep their cyber

[7] Join the Patient Registry. Available at: https://neuralink.com/patient-registry/ [Accessed 28.07.2025].

devices under all circumstances, with the exception of devices that are illegally integrated or pose a danger to others. Such an employee should be guaranteed the right to manage their cyber device. In addition, an employee should not be discriminated against because of cyborgization. In addition to special rights, there will also be responsibilities arising from the additional risk to the workers surrounding the cyborg. Firstly, it is the duty not to use cyber devices in a way that poses a danger to other people, and, secondly, the duty not to disseminate confidential information about other people obtained during the operation of a neuroprosthesis or a neuroimplant.

Whereas cyborg employees are natural persons already recognized under labor law and therefore need only to be classified as a distinct category with tailored rights and obligations, AI systems that constitute the AI workforce are not recognized as legal subjects. However, their contribution into economy will grow as compared with the share of classical working force (people). This suggests that certain categories of AI systems may be recognized as digital employees in the future (Filipova and Tomashevski, 2025).

The current changes cannot but affect the representatives of both employees and employers — their associations; hence, one cannot exclude the emergence of digital trade unions (including those uniting digital employees) and digital associations of employers.

IV. Conclusion

The ongoing digital transformation of the society and increasing intellectual automation of the labor sector necessitate recognition of new digital entities as potential subjects of labor law. In this context, a digital employer may be understood as a legal person or a digital labor platform, functioning on the basis of intellectual automation of recruiting, managing, payment processes, and interacting with employees and digital employees in the virtual environment. A digital employer may take the form of a legal person characterized by an exceptionally high degree of digitalization or of a digital labor platform. In either case, human resource (HR) processes constitute fully automated, cloud-based services are extensively utilized, and managerial functions are exercised

through systems of algorithmic management. In turn, a digital employee is an AI system, possessing agency and in the future — legal subjectivity, capable of automatically performing various working tasks and ensuring processes in the virtual environment. The key characteristics of a digital employee include automation; autonomy; the possession of intellectual functions comparable to those of humans; the capability to perform these functions continuously during extended time; the ability to integrate with other AI agents and easy interaction with people. At present, these characteristics are most closely approximated by embodied virtual agents — AI systems virtual by form but capable of integrating with the expanded reality uniting the real and the virtual environments and executing tasks with the results in the real world. As to the conditions for attaining legal subjectivity, these would require, at a minimum, the development of artificial general intelligence (AGI) and, at a maximum, the emergence of artificial superintelligence (ASI). Such digital entities will displace employees and disrupt employers during the transition to Society 5.0, *i. e.,* the AI-driven world.

The proposals and conceptual ideas advanced in this paper are not intended to result in immediate amendments to existing legislation. On the contrary, they are offered as a formulation of the underlying problem and as an invitation to open scholarly debate, the outcomes of which may encourage the development of future models for regulating legal relationships involving new subjects of labor law in an AI-driven world.

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Received 12.08.2025
Revised 03.09.2025
Accepted 30.10.2025

NEW CHALLENGES FOR INTERNATIONAL LAW

Article

DOI: 10.17803/2713-0533.2026.1.35.100-135

Controls for the Use of Cyber Weapons in the Light of International Humanitarian Law: What are the International Efforts to Legally Regulate Cyber Weapons?

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Abstract: The article analyzes the controls on the use of cyber weapons in the light of international humanitarian law. This is to show the extent to which the rules of international humanitarian law can be applied to cyber weapons. Cyberspace, in particular, is considered one of the modern fields that man has sought to develop and exploit in a way that achieves interests. Therefore, the concept of cyber weapons, the means and attacks that take place in it, and the scope of international recognition of these weapons will be clarified. The study also shows the appropriateness of the rules of international humanitarian law to be applied to these weapons. In conclusion, the authors formulate a set of results and recommendations. The most important of which is that the use of cyber weapons led to the creation and imposition of the concept of unconventional warfare that enables the conflicting parties, whether States or other parties, to launch attacks on other parties and inflict se-

vere damage on all economic and social aspects. Finally, countries must seek to find new strategies that are compatible with the special nature that distinguishes cyberspace from physical reality and with the security challenges that arise with the continuous development of technology. The international legal rules regulating wars and conflicts must be reviewed in a manner consistent with the continuous technical and technological development. The international criminal justice system must also be activated, and cyber weapons must be included in agreements related to the control of the use of weapons.

Keywords: cyberspace; electronic weapons; cyber attacks; international conflicts; international efforts

Cite as: Al-Billeh, T. and Morad, Sh., (2026). Controls for the Use of Cyber Weapons in the Light of International Humanitarian Law: What are the International Efforts to Legally Regulate Cyber Weapons? *Kutafin Law Review*, 13(1), pp. 100–135, doi: 10.17803/2713-0533.2026.1.35.100-135

Contents

I. Introduction 102
II. What are Cyber Weapons? 104
II.1. What is Meant by Cyber Weapons? 105
II.1.1. Definition of Cyber Weapons 105
II.1.2. Legal Nature of Cyber Weapons 107
II.2. Extent of International Recognition of Cyber Weapons 109
III. Applications of Cyber Weapons in the Light of International Humanitarian Law 111
III.1. Extent of Subjection of Cyber Weapons to the Provisions of International Humanitarian Law 111
III.1.1. Subjection of Cyber Weapons to the Provisions of International Humanitarian Law 112
III.1.1.1. Appropriateness of the Basic Principles of International Humanitarian Law that Govern Cyberspace Weapons . . . 114
III.1.1.2. Conditions must be Met for the Application of International Humanitarian Law to Cyberspace Weapons 116
III.1.2. Non-Subjection of Cyber Weapons to the International Humanitarian Law 118

III.2. Available International Means and Capabilities to Confront the Weapons of Cyberspace 120
III.2.1. International Technical Systems to Limit the Use of Cyber Weapons 120
III.2.1.1. The Specificity of Cyberspace Weapons and their Impact on the Application of the Principles of International Humanitarian Law in the Event of Armed Conflict 121
III.2.1.2. Scope of the Use of Weapons in Armed Conflict 122
III.2.2. International Agreements Related to Limiting the Use of Cyber Weapons 124
III.2.2.1. Use of Cyber Weapons in Accordance with the Hague Conventions on Armed Conflicts 125
III.2.2.2. Use of Cyber Weapons in Accordance with the Geneva Conventions and Additional Protocols 127
IV. Conclusion 128
References 129

I. Introduction

Cyber weapons include a series of attacks targeting the information systems of countries. These attacks are committed through cyberspace with the aim of sabotaging data or tampering with associated facilities (Al-Burhami and Ali, 2022, p. 423). Therefore, countries have begun to adopt the option of attacks that are committed through cyberspace in the framework of the wars that break out between them and other countries. It is preferred to resort to it by countries in many international armed conflicts, given that these weapons are considered less costly to countries than conventional weapons, in addition to the secrecy and ambiguity of these weapons, in order to achieve the desired goals that are inflicting serious damage on the opponent (Abdul Wahed, 2021, p. 39).

Countries, international organizations and major companies have become increasingly focusing on cyberspace to achieve their goals and interests. Websites and online programs, especially those related to the infrastructure of countries, have become a means, a tool, and a goal that they seek to own and exploit to meet their own needs (Zaruqa, 2019, p. 1020).

The problem of the study lies in the fact that there is an urgent need for controls over the use of cyber weapons in the light of international humanitarian law, after the weapons used in wars became electronic instead of conventional weapons. However, until international controls are issued for the use of cyber weapons, we must deal with the texts of international conventions and covenants and the resolutions of the United Nations (UN) represented by the General Assembly and the Security Council relevant to the subject of this study. There is an urgent need for the international community to intervene in order to call for codifying some rules and controls for the use of cyber weapons in the light of international humanitarian law.

Therefore, through this study, we will try to answer the main questions that represent the problem of the study, namely: What is meant by cyber weapons? What are the international efforts to legally regulate cyber weapons? To what extent is it possible to apply the rules of international humanitarian law to cyber weapons? Have clear rules been codified to regulate the use of cyber weapons?

The study aims to explain what cyber weapons are, identify the available means and capabilities to confront them, demonstrate international efforts to organize international conventions and charters for cyber attacks and their weapons, clarify the criteria for determining legitimate military targets during cyber attacks in international humanitarian law, and demonstrate the applicability of the rules and principles of international humanitarian law to attacks in which cyber weapons are used, especially since the use of cyber weapons to launch military operations has turned the laws of armed conflict upside down.

The intended targets of any attack using cyber weapons are likely to be civilian rather than military and will affect the civilian population rather than the military forces. The study also aims to review applied cases of cyber attacks in which cyber weapons were used and occurred in and outside the context of the armed conflict.

The issue of controls over the use of cyber weapons in the light of international humanitarian law is one of the modern and important issues that has a significant impact in practice. In this study, we will examine this topic in an in-depth and extensive manner. We will pay our attention to all aspects of the subject both theoretical and practical.

The importance of the study lies in addressing the increase in cyber attacks in recent times and the difficulty of determining who issued these attacks and the lack of a legal basis regulating them. The study addresses a recent topic that is still in the process of evolving and sheds light on the concept and exceptional nature of these attacks. In addition, the study analyzes the rules and principles of international humanitarian law to examine their applicability to cyber attacks, and to evaluate this applicability to applied cases of cyber attacks that actually took place on the ground.

In this study, the comparative approach will be followed for the diversity of the General Assembly and Security Council resolutions, in addition to the international conventions and covenants that differed in dealing with sections and topics included under this topic, explaining the differences between them, and knowing the strengths and weaknesses of the various directions and the extent of their adoption. This will be done by reviewing what cyber weapons and cyber attacks are and analyzing the rules and principles of international humanitarian law in order to assess their applicability to cyber weapons and cyber attacks.

This study also requires an analytical approach to analyze all texts of international conventions and covenants and the UN General Assembly and the Security Council resolutions that are relevant to the subject of this study. This is in order to identify its contents, implications and goals, and to criticize and comment on it.

The critical approach will also be followed, to highlight the opinions and trends of jurisprudence in the issues that have been taken, and the critical side of the researcher for each side that has been taken by the jurisprudential approach. The study required the use of several research approaches due to its complex nature between international conventions and covenants, United Nations resolutions, and jurisprudential opinions and trends.

II. What are Cyber Weapons?

The wide electronic revolution in the field of cyberspace weapons led to the emergence of modern weapons. The weapons used in wars are no longer the traditional weapons, but rather they are committed

with completely different weapons in terms of form and content (Amar, 2019, p. 137).

Therefore, cyberspace wars have emerged, which have rules of engagement that differ in content from conventional wars. Cyber weapons do not aim at destroying the military equipment of hostile countries, nor to seizing and occupying the territory of other countries, but rather to inflict severe damage on the infrastructure of hostile countries at the lowest possible material costs (Farhat, 2019, p. 92).

II.1. What is Meant by Cyber Weapons?

Cyber weapons constitute one of the most important forms of conflict in the information age. These weapons are characterized by the fact that they work to destroy hostile parties, such as espionage. Its repercussions are very serious by destroying the important websites of the State by introducing viruses to harm those sites (Shloush, 2018, p. 189).

The information revolution in the world has led to the creation of an environment for cyberspace with the existence of what can be called cyber power through the development of cyberspace weapons that have a great impact on the whole world. Cyberspace has become the site of conflict between States, rather than a territory being the site of conflict. This provided cyber weapons with an active role at the international and local levels (Ghoneim, 2019, p. 260).

II.1.1. Definition of Cyber Weapons

What is meant by cyberspace is "a group of computer networks in the world, and everything that these networks are linked to and controlled by. It is not limited to the Internet, but rather includes many different computer networks. Therefore, cyberspace constitutes the computer networks that manage the activity of States, their institutions, facilities, and everything related to the military and civil sectors" (Farhat, 2019, p. 93).

It must be noted that the use of intelligence in the military industries led to the development of combat systems of an automatic nature independent of human intervention. Its capabilities often exceed the

limited capabilities of humans in terms of its use in managing various battles, detecting external threats, using various weapons, collecting and analyzing information in a way that serves the military position of countries (Abdul Hamid, 2020, p. 3128; Al-Billeh et al., 2024a, p. 851).

In this context, there is no unified international agreement on a specific designation for cyber weapons. This issue is still the subject of wide discussion among countries, due to the high technology enjoyed by these weapons, which differ from conventional weapons in terms of their technical nature. Therefore, it has been called several names such as lethal autonomous weapons, automatic weapon systems, unmanned and autonomous military systems, autonomous killer robots, and lethal robotic weapons. However, the common factor between these definitions is that it is a weapon system that can choose the targets that are monitored and attack them independently (Abdali, 2008, p. 286). Perhaps it is useful to emphasize that the International Committee of the Red Cross has used the term "automatic weapon system" as a term that includes all types of autonomous weapons, whether those weapons are on land, at sea, or in air (Abdel-Sabour, 2017, p. 6).

On the other hand, the US Department of Defense has defined cyberspace as a wide range of man-made technical weapons and that its military operations mix issues of geography, sovereignty, law, and civil rights in ways that transcend traditional legal boundaries. They must be approached in a different way (Abdel Hamid and Atef, 2015, p. 62).

It must be emphasized that there is no specific definition of weapon. The term is sufficiently common in usage and treatment under international law. A weapon is "something designed with the primary purpose of killing, maiming, injuring, damaging or destroying." This appropriate definition of conventional weapons can also be used as a definition of cyber weapons to ensure compliance with international law, particularly in the absence of clear guidelines in cyber operations. It might make sense to align definitions related to cyber operations with definitions used in conventional military operations (Al-Mubaideen, 2020, p. 72).

As a result, a cyber attack must be defined as an electronic operation using a cyber weapon. In the same regard, an electronic attack can

be defined as "a process in which electronic means are used for the purpose of killing, maiming, injuring or destroying" (Al-Busaili, 1990, p. 86). This would clarify when the laws of war apply to cyber operations and open up discussion about issues surrounding them that fall short of the use of force, which constitute the vast majority of cyber operations that take place today and are done without coherent rules to control behavior (Al-Billeh, 2022b, p. 7; Schmitt, 2017, p. 245).

Although there are advantages to defining a cyber weapon, there are also potential drawbacks to this definition. A stricter limitation of electronic weapons would obviate the need for most legal reviews prior to operational planning (Belqziz, 1989, p. 17). Although legal review is required before any electronic technology can be used in a process to address potential violations of international law, conducting post-legal review wastes time and resources in developing that technology. This can be addressed by consciously reviewing the methods of electronic warfare and the legality of distributing harmful cyber capabilities and stopping uncontrolled random distribution and deeming it illegal (AlSadiq, 2016, p. 28; Al-Billeh et al., 2024b, p. 339).

Therefore, it must be taken into account that the in-depth analysis of the definition of cyber weapons is intriguing, given that the Internet is the only area of military operations in which the State can directly cause significant material damage to the opponent or enemy without the use of weapons. Operational legal review will continue to address concerns of international law whether those concerns arise from the means used, the method adopted, or the proportionality of the means and the goal. It is the intention and effect of the process that will govern its legitimacy. Cyberspace is unique enough to justify this finding to some extent (Abdul-Ghaffar, 2016, p. 32).

II.1.2. Legal Nature of Cyber Weapons

At the outset of the discussion about the legal nature of cyberspace weapons and the possibility of applying the rules of international humanitarian law to them, we must determine the jurisprudential and legal adaptation of this issue in terms of the legality of cyber weapons in the light of international law. Contemporary rules of interna-

tional humanitarian law do not prohibit the use of electronic weapons (Al-Fatlawi, 2016, p. 613; Al Makhmari et al., 2024, p. 94).

Moreover, the use of cyber weapons is considered an illegal act: "States are prohibited in their international relationship from threatening to use cyber weapons against each other or political exploitation of any State or any act inconsistent with the purposes of the United Nations" (Abdul Rahman, 2020, p. 19). Perhaps it is useful to emphasize that the traditional legal texts are no longer compatible with the weapons of cyberspace. This requires the intervention of the international bodies to enact modern laws to confront such weapons, preserving the principle of criminal legality, while strengthening international cooperation to combat them (Hilali, 1997; p. 23).

Therefore, it must be taken into account that cyber security has become an important strategic weapon for countries, especially the superpowers. Electronic weapons have become a new method and part of modern tactics for attacks and wars between countries. Whoever has an electronic weapon strategy will create a balance of terror for him or use it as a deterrent weapon to achieve peace (Al-Burhami and Ali, 2022, p. 428).

From this point of view, the Statute of the International Criminal Court indicated that: "No weapon, missiles, materials or methods of warfare that by their nature cause unnecessary harm or suffering in violation of the international law of armed conflict should be used." To conclude from the foregoing, it is noted that this text was general, aiming not to use any potential advanced electronic weapons manufactured in the future, in terms of modern technology, in the manufacture of weapons of war. To clarify this, it can be said that electronic weapons based on advanced modern technology fall into the category of prevention, prohibition and criminalization according to the rules of the International Criminal Court System (AlSadiq, 2016, p. 38; Alkhseilat et al., 2024, p. 725).

Therefore, it was necessary to examine the extent of the legality of using electronic weapons in the field of international relations. When these electronic attacks are considered a legitimate right in the case of defense, or an illegal violation in the case of a threat or damage to international peace and security, in addition to the role of international

and regional organizations and States in confronting such electronic attacks without prejudice to the basic rights and freedoms stipulated in international covenants and the constitutions of local states (Al-Sadiq, 2006, p. 22; Al-Billeh, 2022b, p. 13).

II.2. Extent of International Recognition of Cyber Weapons

The increasing and wide spread of technical knowledge and its distribution without technological hindrance has led to the proliferation and development of cyber weapons of strategic weight. This matter constituted a threat that outweighs many of the national efforts that have been made and are still being made to try to secure cyberspace and make it available to all (Abdul Sadiq, 2017, p. 33).

Perhaps it is useful to emphasize that cyberspace differs from the space in which we live. It confirms the inability to be absolutely equal between traditional and electronic space. This leads, as a result, to differing jurisprudential opinions regarding the scope and possibility of subjecting cyber weapons to the provisions of international humanitarian law (Khalifa, 2014, p. 22). Some of the jurisprudence went to say that the rules of international humanitarian law apply to cyberspace and that they are sufficient to regulate the use of electronic weapons. They do not backup the supporters of the trend that there is a legal vacuum in cyberspace (Ni'ma, 2018, p. 27).

At the outset of the discussion on subjecting cyber weapons to international humanitarian law, the legal advisor of the International Committee of the Red Cross affirmed that international humanitarian law applies to cyber weapons and cyber conflicts. Its norms are considered applicable to deal with the new developments caused by cyberspace (Abdel-Sabour, 2017, p. 6; Al-Khawajah et al., 2023, p. 32).

The fourth paragraph of Art. 2 of the Charter of the United Nations (1945) affirmed the prohibition of resorting to or threatening of force by state parties in a manner inconsistent with their purposes. This means that the weapons used in cyberspace are considered weapons in the intended sense and have a devastating effect on the physical world. The use of force and weapons against a country constitutes the national right of the attacked State to defend itself. This confirms the need to

implement and respect it without the need to include new legal rules (Ni'ma, 2018, p. 16).

The use of weapons in cyberspace by a country against another country constitutes an act of aggression without counting or limiting the type of weapons to a specific scope. This was confirmed by the text of Art. 51 of the Charter of the United Nations, which authorized the right of defense and the use of force to respond without specifying the type of weapons.

In sum, what the proponents of this opinion inferred is that both conventional and electronic warfare are similar because the effects of each are devastating and reflected on the physical world. Also, Art. 51 did not specify or restrict the type of weapons, which confirms that all disputes that occur are covered by the rules of international humanitarian law. European and American jurisprudence tended not to consider cyberspace among the areas subject to the provisions of international humanitarian law. This leads as a result to making all acts practiced in it permissible so that individuals may practice hostile activities and actions without being subjected to any rules or self-restraint.

This jurisprudence supports the argument that access to the virtual world is through keyboards, computers, and passwords. This means that they cannot be limited to the scope of a specific country. It follows that they are not subject to international humanitarian law, given that this law itself was unable to determine the rule of airspace (Abdul Hamid, 2020, p. 3129).

From this point of view, the idea of the setters of this trend is based on refusing to deal legally with the Internet and cyberspace on the grounds that it is a new world that is not compatible with the traditional physical reality. This leads as a result to the non-applicability of legal rules in international humanitarian law and international conventions to cyberspace weapons. It did not include legal rules suitable for virtual reality. In addition, the application of the rules of international humanitarian law seems unrealistic, given that the means and weapons of cyberspace are not considered sufficiently clear and understood in terms of their use and implications (Abdul Sadiq, 2017, p. 33). It is noted from the foregoing that the users of electronic weapons do not have a fixed place or a place that shows that the attack or the use

of weapons was carried out by them, especially in the event that anonymous and encrypted communication technology was used to hide their identity (Abdul Salam and Al-Atabi, 2018, p. 60).

This means that the proponents of this trend refused to apply the provisions of international law and international humanitarian law to weapons and conflicts in cyberspace, because the actions resulting from them are not considered conflicts or weapons in the true sense and are not subject to the rules of war. They also emphasized that the application of the rules of international humanitarian law requires regular armies, battlefields, confrontation, and actual weapons, unlike the case in cyberspace (William, 2011, p. 38; Haataja, 2022, p. 236).

III. Applications of Cyber Weapons in the Light of International Humanitarian Law

The possibility of applying the principles and rules of international humanitarian law regarding the use of cyber weapons, their application in relation to cyber attacks differs from that in conventional attacks by determining who bears responsibility for illegal acts, especially with regard to individual criminal responsibility. Therefore, it was necessary to set rules consistent with the nature of attacks in which cyber weapons are used during international armed conflicts (Saud, 2018, p. 82).

III.1. Extent of Subjection of Cyber Weapons to the Provisions of International Humanitarian Law

Technological developments in weapons have led to the emergence of new means and methods of warfare, such as cyber weapons. This has raised legal challenges, so it is important for any State, when developing a new weapon or method of weapon use, to assess that those weapons comply with international humanitarian law. The application of pre-existing legal rules to technology using new electronic weapons may raise questions about the adequacy of the rules of international humanitarian law in light of the characteristics of those weapons (Abdul Wahed, 2021, p. 26; Dwan et al., 2022, p. 49).

III.1.1. Subjection of Cyber Weapons to the Provisions of International Humanitarian Law

International law has recognized many principles related to the use of various forces in international relations. However, it meant by force the hard power that includes the use of conventional weapons in all its forms during international and internal conflicts. However, in light of the technological development and the communication revolution that prompted us to search for the possibility of reconciling the will of the legislator with what was imposed by evolution (Czosseck and Podins, 2012, p. 17).

Perhaps it is useful to emphasize that the principles related to international law in most armed conflicts, whether of an international or non-international nature, are characterized by a general customary and peremptory nature. It is distinguished by the fact that it applies to all warring parties, whether they are a party to the international agreements that contain the principles or not (Abdul-Ghaffar, 2016, p. 21).

Therefore, there are many principles that guide the parties, including the principle of the right of belligerents to use the methods and means of warfare that are not prohibited, and the related prohibition of the use of weapons that cause "superfluous injury or unnecessary suffering."[1] The other principle is the distinction between combatants, civilians, military objectives, civilian installations, and installations of a dangerous or dangerous nature (Abdul Rahman, 2003, p. 27; Al-Burhami, 2022, p. 423).

Based on the above, the general rule in international humanitarian law is based on Art. 35(1) of the First Additional Protocol of 1977 to the four Geneva Conventions of 1949[2]. It states that: "The right of the Parties to the conflict to choose methods and means of warfare is not unlimited." The methods mean the methods of fighting, while the means are the weapons and equipment placed at the disposal of the combatants of the parties to the conflict.

[1] Art. 35(2) of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977.

[2] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977.

From this point of view, international humanitarian law dealt with weapons and their use according to three levels represented in the general principle. This principle is based on defining the general principles as the comprehensive framework for controlling the gaps that any agreement overlooks, present or in the future. This is embodied in the Martens clause contained in the Preamble to the Hague Conventions (1907). Article 1 stipulates that civilians and combatants in cases not provided for in this protocol or any other international agreement shall remain under the protection and authority of the principles of international law, as established by custom, humanitarian principles and the dictates of public conscience.

This matter is understood from it that the warring parties are governed by this text and cannot invoke the absence of a text prohibiting the use of a particular weapon. That is, in the sense that it is not entitled to use any of the weapons whose use leads to overstepping the general principles of humanity (Al-Busaili, 1990, p. 36).

Accordingly, weapons are prohibited by nature and may not be used if their use results in indiscriminate effects, massive damage, and unjustified pain. Likewise, its use leads to damage to the environment on a large scale and for a long time (Abdali, 2008, p. 288). The agreements related to the law stipulated the prohibition of weapons. These weapons were described in two parts, the first: prohibited weapons, which are prohibited from being used and mentioned clearly, as they are called by international treaties and agreements, the most important of which are chemical and biological weapons and anti-personnel and bacteriological mines. The other part is: the weapons whose use was restricted, meaning that their use was permitted on a specific scale and according to certain conditions. It was mentioned exclusively and its provisions were organized in the texts and rules of the relevant agreements and treaties (Al-Daami, 2019, p. 36).

Accordingly, the sources of international humanitarian law include a set of principles, customs and rules of a customary nature that are binding on all. As a result, weapons which are permitted to be used, but which are not expressly prohibited in any convention, treaty or declaration are subject to the general principles (Al-Dabbagh, 1997, p. 66).

In the scope of cyberspace, the weapons and attacks that take place within it raise many problems. Among the most important of them: the extent to which weapons and attacks are subject to general principles because they do not include violence in the traditional sense? The answer to this question requires first defining attacks according to what was stated in Art. 49 of the First Additional Protocol, which defined them as: "Acts of violence against the adversary, whether in offence or in defence." It is understood from this matter that general principles and international humanitarian law apply to weapons and attacks committed in cyberspace due to their security repercussions. International humanitarian law is applied if attacks aim to kill and destroy. It must be noted that it is carried out differently from traditional attacks. That is, it takes place according to different methods and through a different medium that greatly affects communication systems and entails many political, economic and social repercussions.

III.1.1.1. Appropriateness of the Basic Principles of International Humanitarian Law that Govern Cyberspace Weapons

Force is one of the means permitted by international law to be used as one of the means used to resolve international disputes. Force is one of the manifestations upon which the State relies to highlight its sovereignty. As a result, international law is based on the organization of force in wars. However, the use of force between States in conflicts led to many dire consequences that harmed humanity. This prompted the international community to limit their use and consider them internationally illegal (Al-Dulaeen, 2014, p. 37).

In this context, by relying on the provisions of the Charter of the United Nations, its Member States should seek to resolve their disputes by peaceful means. They shall refrain from using or threatening to use force against the integrity of other States on the political or economic scale in a manner that is contrary to the purposes of the United Nations. It is not permissible to resort to force except in the case of legitimate defense according to specific controls (Al-Fatlawi, 2016, p. 612).

Therefore, jurisprudence went in two directions in interpreting the term "force." The first is based on the interpretation of force in the narrow domain. This matter excludes cyber weapons from the text of Art. 2(4) of the Charter of the United Nations, and that their use does not fall within the scope of the ban. This is based on what was stated in the Preamble of the UN Charter, which stipulated that "armed force shall not be used, save in the common interest." In addition, Art. 44 stipulates: "If the Security Council decided to use force, then it would have accepted a request from a member not represented in it to provide armed force." In other words, the term "force" does not include weapons used in cyberspace. The other direction of jurisprudence went to the fact that force includes all forms and types, whether armed or economic. Article 2(4) of the UN Charter clarified the prohibited forms of force that are directed against territorial integrity or political independence or are inconsistent with the purposes of the United Nations. As we mentioned in the previous chapter of the study, force includes the use of weapons in cyberspace (Shata, 1986, p. 67).

Thus, it turns out that the consequences of attacks and weapons used in cyberspace are similar to the results of conventional attacks. However, the difference between them is in the means and strategies used in implementation. In other words, attacks and weapons in the virtual and realistic ranges result in material losses (Al-Mubaideen, 2020, p. 16).

This requires that attacks in cyberspace are based on waging psychological warfare, competition for information, and continuous work to develop and invent cyberspace weapons. This underscores the resulting diversity in the means of warfare and conflict in the hypothetical domain. Diversity was not limited to the means, but also included the actors in this war. Terrorist groups or companies working in information technology, as well as individuals and governments, may participate in the conflict. This leads as a result to the creation of the so-called open war that continues to develop methods and weapons of war (Al-Sadiq, 2006, p. 96).

From another angle, international humanitarian law is applied in cases of the outbreak of armed conflicts. In its application, it is based on activating two types of rules. The first type works to limit the ability

of the parties to use the means and methods of war, and the second presupposes that there are rules to be applied to protect people and property in times of armed conflict (Al-Shammari and Ismail, 2020, p. 277).

Thus, the use of force is not free and without observance of restrictions and controls. Failure to specify the nature of military activity does not mean freedom to use force. International humanitarian law has imposed rules on military activity that prohibit the use of certain types of weapons because of the unwarranted harm they cause. One of the basic rules of international humanitarian law recognized that in the event of an armed conflict, the parties have the right to choose the means and methods of fighting. However, this choice is specific and not absolute. It must be done in accordance with the rules of the law (Al-Sheikh, 2019, p. 248).

III.1.1.2. Conditions must be Met for the Application of International Humanitarian Law to Cyberspace Weapons

It should be noted that although most countries sought to develop legislation to combat the non-peaceful use of cyberspace, they still failed to provide effective protection because the legal framework in each country is not applicable in other countries (Al-Shuaibi and Al-Naqeeb, 2022, p. 538). As a result, in order to be able to apply international law to cyberspace weapons, a set of limitations must be available. These limitations are represented in the fact that electronic weapons and attacks that take place in cyberspace are a means of warfare, even if they do not result in the same damages and injuries resulting from conventional attacks (Al-Tai, 2018, p. 18).

In addition, the harmonization of weapons with the spirit of international law requires States to accept interpretations related to armed conflict and attack in a manner commensurate with the development in attack mechanisms and tools. Otherwise, it will make it difficult to apply international humanitarian law to cyber weapons (Amar, 2019, p. 136).

Electronic weapons target many protected facilities and places. Thus, the act resulting from it can be considered an attack in a way that leads to an expansion of the scope of war goals so that we can apply international humanitarian law to it (Ashour, 2018, p. 33). Cyber

weapons are also based on testing the concept of war in its traditional sense. This is a result of the disagreement over the concept of attack, even if space weapons include it (Bougrara, 2018, p. 101). Moreover, the application of international humanitarian law is limited. This is as a result of the use of cyberspace by civilians without creating specific limits separating their use of it from the use of States. This means that there are no limits to the extent of civilian participation in hostilities committed in cyberspace. This will lead to the weakening of international humanitarian law (Shloush, 2018, p. 187).

Undoubtedly, in order for international humanitarian law to be used in respect of cyber weapons, several indicators must apply to the consequences of these attacks, as follows:

— severity of the attack, in the event that civilians were subjected to an electronic attack in a way that exposed them to death or severe damage to their property. In this case, it is considered a military action if the damage is minimal or similar to the use of force in its traditional form (Mukhtar, 2015, p. 23);

— immediacy, in the sense that the effects of the attack will occur within minutes or seconds through vision, as is the case in a conventional attack. As for taking work for a period of weeks or months, it does not fall within the concept of force (Berri, 2019, p. 36);

— initiation, that is, the event is a result and not a cause that is, the availability of a relationship between cause and effect (Al-Sheikh, 2019, p. 249);

— subjecting the action to measurement and observation, in the sense of being able to measure the size and amount of material losses resulting from the use of weapons (Al-Dabbagh, 1997, p. 37);

— penetration, that is, if the act of using weapons is accompanied by an illegal violation of international borders, whether this is done on institutions or installations (Al-Dulaeen, 2014, p. 17);

— ability to impose the legitimacy of work, in the sense that States can assume legitimacy and their ability to monopolize legal use (Abdel Hamid and Atef, 2015, p. 37);

— responsibility, for the State to be responsible for the consequences of using weapons in cyberspace on the grounds that it is a military action and to bear its legal obligations (Belqziz, 1989, p. 33).

III.1.2. Non-Subjection of Cyber Weapons to the International Humanitarian Law

International law envisages many possibilities that include the course, results and effects of conflicts between States. This prompts us to discuss the possibility of including cyber weapons into the international legal discourse, as they are in dispute. Cyberspace and the use of its weapons do not represent an attack in the traditional sense known in international law, but their use at the same time leads to injuries to persons or targets that are protected by international law (Hilmi, 1999, p. 33).

Simultaneously, the use of weapons in cyberspace results in many attacks that affect countries and individuals in one way or another. The scope of impact differs from attacks in their traditional sense. This constituted a temptation for the conflicting parties to push them to resort to and use cyberspace weapons on the grounds that they contribute to the receding of the effects of aggression. The nature of cyberspace and the restrictions imposed on countries in relation to the nature of the international communication and information network subject them to safety and protection standards in a way that may conflict with the management of their internal affairs. This was confirmed in the decision of the International Court of Justice regarding Nicaragua (Wardana et al., 2022, p. 453).

The application of international law collectively as a legal system, especially international humanitarian law, faces many problems; given that cyberspace is a networked world that transcends international borders and national sovereignty. This made the subject of defining the concepts of peace and security in this scope undefined. Since the damage resulting from the use of weapons is not tangible and material, neither *jus in bello* nor the law of Geneva, which aims to protect civilians, can be applied to this attack. Therefore, the issue of determining legal responsibility for these attacks is considered one of the issues that cause problems (Abdul Salam and Al-Atabi, 2018, p. 62).

In addition, the non-applicability of international humanitarian law is due to the difficulty of identifying the attack in cyberspace re-

sulting from the use of its weapons, so it is difficult to distinguish the parties if the attacks were just a reaction, or if the cyber attack was carried out by more than one country. This requires concerted international efforts and cooperation to work towards a global agreement that contributes to providing protection against cyberspace weapons. This is achieved by working to activate existing international agreements or concluding new agreements (Farhat, 2019, p. 90).

Thus, it turns out that it is difficult to apply the provisions of international humanitarian law to cyber weapons in light of the lack of acceptance of the multiple existing interpretations to explain the concept of conflict and force. Also, narrowing the concept of war aims leads to the inability to apply international humanitarian law to weapons used in cyberspace, especially since they were not considered traditional means of war (Samesim, 2010, p. 39).

As a result, many international efforts have been made to limit the use of non-conventional weapons, especially those intended for use against mankind. This necessitated the conclusion of many agreements and the establishment of organizations. By applying the same principle to cyber weapons that are directed and used to harm the global information infrastructure, civil interests and the global economy, it is necessary to seek to limit the use of these weapons (Perlroth, 2021, p. 16).

In this context, the principle of the operation of these weapons is based on harming the security of space in a way that affects the capabilities and production of countries. Its danger increases in the absence of a legal and regulatory framework that defines and controls the basis for the use of weapons in cyberspace (Zaruqa, 2019, p. 1019). On the other hand, stopping the proliferation of cyber weapons and declaring that some areas are free of them depends on the will of States. These countries must take the initiative to create public and comprehensive spaces in the field of cyberspace that are free of electronic weapons based on awareness of the dangers that result from the wrong use of them, especially by non-state parties such as terrorist groups and electronic companies (Al-Daami, 2019, p. 67).

III.2. Available International Means and Capabilities to Confront the Weapons of Cyberspace

The specific system of rules of war in international law has evolved in conjunction with the development of tools and methods used in combat and armament. The increased reliance on information and communication technology in international relations and military operations led to the emergence of a new type of war and armament called electronic weapons, which took cyberspace as a special field for engagement and conflict. This matter necessarily requires providing and organizing the legal provisions related to it and framing it in a way that condemns the parties involved and establishes international responsibility for that (Al-Burhami, 2022, p. 423). From this standpoint, in order to study the international means and capabilities available to confront cyber weapons, we will study the international technical systems and international agreements related to limiting the use of cyber weapons (William, 2011, p. 16).

III.2.1. International Technical Systems to Limit the Use of Cyber Weapons

The pace of countries resorting to cyberspace has increased, considering that it is one of the areas in which conflicts between parties arise and lead to harm to enemies and adversaries. This is done by targeting communication and information networks and their associated systems, facilities, and interests of military and civilian scope (Saeed, 2013, p. 22).

It must be noted that defense systems in cyberspace are based on technical programs that are based on providing and developing programs continuously and quickly to comply with the legislative aspect of the same defense systems. This is in order for the State to secure its cyberspace from any electronic attacks that may harm its interests (Ashour, 2018, p. 38).

III.2.1.1. The Specificity of Cyberspace Weapons and their Impact on the Application of the Principles of International Humanitarian Law in the Event of Armed Conflict

The attacks carried out through cyber weapons raise many basic legal issues in terms of their legality. Especially the law of war does not include any legal text referring to cyber weapons. They are considered non-moving attacks, meaning that they are not military in themselves. As for international humanitarian law, it applies to it because its main goal is to protect civilians from the scourges of war (Abdul Wahed, 2021, p. 20).

The application of international humanitarian law must examine its ability to regulate methods and means of the new war. It is also necessary to state the illegality of using cyber weapons in the case of legitimate defense and armed conflicts in accordance with the international legal framework based on the following basic principles.

— Restricting the rights of belligerents to use weapons of war. This principle requires placing restrictions on belligerents during armed conflict to avoid any harm to civilians and facilities. Based on the provisions of the Geneva Convention of 1949, protection was granted to persons in the event of war without reference to electronic attacks and without limiting them to the use of specific weapons. According to Art. 36 of the First Additional Protocol, it is clear that any military activity that is not regulated in a precise manner does not mean that it can be used without controls and rules, and this applies to cyberspace weapons. Cyberspace weapons are directed at the opponent with the aim of causing damage to the other party. Therefore, it is considered one of the means and methods of war.

— Prohibition of unexplained pain. This principle is based on the fact that the connection between the civilian natures of cyberspace can be exposed to the damage that results from the use of cyberspace weapons that harm the economic, social and political aspects. This means that attacks and electronic weapons used in cyberspace result in excessive and unjustified pain, especially if the attacks are directed at critical infrastructure (Ghoneim, 2019, p. 262).

— Distinguishing between combatants and non-combatants, civilian and military installations. Military objectives are the legitimate objectives of war in international law. By applying this to electronic weapons, it is noted that there is an overlap between the civilian and military uses because they are linked through a single network. This confirms the difficulty of identifying military targets as targets for war, as there are no prisoners or wounded, but there are facilities and systems (Isa et al., 2022).

— Neutrality in international law. The use of cyber weapons is a violation of the principle of neutrality. The international nature of cyberspace makes any party vulnerable to attacks. Launching attacks and directing weapons is done through countries that are not involved in the conflict, so they become involved in the conflict. This constitutes a flagrant violation of the rules of international humanitarian law and the Geneva Conventions. Although countries refrain from transferring cyber weapons through their communication networks because they cause severe harm to civilians and facilities, their transfer may take place without their realizing.[3]

— Precautions during the attack and the duty of commanders in the field. The use of cyberspace is characterized by the possibility of adopting hostile activities during the attack. This requires taking all precautionary measures to avoid loss of life and material damage. However, due to the intertwining between communication and information networks, it is difficult to take the necessary precautions (Wardana et al., 2022, p. 453; Roscini, 2014, p. 137).

III.2.1.2. Scope of the Use of Weapons in Armed Conflict

International humanitarian law does not contain any express rules regarding cyber weapons or cyber warfare. This makes analyzing the legality of using this space for conflicts a matter that raises many problems, especially with the fact that the attacks are non-moving and unarmed in the actual sense. However, the application of the provisions of international humanitarian law is based on its primary objective

[3] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977.

of protecting civilians from any aggression and the scourges of war (Rid and McBurney, 2012, p. 9; Dinstein, 2012, p. 266).

Indicating the legality of the use of weapons in cyberspace requires a statement of international legal frameworks and their relationship to existing principles, if applied. As a result, we list the most important principles in international humanitarian law and show their compatibility with the rules of cyber warfare.

— Restricting the rights of belligerents with regard to the weapons used, by imposing restrictions on combatants in cyberspace, because the effects of their weapons may reach the impact on the work of vital installations, facilities, and infrastructure. This leads to great losses (Touré, 2011, p. 11).

Based on the fact that weapons and attacks in cyberspace aim to achieve damage, this makes them a means of warfare distinguished by its accuracy and superior ability to hit the target. As a result, it is difficult to determine the extent of legal liability. This requires activating the principle of arms restrictions (Wardana et al., 2022, p. 453).

— Prohibition of causing unjustified pain. The cyberspace of many countries depends on communication networks, information and technology that are interconnected with each other to achieve the basic goals and public interests in the country. This confirms the close interdependence between the civilian and military character in cyberspace. This means that indiscriminate attacks may hit civilian facilities in a way that causes many unjustified pains to civilians and society. Despite the different mechanisms, the effects are similar (Touré, 2011, p. 12; Khashashneh et al., 2023, p. 71).

— Prohibition of indiscriminate attacks. Despite the accuracy of cyber weapons, their technological organization may be designed in a way that makes hitting targets randomly. This leads to unjustified damage to many people, civilian and military installations. As a result, Art. 51(8) and 57 of the First Additional Protocol approved the prohibition of indiscriminate attacks that are not directed at a specific target and that use combative means whose effects are not limited to the form required by the Protocol.

— Neutrality in international law. Cyberspace crosses international borders. This makes the use of weapons a violation of the princi-

ple of neutrality. Launching the attack during it leads, as a result, to make the attacks pass through three non-involved countries (Shehab, 2000, p. 17). This constitutes a violation of the First Additional Protocol, which stipulates that: "The states and parties involved in the conflict refrain from moving forces and sending war supplies through the lands of neutral parties."

III.2.2. International Agreements Related to Limiting the Use of Cyber Weapons

The international community has sought to limit the arms race in cyberspace, as this armament encourages competition between States in a way that turns it into war; especially if the two parties possess enormous technological power that enables them to launch electronic attacks (Dahmani, 2017, p. 16).

Based on the above, the international community and States have taken the initiative to take many preventive measures of a legal nature. Thus, laws were enacted on a national scale with the aim of criminalizing entities and parties that use electronic weapons, and then arranging penalties for violators (Ponangi, 2012, p. 129). As a result, a manual known as the Tallinn Manual on the International Law Applicable to Cyber Warfare was issued in 2013. Then, a second version of it was issued in 2017, which aimed to organize and define the rules to be followed by countries when launching attacks in cyberspace. Then, several standards were issued to limit cyber weapons and for data security and integrity (Darwish, 2016, p. 121).

The Tallinn Manual 2.0 comprises four sections and represents a groundbreaking advancement that substantially enhances the theoretical and practical understanding of international law concerning cyberspace. Part I is entitled "General International Law and Cyberspace" and addresses sovereignty, due diligence, jurisdiction, the law of international responsibility, and cyber operations. Part II discusses "Specialized Regimes of International Law and Cyberspace," encompassing international human rights law, diplomatic and consular law, maritime law, aviation law, space law, and international communications law. Part III addresses "International Peace and Security and Cyber Activi-

ties" and is primarily derived from the Tallinn Manual 1.0. This section addresses peaceful resolution, non-intervention, the application of force, and collective security. Part IV delineates "The Law of Cyber Armed Conflict" within the overarching context of the law of armed conflict, specifically addressing the conduct of hostilities, designated individuals, objects, and activities, as well as occupation and neutrality. The text posits that nations' need to safeguard networks within their territory is underpinned by the concepts of universally acknowledged sovereignty and non-intervention. This section examines sovereignty as the cornerstone of international law and non-intervention as its complementary principle, assessing the applicability of these concepts in cyberspace through the relevant provisions of the Tallinn Manual 2.0. The initial rule in the Tallinn Manual 2.0 asserts, "The principle of State sovereignty is applicable in cyberspace." If sovereignty represents authority and power, as stated in the first rule of the Tallinn Manual 2.0, nations are expected to exercise their sovereignty over individuals, entities, and activities in cyberspace in the same manner that they do in the physical realm. Sovereignty in cyberspace can be viewed from two perspectives: rights-based and obligation- or duty-based. State sovereignty, as a fundamental premise of statehood, signifies the supreme power of a State regarding its territorial integrity and political independence. Given that a significant portion of cyberspace resides within the sovereign territories of States and is owned by governments or corporations within those borders, States possess authority over the information and communication technology (ICT) infrastructure situated within their national territories and explicitly affirm their commitment to safeguarding their national cyberborders. Consequently, the cyber infrastructure falls under the authority of the flag state and its sovereign rights. The physical infrastructure required for cyberspace operates on land and is consequently subject to state sovereignty (Schmitt, 2017).

III.2.2.1. Use of Cyber Weapons in Accordance with the Hague Conventions on Armed Conflicts

The Hague Conventions are a series of international agreements related to armed conflicts. Among them, the Hague Convention (IV)

Respecting the Laws and Customs of War on Land is particularly relevant, as it established fundamental rules for the conduct of hostilities between States. In particular, Art. 22 states that "The right of belligerents to adopt means of injuring the enemy is not unlimited," setting a foundational limitation on methods of warfare. However, these agreements primarily addressed conventional armed conflicts and did not include explicit provisions regarding the use of cyber weapons. They were based on the definition and regulation of the use of conventional weapons and the protection of victims in international armed conflicts (Chang, 2014, p. 379).

However, an extrapolation of their provisions shows that some of the general principles stipulated in them can be applied in cyberspace disputes. Among the most important of these principles are distinction and proportionality. The principle of proportionality states that actions that unduly target civilians and civilian property must be avoided, and that the use of weapons be proportionate to the specific military objective (Dempsey, 2020, p. 12).

International efforts aimed at trying to regulate the use of weapons and working to develop them take place within an appropriate legal framework. Examples include talks at the United Nations, the Organization for Security and Co-operation in Europe (OSCE) and the United Nations Group of Governmental Experts on Cyber security (Geers, 2010, p. 547). However, no appropriate legal framework has been put in place to regulate the use of cyber weapons. These issues are related to data protection, cyber security, and dealing with new challenges in the digital field, in order to update the applicable international laws and national legislations (Horschig, 2020, p. 352).

In the first decade of the third millennium, electronic attacks emerged. The use of electronic weapons in cyberspace has increased. This led to the emergence of the dilemma of the legal adaptation of these weapons and the extent of the ability to apply the principles of international humanitarian law to these wars and conflicts. These weapons and cyberspace did not exist during the periods in which the most important international agreements were drafted, including the first set of the Hague Conventions adopted in 1899 and the second set adopted in 1907.

III.2.2.2. Use of Cyber Weapons in Accordance with the Geneva Conventions and Additional Protocols to Them

Both the Geneva Conventions and their protocols have sought to establish the legal framework to regulate the use of cyber weapons and the legal provisions relating to cyber attacks (Bernstein, 2018, p. 133).

The Geneva Conventions and their protocols apply to cyber weapons because they violate the legal principle imposed on weapons in a conflict situation between combatants and civilians. Electronic weapons target all economic, social, political and other sectors important to civilians. Targeting these sectors causes great harm to them. Likewise, electronic weapons are not based on distinguishing between civilian and military targets, nor civilian and military installations.

This is confirmed by the text of Art. 48 of the First Additional Protocol, which stipulates, "The parties to the conflict shall work to distinguish between the civilian population and combatants and between civilian properties and military objectives. Then they direct their operations only against military objectives, in order to ensure the respect and protection of the civilian population and properties."

Also, Art. 51(2) of the First Additional Protocol proclaimed: "The civilian population, as such, may not be the object of attack, acts of violence or threats aimed at spreading terror among civilians are prohibited." The fourth paragraph in the same article stated: "Attacks that are not directed against a specific military target or those which use a method or means of combat, their effects cannot be limited as required by the Appendix. Therefore, they are liable to hit, in every such case, military targets, civilians and civilian properties without distinction."

Therefore, it is understood from the texts of the previous articles that it is forbidden for the conflict, in its traditional or electronic form, to be based on the use of indiscriminate means that lead to indiscriminate attacks. By applying the texts of these articles to electronic weapons in cyberspace, it is clear that they are characterized by a random nature. This confirms the applicability of the provisions of the previous articles to it and that it is prohibited due to its effects that may affect civilians and their interests (Zaruqa, 2019, p. 1016).

IV. Conclusion

The initial Tallinn Manual addressed the legal framework governing armed combat. The recently published Tallinn Manual, referred to as Tallinn 2.0, addresses a wider spectrum of cyber operations, encompassing both peacetime and wartime activities. This article succinctly outlines the principal aspects of the Tallinn Manual 2.0, highlighting significant areas of disagreement among the experts who authored the manual. The article provides insights into the future trajectory of international law concerning cyber activities.

The absence of specific controls on the use of cyber weapons in armed conflicts leads to many risks to international peace and security, and to the rights of civilians in the event of armed conflicts in particular. In light of the recent increase in cyber attacks using cyber weapons and the difficulty of determining who launched these attacks and the lack of a legal basis regulating them, it was necessary to put in place controls governing the use of cyber weapons, taking into account the rules of international humanitarian law.

Therefore, the rules of international humanitarian law should be applied to cyber weapons. The use of cyber weapons to launch military operations has turned the laws of armed conflict upside down. The intended targets of any attack using cyber weapons are more likely to be civilian than military and will affect the civilian population rather than the military forces. Therefore, the international community and the United Nations must work to amend the rules of international humanitarian law, especially with regard to international responsibility as a result of the use of this type of modern technology in weapons, in a way that guarantees the protection of civilians and the maintenance of international peace and security.

In fact, many countries of the world rely on cyberspace to use cyber weapons and launch attacks on opponents to harm them into submission. The international community's awareness of the importance of cyberspace and its great ability to cause damage to military and civilian infrastructure and installations has increased, especially in the light of the use of advanced electronic weapons. It has become the best choice for States as a result of its characteristics and advantages that

enable the party to the conflict to direct the strongest blows with the greatest damage and the lowest costs. Cyber weapons have become a recognized reality and cannot be overlooked or ignored. No country can escape exposure to the use of any of these weapons.

Finally, countries must seek to find new strategies that are compatible with the special nature that distinguishes cyberspace from physical reality and with the security challenges that arise with the continuous development of technology. The international legal rules regulating armed conflicts must be reviewed in a manner consistent with the continuous technical and technological development. The international criminal justice system must also be activated, and cyber weapons must be included in international legal agreements related to the control of the use of weapons and armaments to regulate attacks and weapons used in cyberspace.

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Received 19.02.2025
Revised 14.03.2025
Accepted 26.03.2025

Article

DOI: 10.17803/2713-0533.2026.1.35.136-165

The 1976 Apia Convention on the Conservation of Nature in the South Pacific as the Basis for Regional Environmental Cooperation in Oceania: Evolution, Challenges, and Prospects

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Abstract: The Oceania region, which unites 19 states and territories, has its own environmental problems that require the adoption of appropriate documents to solve them. Using a legal — historical approach, this article revisits the 1976 Apia Convention — the first multilateral environmental treaty concluded by the island states and territories of Oceania — and evaluates its enduring normative and institutional imprint on regional governance. It traces how the Convention's pioneering obligations to establish protected areas, safeguard endemic and migratory species, and control alien introductions catalysed the creation of the South Pacific Regional Environment Programme (SPREP) that was transformed into an international intergovernmental organization in 1993. It was SPREP that became the basis for instruments such as the 1986 Noumea and 1995 Waigani Conventions. The analysis reveals that, despite entering into force only in 1990 and being formally "suspended" in 2006, the Apia Convention continues to serve as a doctrinal touchstone: national courts and inter-state negotiations still cite its due diligence standard when expanding marine reserves or debating high-seas biodiversity. At the same time, the study identifies structural weaknesses of the convention — a low number of ratifications, voluntary compliance and the absence of enforcement machinery — that limit

the Convention's practical reach, particularly regarding the 21st-century threats such as plastic pollution, deep-sea mining and climate-induced migration. Building on recent political momentum, the authors propose a three-pillar reform package: optional protocols on plastics and seabed extraction; dynamic incorporation of the Paris Agreement and the Biodiversity Beyond National Jurisdiction (BBNJ) Convention obligations; and a strengthened reporting and a majority vote amendment procedure.

Keywords: Apia Convention; environmental protection; regional cooperation; sustainable development; Oceania; South Pacific Regional Environment Programme (SPREP); United Nations Human Rights Council (UNHRC)

Cite as: Baryshkov, P.E. and Solntsev, A.M., (2026). The 1976 Apia Convention on the Conservation of Nature in the South Pacific as the Basis for Regional Environmental Cooperation in Oceania: Evolution, Challenges, and Prospects. *Kutafin Law Review,* 13(1), pp. 136–165, doi: 10.17803/2713-0533.2026.1.35.136-165

Contents

I. Introduction 137
II. Political-Territorial Features and Institutional Foundations of Environmental Cooperation in Oceania 139
II.1. Description of the Specifics of the State and Territorial Structure in the Oceania Region 139
II.2. Establishment and Activities of the Secretariat of the Pacific Regional Environment Programme (SPREP) 142
III. The 1976 Apia Convention: Content and Prospects for Modernization 148
III.1. The 1976 Apia Convention 148
III.2. Prospects for Amending the 1976 Apia Convention 156
IV. Conclusion 161
References 164

I. Introduction

The States of the South Pacific, once considered a "quiet" geopolitical sector, have gradually emerged as prominent participants in the global sustainable development dialogue, particularly through the Alli-

ance of Small Island States (AOSIS).[1] The environmental problems facing this region have far-reaching consequences not only for the island nations themselves but for all humanity. From widespread coral bleaching to the risk of complete submersion of atolls like Kiribati or Tuvalu — each of these phenomena demands a collective global response, not just an action from the affected States. Moreover, today's ecosystem threats are increasingly compounded by social ones: rising sea levels are accelerating migration flows, while higher temperatures are undermining food security. According to the estimates by Russian researchers, around 41 million people lived in the region at the turn of the century; by 2100, this number could rise to 71 million (Ochirova et al., 2019, p. 313). Climate-related factors are already directly or indirectly affecting labor migration, though their share in international migration flows currently does not exceed 10–12 %. However, if the frequency of storms and droughts continues to increase, Pacific nations will inevitably face an "exodus" of environmental migrants — primarily to Australia, New Zealand, and the United States.

The environmental agenda in Oceania is closely intertwined with its historical legacy. Former colonial powers left behind a heavy burden, including the consequences of nuclear testing and unequal resource exchange. The Russian Ministry of Foreign Affairs has explicitly described the French colonial model as "brutal," asserting that it inflicted immense harm on local populations — raising the issue of France's international legal responsibility from Algeria to French Polynesia.[2] Today, island nations themselves are increasingly asserting their agency. For example, within the United Nations Human Rights Council (UNHRC), they advocate for historical and ongoing extraterritorial harm — such as radiation pollution and reef destruction — to be addressed within the same legal framework as global greenhouse gas emissions. For the first time, the UNHRC recognized that a State responsible for damage must remedy the consequences of transboundary harm by adopting the Resolution 51/35 "Technical assistance and capacity-building to address the human rights implications of the nuclear legacy in the Marshall Islands"

[1] Available at: https://www.aosis.org [Accessed 12.07.2025].

[2] Available at: https://mid.ru/ru/foreign_policy/borba_s_kolonializmom_i_neokolonializmom/1957975/ [Accessed 19.06.2025].

(2022).[3] At the 58th session (March 2025), the Special Rapporteur presented a report entitled "The Ocean and Human Rights," developed with the active input from Kiribati, Tuvalu, and the Solomon Islands. The report emphasizes that reef destruction and deep-sea mining should be evaluated according to the same legal standards as transboundary CO_2 emissions.[4]

II. Political-Territorial Features and Institutional Foundations of Environmental Cooperation in Oceania

II.1. Description of the Specifics of the State and Territorial Structure in the Oceania Region

"In the central and western parts of the Pacific Ocean lies the largest concentration of islands on the planet, covering a total area of approximately 1 million square kilometres. Most of these islands are grouped into archipelagos. Collectively, they are known as Oceania. Oceania is traditionally divided into three historical and ethnographic regions: Melanesia (which includes New Guinea), Micronesia, and Polynesia (which includes New Zealand). In some classifications, New Zealand is treated as a separate entity" (Solodovnikov, 2025, p. 358).

This region comprises 14 independent states: Australia, Vanuatu, Papua New Guinea, Solomon Islands, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Palau, Samoa, Tonga, Tuvalu, and the Federated States of Micronesia. In addition, three other countries possess territories in Oceania and are interested in environmental cooperation: France (New Caledonia, French Polynesia, Wallis and Futuna); the United Kingdom (Pitcairn); and the United States that administer several types of territories in the region — unincorporated organized territories (Guam, Northern Mariana Islands); unincorporated unorganized territories (Wake Island, American Samoa, Baker Island, Jarvis Island,

[3] UN Human Rights Council, Technical assistance and capacity-building to address the human rights implications of the nuclear legacy in the Marshall Islands: Resolution 51/35, 07.11.2022.

[4] UN Human Rights Council, The Ocean and Human Rights: Report of the Special Rapporteur on the human right to a clean, healthy and sustainable environment (A/HRC/58/59), Geneva, 2025.

Johnston Atoll, Kingman Reef, Midway Atoll, Howland Island); an incorporated unorganized territory (Palmyra Atoll), and the U.S. state of Hawaii.

Unincorporated organized territories of the United States are territories that fall under the U.S. sovereignty, but are not part of any individual state or the District of Columbia. These territories are governed by the U.S. Congress under Art. IV, Section 3, Clause 2 of the U.S. Constitution that grants to the Congress the authority to manage and regulate U.S. territories and other national property. Despite being under the U.S. jurisdiction, such territories do not enjoy full representation at the federal level. Territories of the United States are classified based on two key criteria: the degree of incorporation into the country and the existence of local self-government. An incorporated territory is considered an integral part of the United States, with the full applicability of the Constitution and residents enjoying full citizenship rights. In contrast, an unincorporated territory is one that belongs to the United States, but is not constitutionally a part of it as a state or a permanent possession; the Constitution applies only partially, and such a territory may, in principle, be excluded from the U.S. jurisdiction. Further distinction is made between organized and unorganized territories. An organized territory has a civilian government established by an act of the Congress, while an unorganized territory is administered directly by federal authorities without a formal local governance structure. Thus, an unincorporated organized territory is a territory under the U.S. sovereignty that is not constitutionally a part of the United States, but has limited self-governance granted by the Congress (Irkhin, 2018, p. 485).

The status of territories in the contemporary world is subject to change and often reflects a combination of internal political dynamics and external diplomatic arrangements. A prominent example is New Caledonia, whose status has long been contested between supporters of full independence and advocates of continued association with France. A significant development has occurred recently: France has announced a "historic" agreement under which New Caledonia has been granted the status of a State, while remaining a part of the French Republic.[5]

[5] Available at: https://www.france24.com/en/live-news/20250712-ncaledonia-politicians-agree-on-statehood-while-remaining-french [Accessed 12.07.2025].

This development highlights how rapidly the legal and political status of territories can shift — even within long-established nation-states.

Two countries that possess territories in Oceania do not participate in regional environmental cooperation: Chile (Easter Island) and Indonesia (the province of "West Papua" (Sal′nikov and Delinse, 2022, p. 227)). Chile maintains that Easter Island, despite its geographic location, belongs to the Latin American region rather than Oceania. Indonesia, although geographically a part of Oceania, does not engage in cooperation with the Pacific island states, aligning itself politically and institutionally with Asia. It is a member of the ASEAN[6] and participates in the ASEAN international environmental agreements (Nguyen, 2013, p. 17). Another complication in the region arises from the unique legal status of two territories associated with New Zealand — the Cook Islands[7] and Niue.[8] These territories hold a mixed status: remaining in the free association with New Zealand, they independently participate in international treaties.

In light of the above, the term "states and territories" is used in reference to the Oceania region, as some territories have not achieved full independence. It is precisely these states and territories — which is an unusual phenomenon in international law — that constitute the participants of the regional institutional framework known as the South Pacific Regional Environment Programme (SPREP).[9] It is worth noting that despite the change in the official name, the acronym SPREP remained unchanged. The organization, originally known as the South Pacific Regional Environment Programme, became the Secretariat of the Pacific Regional Environment Programme in 2004. The word "South"

[6] Available at: https://asean.org/member-states/indonesia/ [Accessed 17.06.2025].

[7] Cook Islands Constitution Act 1964, No. 69, adopted in 1964, the principal legal document formalizing the status of the Cook Islands. Available at: https://www.legislation.govt.nz/act/public/1964/0069/latest/DLM354069.html?search=ts_act%40bill%40regulation%40deemedreg_Cook+Islands+Constitution+Act+1964_resel_25_a&p=1 [Accessed 19.06.2025].

[8] Niue Constitution Act 1974, No. 42, adopted in 1974, defines internal governance of Niue and its relationship with New Zealand. Available at: https://www.legislation.govt.nz/act/public/1974/0042/latest/DLM412778.html?search=ts_act%40bill%40regulation%40deemedreg_Niue_resel_25_a&p=1 [Accessed 19.06.2025].

[9] Available at: https://www.sprep.org [Accessed 19.06.2025].

was replaced with "Secretariat" to acknowledge the inclusion of Member States and territories located north of the equator. SPREP originated in 1975[10] as an international programme and evolved into a full-fledged intergovernmental organization with the adoption of its founding treaty in 1993, becoming the Secretariat of the Pacific Regional Environment Programme. For nearly half a century, SPREP has been at the forefront of the environmental protection in Oceania.

II.2. Establishment and Activities of the Secretariat of the Pacific Regional Environment Programme (SPREP)

The Secretariat of the Pacific Regional Environment Programme (SPREP) originated as a joint initiative of the South Pacific Commission (SPC), the South Pacific Bureau for Economic Cooperation (SPEC), the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), and the United Nations Environment Programme (UNEP). It emerged as the regional hub for the UNEP Regional Seas Programme,[11] aligning Oceania with a broader global effort to protect marine and coastal environments.

The decisive "political accelerator" for the development of SPREP was the Conference on the Human Environment in the South Pacific, held in Rarotonga, Cook Islands, from 8 to 11 March 1982.[12] This conference played a critical role in advancing the institutional consolidation of SPREP and firmly placing environmental concerns on the regional political agenda. The delegates of this conference adopted two key resolutions:

— the "South Pacific Declaration on Natural Resources and the Environment" that called on governments to prioritize the environmental protection at the national level;

[10] Available at: https://www.sprep.org/our-history [Accessed 19.06.2025].

[11] Available at: https://www.unep.org/topics/ocean-seas-and-coasts/regional-seas-programme/about-unep-regional-seas-programme [Accessed 07.07.2025].

[12] South Pacific Regional Environment Programme; South Pacific Commission, Report of the Conference on the Human Environment in the South Pacific, Rarotonga, Cook Islands, 8–11 March 1982: including South Pacific Declaration on Natural Resources and the Environment and Action Plan for Managing the Natural Resources of the South Pacific Region, Rarotonga, 1982, 27 pp.

— the "Action Plan for Managing the Natural Resources of the South Pacific Region" that outlined specific areas of work — such as ecosystem assessment, pollution control, and environmental education — and mandated the establishment of a permanent regional secretariat. In the same decision, the conference resolved to transition the SPREP from a temporary project into a separate entity within the framework of the South Pacific Commission (SPC). This move granted the programme its own mandate, ensured regular funding, and established direct accountability to the environment ministers of the region's countries.

The subsequent development of SPREP unfolded as follows: in 1986, the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (the Noumea Convention) was signed. After years of consultations, SPREP formally separated from the South Pacific Commission (SPC) in Noumea in 1992 and relocated its headquarters to Samoa. It gained full autonomy as an intergovernmental organization with the signing of the Agreement Establishing the SPREP in Apia on 16 June 1993 that entered into force on 31 August 1995.[13]

The 1993 Agreement consists of 11 articles and contains the following provisions.

Article 1 establishes SPREP as an intergovernmental organization. It is composed of two principal bodies: the SPREP Meeting and the Secretariat that is permanently based in Apia, Samoa, unless the Meeting decides otherwise. In this way, the regional environmental mechanism — previously operating in a less formalized form — acquired its own legal personality and institutional structure.

Article 2 of the Agreement defines the purpose of SPREP as promoting cooperation among the countries of the South Pacific in the protection and improvement of the environment, and in ensuring sustainable development for present and future generations. The main instrument for achieving this purpose is the SPREP Action Plan that is regularly adopted by the SPREP Meeting. The article outlines key areas of activity: coordination of regional initiatives, environmental moni-

[13] Agreement Establishing the South Pacific Regional Environment Programme (SPREP), Apia, 16 June 1993. Available at: https://faolex.fao.org/docs/pdf/mul-67012.pdf [Accessed 03.07.2025].

toring, conservation and research programmes, pollution prevention, strengthening of national institutions, public education, and the development of legal and governance frameworks. This list sets out a broad yet clearly defined agenda, making the Action Plan the central operational instrument of SPREP.

The SPREP Meeting (Art. 3) serves as the organization's highest governing body and is open to both State parties and a number of dependent territories in the region. The article outlines its key powers: discussing regional environmental issues, adopting and revising the Action Plan, approving the budget and work programmes, appointing the Director, establishing subcommittees, and coordinating activities with the 1976 Apia Convention and the 1986 Noumea Convention. Thus, the Meeting fulfills both strategic and administrative-oversight functions. Its status enshrines the principle of "one country — one consensus," a hallmark of the Pacific regional practice.

Article 4 outlines the procedures governing the work of the SPREP Meeting. It establishes a system of rotating chairmanship, the adoption of the Meeting's own Rules of Procedure, and the resolution of issues by consensus — first among all members, and then separately among the parties to the Agreement. The article also provides for the participation of observers, designates the Director as the convening authority, and specifies English and French as the working languages. This article institutionalizes the Pacific tradition of "consensual regionalism" and ensures inclusivity, even for territories lacking full international legal personality.

Article 5 addresses SPREP's budgetary matters. The Director is responsible for preparing budget estimates, but the approval of the budget and all related decisions must be made by a unanimous agreement. The financial regulations may allow the acceptance of contributions from both public and private sources, thereby opening the door to donor funding for SPREP projects. This article ensures strict member control over financial decisions while maintaining flexibility in resource mobilization.

According to Art. 6, the Director heads the Secretariat, recruits staff in accordance with the rules established by the SPREP Meeting, and reports annually to the South Pacific Conference and the Pacific

Islands Forum. The Director is responsible for the management and implementation of programmes, serving as the key link between political decisions and their practical execution.

The functions of the Secretariat are defined in Art. 7. The Secretariat implements the Action Plan through annual work programmes by coordinating projects, conducting research, providing technical assistance to member states, collecting and disseminating information, organizing training activities, and securing funding. In addition, it administers the 1976 Apia Convention, the 1986 Noumea Convention, and other regional environmental agreements, thereby establishing SPREP as the central hub of environmental governance in Oceania.

Article 8 defines the legal status, privileges, and immunities of SPREP. The organization possesses international legal personality, enabling it to enter into agreements, own property, and initiate or respond to legal proceedings. SPREP, along with its officials and representatives, is granted privileges and immunities as agreed upon with the host State (Samoa) and, where necessary, with other parties. These provisions ensure the organization's functional independence and the protection of its personnel.

Article 9 explicitly states that the Agreement does not affect the sovereignty of the parties over their territory, territorial seas, exclusive economic zones, or continental shelves. This provision serves to prevent potential conflicts between environmental cooperation and sovereign rights over natural resources.

Article 10 outlines the procedures for signature, ratification, accession, and entry into force. The Agreement was open for signature from 16 June 1993 to 16 June 1994 by the 18 listed States and territories. It enters into force 30 days after the deposit of the tenth instrument of ratification. Thereafter, other States may accede to the Agreement, provided no objections are raised by the existing parties within six months. The Government of Samoa is designated as the Depositary. This article establishes a flexible yet controlled mechanism for the expansion of membership.

Article 10 of the Agreement lists 18 members (Australia, the Cook Islands, the Federated States of Micronesia, the Republic of Fiji, the French Republic, the Republic of Kiribati, the Republic of the Marshall

Islands, the Republic of Nauru, New Zealand, Niue, Papua New Guinea, the Solomon Islands, the Kingdom of Tonga, Tuvalu, the United Kingdom on behalf of the Pitcairn Islands, the United States of America, the Republic of Vanuatu, and Western Samoa.) (In 1994, Palau gained independence and subsequently became a member of both the United Nations and SPREP).

Amendments to the Agreement (Art. 11) may be proposed by any party and must be adopted by consensus of all parties at the SPREP Meeting. They enter into force once ratified by each party. Withdrawal from the Agreement is permitted through a written notification, which takes effect one year after the Depositary receives the notice. This provision ensures a balance between the stability of the Agreement and the sovereign right of States to withdraw.

Thus, the 1993 Agreement transformed SPREP into a full-fledged international organization with a clear mandate — to coordinate the efforts of Pacific States in the environmental protection and sustainable development. It combines a consensus-based decision-making model, traditional for the region, with the universal legal norms of international organizations, thereby establishing a solid international legal foundation for long-term environmental cooperation in Oceania.

Today, 19 States and territories are members of SPREP: Australia; the Cook Islands (in free association with New Zealand); the Federated States of Micronesia; Fiji; France (representing its three overseas territories: New Caledonia, Wallis and Futuna, and French Polynesia); Kiribati; the Marshall Islands; Nauru; New Zealand; Niue (in the free association with New Zealand); Palau (since 1994); Papua New Guinea; Samoa; the Solomon Islands; Tonga; Tuvalu; the United Kingdom (representing its overseas territory of Pitcairn); the United States (representing 12 territories: 2 unincorporated organized territories, 8 unincorporated unorganized territories, 1 incorporated unorganized territory, and the U.S. state of Hawaii); and Vanuatu. Out of these 19 SPREP members, 2 — the Cook Islands and Niue — are not members of the United Nations.

Over the past fifty years, the following international environmental agreements have been adopted under the framework of SPREP (Table 1):

— Convention on the Conservation of Nature in the South Pacific (Apia Convention), 1976;

— Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea Convention), 1986;

— Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention), 1995.

The SPREP Secretariat administers all three of the aforementioned conventions, acting as both their depositary and executive body. It should be specifically emphasized that several treaties of critical importance to the region have been adopted outside the SPREP framework. These include the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga), signed on 6 August 1985;[14] the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, adopted in 2009;[15] (Bekiashev and Bekiashev, 2016, p. 45) and the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, concluded in 2023 (commonly referred to as the "Agreement on Marine Biodiversity Beyond National Jurisdiction").[16]

Among the aforementioned treaties, it is the Apia Convention that served as the legal foundation upon which subsequent environmental initiatives in the region were built. The purpose of this article is to provide a comprehensive legal analysis of the Apia Convention. It examines the Convention's key provisions, institutional legacy, significance for

[14] South Pacific Nuclear Free Zone Treaty (with annexes). Concluded at Rarotonga on 6 August 1985. Available at: https://treaties.un.org/doc/publication/unts/volume%201445/volume-1445-i-24592-english.pdf [Accessed 10.07.2025].

[15] Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, 2009. Available at: https://www.sprfmo.int/assets/Basic-Documents/Convention-and-Final-Act/SPRFMO-Convention-2023-update-12 May2023.pdf [Accessed 03.07.2025].

[16] Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, 2023. Available at: https://treaties.un.org/doc/Treaties/2023/06/20230620%2004-28%20PM/Ch_XXI_10.pdf [Accessed 03.07.2025].

international environmental law, as well as current challenges and potential avenues for modernization. Given the rapidly evolving context of climate and biodiversity threats (Solntsev et al., 2024), particular attention is devoted to assessing the continued relevance of the Convention and exploring how its provisions can be adapted to the new realities of the 21st century. In this connection, the article also assesses the legal feasibility of establishing a regional compliance mechanism within the SPREP framework.

III. The 1976 Apia Convention: Content and Prospects for Modernization

III.1. The 1976 Apia Convention

The first codified attempt to develop a regional response to environmental challenges in Oceania was the Apia Convention on the Conservation of Nature in the South Pacific, signed in 1976 in Samoa. This document laid the legal foundation for a system of protected areas, a ban on the commercial exploitation of rare species, and a mechanism for regional monitoring. Its true innovation was in enabling small island States to act as a coordinated group rather than as isolated "voices in the General Assembly." For this reason, the Convention was soon recognized as a "cornerstone" of the Pacific environmental regionalism. In parallel with the adoption of the Apia Convention, the foundations of SPREP were also being established, as discussed earlier.

The treaty emerged in the context of a global surge in environmental diplomacy following the 1972 United Nations Conference on the Human Environment in Stockholm (which is referenced in the preamble to the Convention). It became the first instrument to grant the island States of the region a distinct legal voice in the emerging field of international environmental law. Over the decades, the Convention has influenced numerous national laws across the region, helped to establish the institutional foundations for cooperation, and set the course for subsequent regional agreements, including the 1986 Noumea Convention and the 1995 Waigani Convention.

Historically, the States of the South Pacific entered the era of self-determination and international cooperation at a time when the envi-

ronmental protection became inseparable from discussions about sovereignty. Prior to the establishment of the United Nations, there were no independent States in the region. It was at the Fourth South Pacific Forum in 1973[17] that the intention to negotiate a regional conservation agreement was formally expressed for the first time. By the mid-1970s, a range of environmental issues had sharply escalated: soil erosion on small volcanic islands, coastal pollution from oil spills, the lingering effects of nuclear testing, the introduction of invasive species, and — most critically — the irreversible decline of marine life within the waters of newly independent States. In this context, the Apia Convention emerged as a response not only to global trends but also to an urgent regional need for the collective protection of environmental interests.

The treaty was signed by five countries: Australia, France, Fiji, Samoa, and the Cook Islands. However, the Convention did not enter into force until 26 June 1990 — fourteen years later — after the required number of ratifications had been obtained.[18] Despite its formal entry into force, the parties later agreed to suspend the Convention's operation (this will be discussed in more detail below), in part due to its obsolescence and the fact that many of its provisions were incorporated into more modern agreements, such as the 1992 Convention on Biological Diversity,[19] among others. As a result, only 5 out of the 19 SPREP members have acceded to the Apia Convention. By contrast, the Noumea Convention (1986)[20] and the Waigani Convention (1995)[21]

[17] South Pacific Forum, Apia, Western Samoa, 17–18 April 1973. Available at: https://forumsec.org/publications/south-pacific-forum-apia-western-samoa-17-18-april-1973 [Accessed 03.07.2025].

[18] Convention on the Conservation of Nature in the South Pacific (Apia Convention). Available at: https://www.sprep.org/convention-secretariat/apia-convention [Accessed 03.07.2025].

[19] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992. Available at: https://www.cbd.int/doc/legal/cbd-en.pdf [Accessed 03.07.2025].

[20] Convention for the Protection of Natural Resources and Environment of the South Pacific Region (Noumea Convention), 24 November 1986. Available at: https://www.sprep.org/convention-secretariat/noumea-convention [Accessed 07.07.2025].

[21] Waigani Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region, 16 September 1995. Available at: https://www.sprep.org/convention-secretariat/waigani-convention [Accessed 07.07.2025].

have each been ratified by 12 parties. The Waigani Convention has not been ratified by France, the Marshall Islands, the United Kingdom, the United States, and Vanuatu. In addition, two countries — Palau and Nauru — signed the Convention, but have not completed the ratification process. The Noumea Convention has not been ratified by the following States and territories: Kiribati, Niue, Palau, Tonga, Tuvalu, the United Kingdom, and Vanuatu. Thus, the United Kingdom and Vanuatu are the only two States that have ratified neither of the two conventions.

The scope of the Apia Convention covers the protection of both marine and terrestrial ecosystems. It consists of 16 articles. From the outset, the preamble emphasizes the particular vulnerability of island States that rely on a limited natural resource base, and affirms the goal of preserving natural heritage for the well-being of present and future generations. The Convention sets out specific obligations, including the establishment of national reserves and protected areas, the protection of endemic and migratory species, control over the introduction of alien organisms, and the promotion of scientific research and information exchange (Dahl, 2017).

Article 1 of the Convention defines the key terms and areas of protection. The Convention introduces a clear categorization: a "protected area" is divided into two types — a "national park" and a "national reserve." A national park is intended for public access and the conservation of entire ecosystems, while a national reserve allows for varying degrees of protection. This classification of protected areas establishes a balance between strict conservation and regulated access, setting a precedent that would later be adopted in other Pacific legal instruments.

Under Art. 2 of the Convention, the obligation to establish protected areas is clearly articulated. The contracting parties commit to creating a representative network of protected areas, with a particular focus on endangered species and outstanding landscapes.

The provision requiring parties to notify the "bureau authority" (later assumed by SPREP) institutionalizes a vertical system of registration and monitoring, anticipating modern standards of reporting and oversight found in contemporary international environmental law (Otrashevskaia et al., 2023, p. 47).

A special regime for national parks is established in Art. 3. Any reduction in the area, commercial exploitation of resources, or removal of plant or animal specimens is permitted only after "the most careful scrutiny." This phrasing effectively introduces a presumption of prohibition, shifting the burden of proof onto the party proposing the change — making it a powerful preventive legal mechanism. The provision on the visitor access highlights the educational, cultural, and recreational functions of national parks, reinforcing their role not only in conservation, but also in public awareness and community engagement.

Article 4 regulates national reserves. Reserves are to be kept "as undisturbed as possible," though scientific research and other uses compatible with the purposes of their establishment are permitted. The phrase "as undisturbed as possible" provides necessary flexibility, allowing for the consideration of the socio-economic realities of small island States, without undermining the protective intent of the reserve designation.

Article 5 extends protection beyond designated protected areas. The Convention moves beyond a strictly territorial approach by obligating States to safeguard all native biota, with a particular emphasis on migratory species. Each party is required to compile a national "red list" and enforce a strict prohibition on the removal of listed species, except for scientific or ecologically justified purposes. The provision calling for the "careful consideration" of the introduction of non-native species reflects an early recognition of the risks posed by biological invasions.

Traditional use is addressed in Art. 6. It includes a clause on the "customary use," allowing indigenous communities to maintain their cultural practices. This provision represents an early legal bridge between the environmental protection and the rights of indigenous peoples — an approach that would later be reinforced in instruments such as the 1992 Convention on Biological Diversity, the 2007 United Nations Declaration on the Rights of Indigenous Peoples, and similar frameworks.

Article 7 outlines the framework for regional cooperation. Its five paragraphs define a full cycle of collaborative action among Pacific States: conducting research, sharing data, building human capacity, harmonizing conservation objectives, and promoting public education.

These mechanisms were later incorporated into the structure of SPREP, which — 17 years after the Convention's signing — was transformed into an intergovernmental organization. In this way, SPREP became the direct administrative pillar supporting the implementation of the Convention.

Article 8 describes the procedures for ongoing consultations and the role of the bureau. SPREP is designated as the administrative bureau of the Convention, responsible for circulating reports and convening meetings, thereby ensuring the institutional "memory" and continuity of action. This provision formally integrates the Convention into the broader regional organizational framework.

Article 9 allows for the making of reservations, provided they are consistent with the objectives of the Convention and with international law. This provision eases potential tensions between the universality of the Convention's norms and the sovereign specificities of individual States, without opening the door to undermining the core obligations established by the Agreement.

Article 10 governs the procedure for amending the Convention. The process is strict yet workable: a proposed amendment must be submitted at least 90 days in advance, adopted by a qualified majority of three-fourths of the parties present, and enters into force once ratified by the same three-fourths. This framework ensures a balance between the stability of legal norms and the capacity for evolution in response to advancing scientific knowledge and shifting political realities.

Articles 11 to 13 set out the procedures for signature, ratification, and accession. The Convention was open for signature until 31 December 1977, while ratification and accession remain open without time limits. The Government of Samoa serves as the Depositary. The universal nature of potential membership underscores the inclusive character of Pacific regional environmental diplomacy.

Entry into force is established in Art. 14. The threshold for activation is four ratifications, after which the Convention enters into force for each new party 90 days following the deposit of its instrument of ratification. This low threshold was intended to expedite the Convention's entry into force — though in practice, it took 14 years for the Convention to become operative, finally entering into force in 1990.

Denunciation of the Convention is addressed in Art. 15. A party may withdraw five years after the Convention enters into force for it, with a 12-month advance written notice. This standard clause minimizes political risks by providing legal clarity and predictability, which is essential for fostering long-term environmental commitments and investments.

Authenticity of the texts and the UN registration are established in Art. 16. The article affirms the equal legal validity of the English and French versions of the Convention, outlines the duties of the Depositary, and provides for registration in accordance with Art. 102 of the United Nations Charter — a necessary requirement under international law.

Thus, the Apia Convention anticipated many key elements of the emerging global biodiversity conservation framework: territorial networks of protected areas, national red lists, control over species introductions, an amendment mechanism, and the integration of Indigenous practices. Building on the principles of the 1972 Stockholm Declaration on the Human Environment, the Convention translated those broad aspirations into binding legal norms. With the subsequent establishment of SPREP, it gained a durable institutional foundation, positioning Oceania as one of the global pioneers in the regional environmental integration. At the time, only one other region — Africa — had adopted a comparable regional instrument: the African Convention on the Conservation of Nature and Natural Resources (Algiers, 1968).[22] As a part of the broader discussion, it is worth noting that the 1968 African Convention on the Conservation of Nature and Natural Resources was replaced by a revised version adopted in Maputo, Mozambique, on 11 July 2003.[23] This updated treaty — known as the Maputo Convention — introduced modernized principles of sustainable development, environmental governance, and integration with international environmental law. However, the Maputo Convention only entered into force in 2016, highlighting the often lengthy process of ratification and implementation of regional environmental agreements.

[22] Available at: https://au.int/sites/default/files/treaties/41550-treaty-Charter_ConservationNature_NaturalResources.pdf [Accessed 07.07.2025].

[23] Available at: https://au.int/sites/default/files/treaties/41550-treaty-Charter_ConservationNature_NaturalResources.pdf [Accessed 07.07.2025].

Nevertheless, the legal analysis reveals that the absence of an enforcement mechanism from the outset imposed inherent limitations on the Convention. The wording — "to make every effort to protect such fauna and flora (with special attention to migratory species) so as to safeguard them from unreasonable exploitation and other threats which might lead to their extinction" — granted States broad discretion in translating international obligations into domestic law. This flexibility, while accommodating national contexts, ultimately weakened the Convention's capacity to ensure uniform and binding implementation across the region (Lawrence, 1994, p. 203). The absence of a dedicated compliance committee, mandatory reporting obligations, and enforcement measures effectively placed the burden of implementation on national governments, many of which were still in the process of building administrative institutions in the wake of decolonization. According to SPREP, which was originally established to support the implementation of the Apia Convention, by the mid-1990s only half of the Convention's signatories had developed and submitted national park development plans for approval (Herr, 2013, p. 42).

The institutional legacy of the Apia Convention is most clearly reflected in the establishment and evolution of SPREP that gradually developed into an independent intergovernmental organization. Since 1986, SPREP has served as the managing body for the Noumea Convention on the Protection of the Marine Environment of the South Pacific Region, and since 1995, for the Waigani Convention on the Transboundary Movement of Hazardous Wastes. Thus, the "treaty plus secretariat" model first implemented under the Apia Convention became a template for regional marine agreements within the framework of the UNEP Regional Seas Programme. This same institutional structure was later replicated in other regions, including the Caribbean, East Africa, and the Mediterranean (see Table 1 below for details).

Importantly, the Convention also had a political impact by strengthening the collective diplomatic weight of small island States. Certain provisions — particularly Art. 4 and 5 — call for the joint development of scientific justifications for protected areas. This enables countries such as Niue and Tuvalu, which have limited human and technical capacity to conduct comprehensive cadastral or ecological surveys, to rely on

regional expertise and cooperation (Tagelagi, 1997, p. 183). The shared stance of the "Apia group" has also been invoked beyond the Convention's immediate jurisdiction — for example, during voting at the 2023 conference on the adoption of the Agreement on Marine Biodiversity Beyond National Jurisdiction (BBNJ). There, Pacific island States referenced their prior experience with harmonizing zonal approaches, as codified in the 1976 Convention, to support their positions.

Over time, however, the Convention began to fall behind the increasingly complex environmental agenda. The Noumea Convention that entered into force in 1990 addressed marine pollution and partially overlapped with the provisions of the 1976 Convention, yet it failed to resolve the core issue of weak state accountability in fulfilling the obligations. The Waigani Convention expanded the scope of regulation to the transboundary movement of hazardous waste, while the 1992 Convention on Biological Diversity introduced global standards for access to genetic resources and benefit-sharing (Inshakova et al., 2023, p. 145) — elements entirely absent from the 1976 text. In recent years, new challenges such as plastic waste, microplastics (Solntsev, 2023), the prospect of the deep-sea mineral extraction, climate threats and sea-level rise, as well as ocean acidification, have raised issues that the half-century-old Convention simply could not have anticipated. At the same time, the number of the SPREP members that have ratified the Apia Convention remains low, which diminishes its legitimacy as a comprehensive normative framework for the region.

Table 1. Contribution of the Apia Convention to Institutional Development

Element	To what do we owe the Apia Convention	Further Development
SPREP (Secretariat)	Initially administered only the Apia Convention	Since 1995 — an independent intergovernmental organization serving as the secretariat for the Noumea and Waigani Conventions

Element	To what do we owe the Apia Convention	Further Development
Regional network of protected natural areas	First to establish the obligation to create marine and terrestrial reserves (Arts. 5, 8)	Duplicated by the Noumea Convention (Arts. 7–10) and further developed under the 1992 Convention on Biological Diversity
Coordination with the UNEP Regional Seas Programme	Introduced the "treaty + action plan" model	The 1986 Noumea Convention became an official component of the UNEP Regional Seas Programme
Political subjectivity of small island States	Gave microstates a platform for coordinated regional negotiations	Used in advancing the 2023 Agreement on Marine Biodiversity Beyond National Jurisdiction

In this context, the legal analysis suggests that the Convention functions more as a "normative core" than as a fully effective regulatory instrument for the 21st century. The principles of ecosystem conservation and collective responsibility for the region's natural heritage continue to serve as important reference points for environmental legislation in Oceania. However, the actual challenges of the 21st century demand more flexible and robust international legal mechanisms (Dahl, 2017).

III.2. Prospects for Amending the 1976 Apia Convention

The following three directions for modernizing the Convention are fundamental. First, it is necessary to develop optional protocols, similar to the mechanism applied in the Noumea Convention regarding discharges and emergency pollution. A protocol on combating plastic pollution could eliminate the gap in the regulation of solid household waste, while a protocol on deep-sea mining could introduce mandatory strategic environmental assessments and precautionary standards prior to the issuance of licenses. Second, it would be appropriate to integrate the provisions of the Paris Agreement and the 2023 Agreement on Marine Biodiversity Beyond National Jurisdiction, clarifying the interaction between zonal and transzonal protection regimes. The

inclusion of a *mutatis mutandis* clause in a separate article would allow for the flexible application of new global standards without a complete revision of the Apia Convention text. Third, the procedure for amendments and monitoring should be reformed, shifting from consensus to a three-fourths majority vote, introducing mandatory national reports every four years, and granting the Secretariat the authority to issue recommendations for addressing identified violations.

The provisions of the 1976 Convention are already being used in legal argumentation. For example, in 2019, the High Court of Kiribati referred to Art. 5 of the 1976 Convention in an advisory opinion on the legality of expanding the Phoenix Islands marine reserve (Herr, 2021). The analysis shows that even in the absence of a strict enforcement mechanism, the treaty continues to serve as a normative reference point, reinforcing the obligations of regional States to exercise due diligence. At the same time, it is precisely the weakness of the accountability system that explains why many of the Convention's provisions have, over the years, failed to develop "teeth." This justifies characterizing compliance as its "Achilles' heel" (Lawrence, 1994, p. 203) and highlights that strengthening enforcement procedures would be the most pragmatic step in any reform effort.

Despite the formal status of the 1976 Convention as "in force" (as indicated in the Australian treaty database),[24] its effectiveness has remained low. No additional rounds of accession by new State parties have taken place; the Convention obligations have been largely duplicated by more recent global treaties, most notably the 1992 Convention on Biological Diversity; and since the early 2000s, financing and reporting have been carried out primarily through the SPREP programmes rather than through the own mechanisms of the Convention.

In an attempt to revive the document, a package of amendments was agreed upon at the meeting of the parties in Guam on 10 September 2000. These included the introduction of a formal procedure for amending the text, clarifications regarding denunciation procedures, and other updates. However, the amendments have not entered into

[24] Convention on the Conservation of Nature in the South Pacific (Apia Convention).

force, as they have yet to receive the required two-thirds of ratifications.[25]

The decisive turning point came on 13 September 2006 in Noumea, when the joint 8th Conference of the Parties to the Apia and Noumea Conventions adopted a decision to "suspend the operation of the Apia Convention until further notice." This effectively left the treaty in force *de jure*, while discontinuing its practical application *de facto*.[26]

From that point onward: regular meetings of the parties ceased; no further reporting or budgeting has taken place; and environmental issues in the region have since been addressed primarily through the Noumea Convention and the implementation of national obligations under the Convention on Biological Diversity.

Thus, the current status of the Apia Convention can be described as formally in force but functionally "dormant": the treaty remains legally valid, yet its institutional activity is suspended, and the conservation mechanisms it envisaged have been absorbed into other international instruments.

Given the above, a realistic pathway to strengthen the enforcement of the Apia Convention in Oceania is the incremental creation of a regional jurisdictional mechanism under the SPREP architecture. Legally, the SPREP Meeting is empowered to establish subsidiary bodies, while the Conferences of the Parties to the Noumea and Waigani Conventions can adopt procedures to promote implementation; this makes a two-step model feasible: first, the establishment of a standing, expert-based Compliance and Implementation Committee with quasi-judicial functions (receiving Party submissions, issuing findings and recommendations, and triggering facilitative measures), modelled on the Mediterranean (Barcelona) system;[27] second, incorporation of a consent-based

[25] Amendments to the Convention on Conservation of Nature in the South Pacific (Apia Convention), Guam, 10 September 2000. Available at: https://www.info.dfat.gov.au/info/Treaties/Treaties.nsf/AllDocIDs/e6eca589122fb7cbca256b1a0080aa23?OpenDocument&Click= [Accessed 03.07.2025].

[26] Convention on the Conservation of Nature in the South Pacific (Apia Convention).

[27] UNEP/MAP (Mediterranean Action Plan). Decision IG.17/2 "Procedures and mechanisms on compliance under the Barcelona Convention and its Protocols." In: 15th Meeting of the Contracting Parties to the Barcelona Convention and its Proto-

clause for binding dispute settlement by arbitration using the Permanent Court of Arbitration Optional Rules for Environmental and Natural Resources Disputes,[28] inserted via a protocol or a COP decision. Regionally, the momentum already exists: Parties to the Waigani Convention have tabled the creation of a Compliance Committee,[29] indicating political receptivity to a formal compliance organ. While a full-fledged "Pacific Environmental Court" would require a new constitutive treaty and therefore heavier diplomacy, the compliance-committee-plus-arbitration track can be operationalized within the existing instruments and would align Oceania with best practice across multilateral environmental agreements.

The International Court of Justice Advisory Opinion of 23 July 2025[30] on the Obligations of States in respect of Climate Change materially strengthens the normative baseline for the Pacific regionalism. The Court clarified that States owe binding obligations under treaty and customary international law to protect the climate system, must exercise a stringent standard of due diligence to prevent significant harm, and have duties to cooperate and to align measures with the best available science; it also tied the climate protection to the human right to a clean, healthy and sustainable environment. Although advisory in nature, the Opinion is authoritative and can be operationalised regionally in two ways: first, by mandating the proposed Compliance and Im-

cols (Almería, Spain, 15–18.01.2008), UNEP(DEPI)/MED IG.17/10, Annex V. Nairobi: UNEP, 2008. Available at: https://resolutions.unep.org/uploads/2008-contracting_parties_to_barcelona_convention.pdf [Accessed 16.08.2025].

[28] Permanent Court of Arbitration. Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment (adopted 19.06.2001). The Hague: PCA, 2001. Available at: https://docs.pca-cpa.org/2016/01/Optional-Rules-for-Arbitration-of-Disputes-Relating-to-the-Environment-and_or-Natural-Resources.pdf [Accessed 16.08.2025].

[29] SPREP; Waigani Convention Secretariat. Report of the Tenth Meeting of the Conference of the Parties to the Waigani Convention (Apia, Samoa, 30.08.2019), esp. Para. 39–40 (agenda item 7.3 "Proposal for a mechanism to promote compliance"). Apia: SPREP, 2019. Available at: https://www.sprep.org/sites/default/files/documents/circulars/Cir19-70_Report_Tenth_Mtg_Waigani_Convention_0.pdf.

[30] International Court of Justice. Obligations of States in respect of Climate Change: Advisory Opinion of 23 July 2025 (Case No. 187). The Hague: ICJ, 2025. Available at: https://www.icj-cij.org/case/187 [Accessed 16.08.2025].

plementation Committee to take the Opinion due-diligence standard and cooperation duties as interpretive guidance when reviewing Party reports; second, by embedding an obligation to consider principles articulated by the ICJ when adopting the SPREP work programmes and Noumea/Waigani decisions. For small island developing States, this elevates arguments for enhanced mitigation support, adaptation finance and loss-and-damage responses within Oceania's legal order and in relations with major emitters beyond the region.

Accordingly, the creation of regional jurisdictional bodies for international environmental law in Oceania is not only legally possible within existing treaty frameworks; it is practically advisable, beginning with a SPREP-anchored compliance committee and an opt-in arbitral track.[31]

The political groundwork for updating the text of the Apia Convention is already taking shape. In 2024, the region's countries adopted the Apia Ocean Declaration,[32] which calls for the modernization of regional agreements to address plastic pollution and unsustainable extractive industries. The ratification of the 2023 Agreement on Marine Biodiversity Beyond National Jurisdiction is also drawing attention to the complementarity between regional and global mechanisms. The 2023 Agreement has been signed but not yet ratified by the following Oceania States and territories: Australia, the Cook Islands, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Tonga, the United Kingdom, and the United States. At the same time, the Agreement has already been ratified by the Federated States of Micronesia, Fiji, France, the Marshall Islands, Palau, the Solomon Islands, Tuvalu, and Vanuatu. Meanwhile, the leadership of Samoa, Fiji, and Vanuatu in advancing the Blue Pacific concept is reinforcing the political will to renew and strengthen the regional environmental legal framework.

[31] Permanent Court of Arbitration. Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment (adopted 19.06.2001). The Hague: PCA, 2001.

[32] Apia Commonwealth Ocean Declaration "One Resilient Common Future," 2024. Available at: https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/s3fs-public/2024-11/apia-commonwealth-ocean-declaration.pdf?VersionId=lLG2G1O4G7Nwp28YME7kl80jjWBwmHCN [Accessed 03.07.2025].

IV. Conclusion

Prior to the establishment of the United Nations, there were no independent States in Oceania. Historically, the States of the South Pacific entered the era of self-determination and international cooperation at a time when environmental protection became inseparable from broader discussions on sovereignty.

The 1976 Apia Convention on the Conservation of Nature in the South Pacific was the first treaty to give legal form to the long-standing sense of shared ecological destiny among the island States of Oceania, transforming their individual voices into a collective, legally articulated position. Signed in the capital of Samoa, the Convention introduced a long-missing "language" of regional environmental governance by formulating binding obligations to preserve terrestrial and marine ecosystems, ban the commercial exploitation of rare species, and establish a network of protected areas. It was within the framework of this Convention that the principles of collective environmental responsibility, the inclusion of coastal-marine zones, and institutional monitoring were first codified — principles that would later become the foundation of the entire Pacific environmental architecture. Ultimately, the 1976 text was not only a response to the 1972 Stockholm Conference on the Human Environment, but also an early effort by small island States to position themselves as equal participants — alongside former colonial powers — in the emerging global agenda for biodiversity conservation.

By the time the Agreement entered into force in 1990 — following the minimum threshold of four ratifications — three interrelated layers of a future regional order had already begun to crystallize around it: normative, represented by the Apia Convention itself and the treaties that followed; institutional, embodied in SPREP, which became the Convention's secretariat and institutional "memory"; and socio-humanitarian, encompassing the broader issues of climate, economic development, and the postcolonial identity of the Pacific Islands Forum States. This triadic foundation allowed the Convention to function as the "core" around which later legal instruments were built — most notably, the 1986 Noumea Convention on the protection of the South Pacific marine environment and the 1995 Waigani Convention banning the trans-

boundary import of hazardous wastes. The SPREP Secretariat, initially established to serve only the Apia Convention, evolved into an independent intergovernmental organization, now acting as depositary and executive body for all three treaties: the Apia, Noumea, and Waigani Conventions.

Through the lens of the evolution of international environmental law, it is evident that the Apia Convention anticipated many elements that are now widely accepted as a part of the global legal architecture: territorial networks of protected areas, the recognition of traditional knowledge of indigenous peoples, a mandatory amendment mechanism, and even the "treaty + action plan" model later implemented in the UNEP Regional Seas Programme.

At the same time, the text of the 1976 Agreement contained inherent limitations that became sources of future challenges. First, not all countries in the region ratified the treaty: to date, only 5 out of the 19 SPREP members are full parties — less than a quarter. This low ratification rate weakened the representativeness of the Convention and opened the door for competing legal frameworks. Second, the treaty drafters deliberately opted against establishing a binding supranational enforcement mechanism, favoring instead voluntary national measures and periodic reviews. Third, although the Convention includes a detailed amendment procedure — requiring proposals 90 days in advance, adoption by a qualified majority of three-fourths of the parties present, and entry into force upon ratification by the same majority — this mechanism, unfortunately, has never been activated.

As a result, the text of the 1976 Agreement — drafted in an era when the primary concerns centered around the disappearance of rare birds and the introduction of exotic plant species — proved unprepared for the challenges of plastic pollution, sea-level rise, and the emerging prospect of large-scale deep-sea mineral extraction.

The logical outcome was the gradual "reassignment" of the regional environmental agenda to more modern international agreements. The Noumea Convention that entered into force in the same year — 1990 — focused on the marine pollution and effectively duplicated the territorial scope of the Apia Convention, while failing to resolve the problem of weak accountability. The Waigani Convention addressed the trans-

boundary movement of hazardous waste. The global Convention on Biological Diversity (1992) introduced rules on access to genetic resources and benefit-sharing — entirely absent from the 1976 text. And the 2023 Agreement on Marine Biodiversity Beyond National Jurisdiction outlined the framework for future regulation of areas beyond national jurisdiction. Against this backdrop, the Apia Convention remains formally in force, but functionally dormant: regular meetings of the parties have ceased, no reporting or budget processes are active, and most of its original mechanisms have been absorbed into other regional framework instruments.

The upcoming fiftieth anniversary of the Convention in 2026 presents a unique window of opportunity for its "second life." The key question, however, is not whether the Convention can be revived, but whether the States of the region are willing to use its accumulated normative and institutional capital as a springboard for addressing the challenges of the 21st century. If by 2027 even a single legally binding protocol is adopted — for example, one targeting a 40 % reduction in plastic leakage by 2035 and imposing a moratorium on the industrial extraction of manganese nodules pending a comprehensive environmental impact assessment — and if a national reporting mechanism begins operating in a pilot phase, the Apia Convention could once again become a relevant regulatory instrument rather than a merely historical symbol. But if the reform efforts stall in consultative committees, the treaty risks being remembered primarily as a case of the unfulfilled ambition — supplanted by newer, but often less legitimate, initiatives.

Thus, the fate of the spirit of Apia is no longer defined by the 1976 text — nor even by the 2006 decision to suspend its operation, — but by the political will of today's Pacific leaders to transform a half-century-old legal artifact into a living instrument for managing growing risks: from microplastics and ocean acidification to the climate-induced migration. The ICJ Advisory Opinion on climate change rendered in 2025 provides the doctrinal anchor for this turn: it converts previously contested climate due diligence expectations into an authoritative benchmark that Oceania's institutions can reference in compliance review and, where consented, in arbitration.

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Received 04.08.2025
Revised 08.09.2025
Accepted 17.09.2025

Article

DOI: 10.17803/2713-0533.2026.1.35.166-186

Challenges for the International Community in Implementing The 1982 United Nations Convention on the Law of the Sea

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Abstract: The 1982 United Nations Convention on the Law of the Sea (UNCLOS) was adopted on 30 April 1982 and opened for signature on 10 December 1982. UNCLOS entered into force on 16 November 1994. In terms of content, UNCLOS 1982 comprehensively regulates international legal issues on seas and oceans, and is the most important international legal basis for countries to establish and exercise sovereignty, sovereign rights, jurisdiction; rights, obligations and other freedoms in the process of exploiting, managing and using seas and oceans for peaceful purposes. Therefore, UNCLOS is considered the "Constitution of the Seas and Oceans" of the international community, the second most important global international treaty after the United Nations Charter, UNCLOS is the legal basis for all actions and cooperation at the national, regional and global levels to "resolve all issues related to the law of the sea" and "establish a legal order at sea." However, in the face of the constant changes in science and technology, the need to exploit and use marine resources, climate change, international geopolitics, etc., UNCLOS also needs to change to continue to improve and promote its universal international legal value in the present and the future. Based on the above practice, this article will study and clarify three challenges to improve UNCLOS 1982.

Keywords: UNCLOS 1982; Constitution of the Seas and Oceans; Challenges to complete UNCLOS 1982; Vietnam

Acknowledgment: This research is funded by University of Economics and Law, Vietnam National University Ho Chi Minh City, Vietnam.

Cite as: Ngo Huu Phuoc and Vu Kim Hanh Dung, (2026). Challenges for the International Community in Implementing The 1982 United Nations Convention on the Law of the Sea. *Kutafin Law Review*, 13(1), pp. 166–186, doi: 10.17803/2713-0533.2026.1.35.166-186

Contents

I. Introduction 167
II. Three Key Challenges Facing UNCLOS in the Current International Context .. 170
II.1. The Challenge of Climate Change 170
II.2. Challenges in Maritime Security 176
II.3. Challenges in Protecting Human Rights at Sea 179
III. Conclusion 185
References 185

1. Introduction

The management, exploitation, and utilization of the seas and oceans have been practiced by nations since the era of slavery.[1] However, it was not until 1930 that the first International Conference on the Sea was convened by the League of Nations[2] in The Hague, Netherlands, from 13 March 1930 to 12 April 1930 with the participation of 47 States. The aim of this Conference was to establish a "Law of the Sea Code" for the international community. However, due to disagreements among nations regarding the determination of the breadth and legal regime of the territorial sea, the establishment of baselines, the

[1] According to historical records, as early as 406 BCE, Rome and Carthage (Tunisia) concluded an international treaty concerning the sea. Roman vessels were prohibited from navigating beyond the northern promontory of the Gulf of Carthage, except in cases of accident or pursuit by enemies, but were not permitted to engage in trade, with the exception of items necessary for ship repairs, and were not allowed to remain for more than five days. *See:* Maritime Safety Department (1982). Some Issues on the Law of the Sea, Navy Command, p. 11.

[2] The League of Nations is an intergovernmental organization, the precursor to the United Nations, established on 10 January 1920.

principle of freedom of navigation, the right of innocent passage, and the legal regime of the contiguous zone, the Conference failed to adopt any international treaty.

Following the Second World War, under the auspices of the United Nations, the International Conference on the Law of the Sea was held in Geneva, Switzerland, from 24 February 1958 to 29 April 1958. This Conference adopted the Convention on the Territorial Sea and the Contiguous Zone, the Convention on the High Seas, the Convention on Fishing and Conservation of the Living Resources of the High Seas, the Convention on the Continental Shelf, and the Optional Protocol of Signature concerning the Compulsory Settlement of Disputes. Nevertheless, owing to their dispersion across four separate conventions and the limited participation of States worldwide, the legal effectiveness and regulatory impact of these four conventions did not meet the expectations of the international community. Consequently, continued cooperation to develop a "Constitution for the Seas and Oceans of the International Community" remained the aspiration of humankind. After five years of preparatory work (1968–1973) and nine years of formal negotiations (1973–1982) spanning eleven sessions, the United Nations Convention on the Law of the Sea (UNCLOS) was adopted on 30 April 1982 in New York and opened for signature by States in Montego Bay, Jamaica, on 10 December 1982. Comprising 17 Parts, 320 Articles, 9 Annexes, 4 Resolutions, and over 1,000 provisions, UNCLOS stands as the most comprehensive and extensive international legal instrument governing the seas and oceans. UNCLOS entered into force on 16 November 1994.[3]

With the advent of UNCLOS 1982, for the first time in history, the seas and oceans were delimited into three zones with distinct legal regimes: (i) marine spaces under national sovereignty (internal waters,

[3] According to Art. 308 of UNCLOS, the Convention would enter into force 12 months after the date of the sixtieth ratification. As of May 2025, UNCLOS has 168 member states, including 164 member states of the United Nations. Fourteen UN member states have signed but not yet ratified the Convention: Afghanistan, Bhutan, Burundi, Cambodia, Central African Republic, Colombia, El Salvador, Ethiopia, Iran, Democratic People's Republic of Korea, Libya, Liechtenstein, Rwanda, and the United Arab Emirates. Fifteen states have not signed UNCLOS: Andorra, Eritrea, United States, Israel, Kazakhstan, Kyrgyzstan, South Sudan, Peru, San Marino, Syria, Tajikistan, Turkey, Turkmenistan, Uzbekistan, and Venezuela.

archipelagic waters, and the territorial sea); (ii) marine spaces under national sovereign rights and jurisdiction (the contiguous zone, the exclusive economic zone, and the continental shelf); and (iii) marine spaces considered the common heritage of mankind (the high seas) and the deep seabed (the Area). Simultaneously, UNCLOS 1982 comprehensively and extensively regulated legal issues pertaining to straits used for international navigation; islands and archipelagic States, geographical features at sea, maritime and air navigation, the exploitation, utilization, management, and conservation of marine resources, the protection and preservation of the marine environment, the suppression of piracy and maritime security, international cooperation on marine affairs, maritime delimitation, and dispute settlement.

Furthermore, UNCLOS established institutions to ensure the most effective implementation and international cooperation on marine issues, including: the International Seabed Authority,[4] the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, the Commission on the Limits of the Continental Shelf, the International Tribunal for the Law of the Sea established under Annex VI, arbitration constituted under Annex VII, and special arbitration constituted under Annex VIII. Consequently, it can be affirmed that UNCLOS serves as the most significant international legal basis for States to establish and exercise their sovereignty, sovereign rights, jurisdiction, as well as other rights, obligations, and freedoms for the peaceful exploitation and utilization of the seas and oceans.

As the "Constitution for the Seas and Oceans" of the international community, UNCLOS is not an international treaty with perpetual and immutable legal value but is continuously updated, supplemented, and progressively improved. Specifically, after the entry into force of UNCLOS, the international community adopted the 1994 Agreement relating to the Implementation of Part XI (the Area) of UNCLOS; and the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. Notably, after 15 years of negotiations, on

[4] The International Seabed Authority, known in French as Autorité Internationale des Fonds marins, is abbreviated as ISA (English) and AIF (French).

19 June 2023, the United Nations General Assembly adopted the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (the High Seas Treaty). This Treaty holds particular significance in reinforcing the UNCLOS framework and ensuring sustainable development and prosperity for all nations.

Notwithstanding this, the rapid and continuous advancements in science and technology, the evolving needs for the management and exploitation of marine and ocean resources, geopolitics, and international relations necessitate that the international community continue to supplement, develop, and refine UNCLOS in the future.

II. Three Keys Challenges Facing UNCLOS in the Current International Context

II.1. The Challenge of Climate Change

Climate change has had, is having, and will have a significant impact on natural and human systems, exacerbating the challenges to the existence and development of nations, particularly island States, and to maritime security. Climate change and rising sea levels contribute to population displacement, changes in marine ecosystems, shifts and declines in fishery resources, and increasing poverty and social inequality. Moreover, climate change and sea level rise "undermine legitimate coastal livelihoods and may provide fertile ground for the growth of blue crimes."[5] The Arctic, in particular, is a region where climate change is expected to have significant implications for maritime security. Historically, the polar regions were considered safe, with little concern for maritime security. However, the melting of sea ice has led to increased vessel traffic and human activities in the Arctic, raising concerns over "illegal fishing, human security and safety, and marine pollution."[6] Furthermore, disputes and disagreements have already emerged over which States will have rights over areas of the Arctic Ocean that were

[5] Available at: https://committees.parliament.uk/writtenevidence/40818/html/ [Accessed 23.09.2024].

[6] Available at: https://committees.parliament.uk/oralevidence/2958/html/ [Accessed 23.09.2024].

previously covered by ice but are increasingly becoming open sea. This is attributable to the fact that during the negotiations of UNCLOS "the impacts of climate change were not envisaged."[7] This presents a series of challenges in the 21st century, as the impacts of climate change, including sea-level rise, have become a reality, while UNCLOS lacks a sufficient legal basis to adequately address these effects.

The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)[8] Stated that global mean sea level has risen faster since 1900 than in any preceding century in at least the last 3,000 years.[9] Under a medium greenhouse gas emissions scenario, global mean sea level is projected to rise between 0.44 and 0.76 meters by 2100, and could reach up to 1.01 meters under a very high emissions scenario.

The rise in sea levels poses a challenge to the regulations governing maritime rights as enshrined in UNCLOS. Currently, maritime zones are determined from baselines established using the "normal baseline" method, which relies on the low-water line along a State's coast. According to the traditional view, these baselines, defined by the low-water line along the coasts, islands, and archipelagos, are considered "mobile." Consequently, as sea levels rise, the low-water line along numerous coastlines will shift landward. This has particularly significant implications for coastal States, small island developing States, and nations with low-lying topography, such as the Netherlands, which will face an "existential threat" due to rising sea levels. If climate change and sea-level rise remain unmitigated, low-lying States and small island nations risk submersion, leading to the loss of their legal status under UNCLOS and the criteria established by the 1933 Montevideo Convention. Be-

[7] Available at: https://committees.parliament.uk/writtenevidence/40883/html/ [Accessed 23.09.2024].

[8] The Intergovernmental Panel on Climate Change (IPCC) is a scientific body responsible for assessing the risks of climate change caused by human activities. The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme.

[9] Intergovernmental Panel on Climate Change. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport.pdf [Accessed 23.09.2024].

cause according to Art. 1 of the 1933 Montevideo Convention, a State must possess four essential elements: a defined territory, a permanent population, a government, and the capacity to engage in relations with other States. Legally and theoretically, the loss of terrestrial territory could result in a State ceasing to exist as a subject of international law or could severely affect its maritime entitlements, as maritime rights are derived from land. Even if an island is not entirely submerged, a shrinking baseline could lead to reclassification of its territory, resulting in States losing maritime entitlements.

According to Art. 121 of UNCLOS, an island is defined as "a naturally formed area of land surrounded by water that is above water at high tide." Islands are entitled to maritime zones (territorial sea, contiguous zone, exclusive economic zone, and continental shelf) similar to land territory. However, if an island cannot sustain human habitation or economic life, it is classified as a "rock" and is not entitled to an exclusive economic zone or a continental shelf. Geographical features that are above water only at low tide are classified as low-tide elevations and do not generate maritime entitlements.[10]

To address this issue, in August 2021, the Pacific Islands Forum (PIF),[11] the group of nations most severely affected by rising sea, issued a declaration affirming their intention to maintain existing maritime boundaries and zones. The declaration noted that UNCLOS, "in the determination of maritime zones, coastlines and maritime features were generally considered to be stable." It is important to note that UNCLOS "imposes no obligation to keep baselines and outer limits of maritime zones under review nor to update charts or lists of geographical coordinates once deposited with the Secretary-General of the United Nations." As a result, the declaration asserts that "we intend to maintain these zones without reduction, notwithstanding climate change-related sea-level rise."[12]

[10] Art. 13 UNCLOS.

[11] The Pacific Islands Forum (PIF) is an intergovernmental organization aimed at enhancing cooperation among independent states in the Pacific region.

[12] Pacific Islands Forum, "Declaration on Preserving Maritime Zones in the Face of Climate Change-related Sea-Level Rise" (6 August 2021). Available at: https://forumsec.org/sites/default/files/2024-03/2021%20Declaration%20on%20Preserving%20Maritime%20Zones%20in%20the%20face%20of%20Climate%20Change-related%20Sea-level%20rise.pdf [Accessed 25.04.2024].

The PIF Declaration has clearly expressed the position of coastal States, not only the 17 nations that adopted it, as it "avoids the gradual diminution of the areas over which they currently exercise sovereignty and jurisdiction, while other States lose nothing by it."[13] In this regard, UNCLOS does not require States to update their maps, thereby allowing them to maintain the boundaries and maritime zones they have previously determine and formally deposited with the United Nations. According to Art. 62 of the 1969 Vienna Convention on the Law of Treaties, "a fundamental change of circumstances may not be invoked as a ground for terminating or withdrawing from a treaty." Therefore, the PIF Declaration is significant and will have a substantial impact in ensuring that the determining of maintaining fixed baselines under UNCLOS is binding on all States. The PIF States support the negotiation of a supplementary agreement to UNCLOS, similar to the Fish Stocks Agreement to "ensure the legal validity of fixed baselines in the context of sea level rise." This issue has been under consideration by the United Nations International Law Commission (ILC) since its 2021 session.[14] In principle, States must respond to any recommendations from the ILC in a manner that balances the need for stability and security in the law of the sea with the objective of promoting equity in addressing climate change and requiring a "serious consideration" in order to preserve the integrity of UNCLOS.[15]

Finally, the impacts of climate change will entail the responsibility of UNCLOS Member States concerning the protection and preservation of the marine environment and ecosystems, which necessitates a unified understanding and application by the international community, particularly by coastal States and territories. On this matter, at the request of the Commission of Small Island States on Climate Change

[13] Available at: https://committees.parliament.uk/writtenevidence/40693/html/ [Accessed 24.09.2024].

[14] More information is available at: https://committees.parliament.uk/writtenevidence/40742/html/ [Accessed 24.09.2024].

[15] More information is available at: https://committees.parliament.uk/writtenevidence/40763/html/ [Accessed 24.09.2024].

and International Law (COSIS),[16] on 21 May 2024, ITLOS issued Advisory Opinion No. 31 to clarify two questions. Specifically, regarding question (a) on the obligations of UNCLOS parties in relation to climate change, including the impacts from anthropogenic greenhouse gas (GHG) emissions, ocean acidification, and sea-level rise, ITLOS, concerning the definition of pollution, determined that GHG emissions into the atmosphere constitute pollution under Art. 1(4) of UNCLOS, as they cause direct or indirect harm to the marine environment through changes in temperature, acidification, and sea-level rise. Regarding the obligations under Art. 194(1), ITLOS established that States must take all necessary measures to prevent, reduce, and control pollution from GHGs. Concerning the nature of the obligation, ITLOS determined that this is an obligation of due diligence with a strict standard due to the risk of serious and irreversible harm, as scientifically assessed by the IPCC.[17] Furthermore, the obligation under Art. 194(2) to prevent transboundary pollution from GHGs carries an even stricter standard of due diligence due to its transnational character. The sources of pollution include land-based sources (Art. 207), vessels (Art. 211), and the atmosphere (Art. 212). Simultaneously, ITLOS requires States to enact legislation and implement it through international organizations. ITLOS calls upon States to engage in international cooperation under Art. 197, 200, and 201, including cooperative research, the establishment of standards, and data exchange. It also requires the provision of technical and financial assistance under Art. 202 and 203 to developing countries, particularly vulnerable States, and mandates monitoring, assessment, surveillance, reports publication, and environmental impact

[16] COSIS was established on 31 October 2021, with initial members comprising small island developing states such as Antigua and Barbuda, Tuvalu, Palau, Niue, and Vanuatu, Saint Lucia, and was subsequently joined by Saint Vincent and the Grenadines, Saint Kitts and Nevis, and the Bahamas.

[17] Abbreviation for: Intergovernmental Panel on Climate Change, an international organization established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). The IPCC's mandate is to provide objective, comprehensive, and the most up-to-date assessments of scientific, technical, and socio-economic information relevant to climate change, based on research conducted by scientists worldwide. IPCC reports serve as a crucial foundation for governments to formulate policies addressing climate change.

assessments for activities with the potential to cause GHG pollution under Art. 204, 205, and 206.

Regarding question (b) on the protection and preservation of the marine environment from the impacts of climate change, ITLOS affirmed that Art. 192, applicable to all threats, including climate change and acidification, requires both protection (prevention of harm) and preservation (restoration of degraded ecosystems). This obligation is one of due diligence with a strict standard, demanding proactive measures based on foreseeable risks. Article 194(5) concerning the protection of rare or fragile ecosystems (ice-covered areas under Art. 234) and the habitat of depleted, threatened, or endangered species (based on the CITES Convention) requires flexible but reasonable and science-based measures. Articles 61 and 119 on the conservation of living resources in the EEZ and High Seas necessitate management measures based on the best scientific evidence, the application of the precautionary and ecosystem approaches, and consideration of the impacts of climate change (such as the migration of fish stocks). Articles 63, 64, and 118 on international cooperation for the protection of migratory species and shared stocks require good-faith consultations to coordinate measures and adapt to changes in distribution due to climate. Article 196, addressing the prevention of the introduction of alien species due to climate change (warming sea temperatures altering ocean currents), sets a threshold of "significant harmful effects" and requires the application of the precautionary approach. Concerning area-based management tools, ITLOS encourages the use of marine protected areas (MPAs) and marine spatial planning, drawing upon regional practices (such as the OSPAR Convention[18]) and the BBNJ Agreement[19] for adaptation and mitigation.[20]

[18] Convention for the Protection of the Marine Environment of the North-East Atlantic. Available at: www.ospar.org [Accessed 02.05.2025].

[19] Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement), was adopted on 19 June 2023, during the fifth session of the Intergovernmental Conference (IGC-5) under the United Nations. Available at: https://www.un.org/bbnj/ [Accessed 02.05.2025].

[20] Advisory Opinion. Available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Advisory_Opinion/C31_Adv_Op_21.05.2024_orig.pdf [Accessed 02.05.2025].

II.2. Challenges in Maritime Security

The 21st century has witnessed the explosive development of science and technology across numerous domains, including the maritime sector, which encompasses Maritime Autonomous Vessels (MAVs) also known as unmanned vessels. These technologies replicate many functions of traditional ships and offer new capabilities to operators (Klein et al., 2021). Much of the development of such technologies is geared towards military purposes. The emergence of MAVs presents a novel challenge to international maritime security. This is because UNCLOS was drafted at a time when traditional maritime vessels required a physical crew to operate. Numerous UNCLOS provisions refer to and impose obligations upon the "crew" of a vessel. For instance, Point 4, Art. 94 of UNCLOS mandates that "each ship is in the charge of a master and officers who possess appropriate qualifications, in particular in seamanship, navigation, communications and marine engineering, and that the crew is appropriate in qualification and numbers for the type, size, machinery and equipment of the ship." In contrast, MAVs do not require a physical crew for operation and some may not even require remote crew operation. According to the IMO classification, MAVs have four degrees of automation. Level 1 involves a ship with some automated systems but still manned; Level 2 involves remote control capabilities but still with personnel on board; Level 3 involves remote operation of the ship without personnel on board; and Level 4 is fully autonomous, meaning the ship has the capacity to make decisions independently.[21]

From a legal perspective, the classification of MAVs as "ships," "warships," or simply "equipment" is critical due to its implications for rights enshrined in UNCLOS such as the "right of innocent passage" through territorial waters applicable to "ships." If MAVs are deemed "ships," what responsibility falls upon the flag State? Therefore, there is a requirement that new regulations and guidance are imperative to address these questions, as technological advancements currently outpace the development of international law. The IMO is undertaking efforts

[21] International Relations and Defence Committee. Corrected Oral Evidence: UNCLOS: Fit for Purpose in the 21st Century? Available at: https://committees.parliament.uk/oralevidence/3000/html/ [Accessed 24.09.2024].

to establish a legal framework to fill these lacunae and provide specific guidance. However, this may not be finalized until 2028.[22]

On the other hand, can MAVs used by the military be classified as "warships"? Under the Law of Naval Warfare, only warships are legally permitted to use force in armed conflicts. This right known as the "belligerency rights" includes the authority to "kinetic strike, visit board search and seizure, laying mines, amphibious operations against enemy held coast, blockade enforcement."[23] According to UNCLOS, warships are entitled to "immunity," meaning that other States cannot exercise jurisdiction over them. Article 29 of UNCLOS defines a warship as: "a ship belonging to the armed forces of a State bearing the external marks distinguishing such ships of its nationality, under the command of an officer duly commissioned by the government of the State and whose name appears in the appropriate service list or its equivalent, and manned by a crew which is under regular armed forces discipline." Based on this definition, an MAV cannot be classified as a warship because it lacks both an officer in command and a crew. Consequently, in principle, MAVs do not enjoy the right of belligerency. Moreover, high-tech crime have evolved rapidly. MAVs have been employed for unlawful purposes, such as the Houthi rebels' use of unmanned explosive boats in the Yemen conflict, Ukraine currently using them to attack Russian military vessels in the Black Sea, or the MAVs being used to transport illicit goods. These developments pose significant threats to international maritime security.

From a legal perspective, UNCLOS only provides a "starting point for establishing State rights and duties in responding to illicit activity at sea" (Klein et al., 2021). Accordingly, a coastal State may exercise criminal jurisdiction over offenses committed within its territorial waters, including internal waters, archipelagic waters, and the territorial sea. In the contiguous zone, however, the coastal State may only exercise the necessary control to prevent infringements of its customs, fiscal, immigration, or sanitary laws and regulations within its territory or

[22] International Relations and Defence Committee. Available at*:* https://committees.parliament.uk/oralevidence/3000/html/ [Accessed 24.09.2024].

[23] Ministry of Defence. Evidence (UNC0018). Available at: https://committees.parliament.uk/writtenevidence/40830/html/ [Accessed 24.09.2024].

territorial sea; and punish infringements of such laws and regulations that have occurred within its territory or territorial sea.[24]

Additionally, other international treaties, such as the 2000 United Nations Convention against Transnational Organized Crime (UNTOC)[25] and the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances set out additional responsibilities and rights for States. However, the exercise of criminal jurisdiction depends on the State's ability to identify criminal activities once they are commited. This presents a significant challenge when crimes are committed using MAVs because "The level of autonomy and hence the level of human involvement has implications for characterizing the vessel, as well as for determining liability for conduct at sea, including ascertaining which actor is liable" (Klein et al., 2021). As a result, the exercise of national jurisdiction over MAVs currently presents a challenge because it is exceedingly difficult to determine ownership, as "it can be registered in a national registry, fly its flag, and be located in one State but be remotely controlled from another State." This issue remains unresolved because technology has advanced more rapidly than international law. Consequently, in the future, the international community needs to reach a consensus to develop international regulations to ensure that the use of MAVs for criminal purposes is incorporated into national law.

Beyond military applications, international shipping companies continue to invest in the development of MAVs for commercial purposes. However, they face similar legal challenges to those associated with military use. This is because UNCLOS and other relevant international treaties establish that ships must have a crew on board. For instance, both the SOLAS[26] and MARPOL[27] contain "provisions that explicitly refer to the presence of a master and a qualified crew on board" as well

[24] Art. 33 of UNCLOS.

[25] The Convention entered into force on 29 September 2003.

[26] The International Convention for the Safety of Life at Sea (SOLAS) was adopted on 1 November 1974, and entered into force on 25 May 1980.

[27] The International Convention for the Prevention of Pollution from Ships (MARPOL) was adopted by the International Maritime Organization (IMO) in 1973, came into force in 1978, and was amended in May 2005.

as "provisions concerning cabins and other areas designated for crew use."[28] Another key legal question is whether individuals remotely operating autonomous vessels from shore should be classified as "crew" and granted "seafarer rights in the way the crew of a crewed ship would have."[29] This highlights the need for the International Maritime Organization (IMO) to establish future regulations governing the use of MAVs. Specifically, regulatory frameworks should clarify the meaning of terms such as "master," "crew," or "responsible person," particularly in relation to levels three and four of autonomy MAVs.

II.3. Challenges in Protecting Human Rights at Sea

While the exclusive jurisdiction of the flag state is a fundamental principle of international maritime law, the widespread use of Flags of Convenience (FOCs) has posed — and will continue to pose — a significant challenge to law enforcement efforts aimed at protecting human rights at sea. A vessel flying a FOC is registered under the flag of a country different from that of its actual owner. FOCs are particularly attractive to ship-owners more concerned with maximizing profits than ensuring the welfare of seafarers, as they allow for cost reductions. In practice, FOC registries offer ship-owners low registration fees and the opportunity to circumvent regulations. Once a vessel is registered under an FOC, ship-owners often hire cheap labor, pay low wages, and cut costs by lowering living standards and working conditions for the crew. FOCs also provide a revenue stream for countries without a domestic shipping industry. Such states establish ship registries and charge fees to ship-owners without assuming any real responsibility for crew safety and welfare, unlike states whose vessels genuinely operate under their national flag. Because FOC vessels lack a genuine national affiliation, they remain beyond the jurisdiction of seafarers' unions in any single

[28] International Relations and Defence Committee. Corrected Oral Evidence: UNCLOS: Fit for Purpose in the 21st Century? Available at: https://committees.parliament.uk/oralevidence/3000/html/ [Accessed 24.09.2024].

[29] International Relations and Defence Committee. Corrected Oral Evidence: UNCLOS: Fit for Purpose in the 21st Century? Available at: https://committees.parliament.uk/oralevidence/3000/html/ [Accessed 24.09.2024].

country. As a result, most seafarers working on FOC vessels are not union members. Even for those who are, their unions have little to no influence over conditions on board. This is why the International Transport Workers' Federation (ITF) has persistently campaigned against the use of FOCs. As of October 2024, ITF has identified 43 countries with FOC registries.[30]

In practice, the use of FOCs constitutes a major obstacle to the enforcement of regulations aimed at protecting human rights at sea, particularly in international waters. The jurisdictional gap created by the exclusive jurisdiction of the Flag State and the widespread use of FOCs presents a significant challenge to safeguarding human rights at sea. In reality, more than 30 million people work at sea, with the majority (about 27 million) being fishers (Haines, 2021). Other individuals working at sea include offshore oil and gas workers, migrants, refugees, asylum seekers, victims of human trafficking, crewmembers, and passengers on cruise ships.

UNCLOS contains several provisions related to the fisheries and their human rights implications, such as Art. 73 (Enforcement of Laws and Regulations of the Coastal State) requiring humane treatment in the context of fisheries enforcement, Art. 98 (Duty to Render Assistance), Art. 99 (Prohibition of the Transport of Slaves), and Art. 292 (Prompt Release of Vessels and Crews). However, there remain significant gaps in the protection of human rights at sea within UNCLOS itself. This is because UNCLOS was developed prior to and independently of international human rights law. Consequently, some argue that "UNCLOS was drafted as if people did not exist at sea, but only vessels, resources and marine species" (Papanicolopulu et al., 2021) or that it "does little to protect the human and labour rights of the people who travel, work and live at sea."[31]

From a legal perspective, international human rights law applies to individuals both on land and at sea. Therefore, no State can claim

[30] More information available at: https://www.itfglobal.org/en/sector/seafarers/flags-convenience [Accessed 25.09.2024].

[31] Human Rights at Sea — evidence (UNC0016). Fit for Purpose in the 21st Century? Available at: https://committees.parliament.uk/writtenevidence/40825/html/ [Accessed 25.09.2024].

that, at any given time, it has no obligation to address human rights issues that extend to the maritime domain. Some argue that it may not be necessary to incorporate human rights into UNCLOS, as this matter has already been addressed by competent organizations such as the International Maritime Organization (IMO).[32] In practice, several other international treaties regulate the conditions of individuals working at sea, such as the International Convention for the Safety of Life at Sea (SOLAS), the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW),[33] International Convention on Maritime Search and Rescue (SAR),[34] and the Maritime Labour Convention (MLC)[35] adopted by the ILO. However, these treaties are not specialized international human rights instruments. Furthermore, the lack of attention to human rights in the maritime context is evident in the fact that only one NGO — Human Rights at Sea, a UK-based charity — focuses on human rights at sea, in contrast to the hundreds of organizations on land.[36] As a result, there remains a misalignment between the legal regimes governing the law of the sea and the protection of human rights.

As previously discussed, the exclusive jurisdiction of flag States and the use of FOC present significant obstacles to transparency and the detection of human rights violations at sea. Consequently, States must enact domestic legislation to fulfil their obligations under UNCLOS and international human rights law. This should include granting national courts the authority to prosecute and penalize any individual or entity responsible for human rights violations occurring at sea. However, in practice, many States either fail to enact such legislation, lack the will or capacity to enforce it, or deliberately refrain from enforce-

[32] Human Rights at Sea — evidence (UNC0016). Fit for Purpose in the 21st Century.

[33] STCW was adopted on 7 July 1978 and entered into force on 28 April 1984 (as amended in 1995 and 2010).

[34] SAR was adopted on 27 April 1979 and entered into force on 22 June 1985.

[35] MLC was adopted on 23 February 2006 and entered into force on 20 August 2013.

[36] International Relations and Defence Committee. Corrected Oral Evidence: UNCLOS: Fit for Purpose in the 21st Century? Available at: https://committees.parliament.uk/oralevidence/3126/html/ [Accessed 25.09.2024].

ment. Additionally, ship-owners often choose to register under FOC regimes to evade accountability and maximize profits (Papanicolopulu et al., 2021). Even when a State has appropriate legal frameworks in place, exercising jurisdiction remains highly challenging, if not practically impossible. This is because ships can move freely across international waters, far beyond the territory and enforcement reach of the flag State's patrol vessels, making it exceedingly difficult to monitor, investigate, and prosecute human rights violations at sea.

Moreover, UNCLOS only establishes State jurisdiction within specific maritime zones. As a result, the State cannot invoke UNCLOS jurisdiction solely for the purpose of protecting human rights. For instance, if a vessel flying the flag of Liberia passes through Vietnam's territorial sea and has victims of human trafficking on board, those cases may fall under Vietnam's jurisdiction. However, this does not necessarily mean that Vietnam has the right to intervene in the vessel's innocent passage to protect the victims — unless Vietnam determines that the human rights violation constitutes a threat to its peace, security, or public order under Art. 27 of UNCLOS.[37] Thus, the primacy of the principle of freedom of navigation and the exclusive jurisdiction of Flag States under UNCLOS has significantly hindered the effective application of human rights law at sea.

Furthermore, the absence of procedural mechanisms allowing individuals to seek protection of their rights presents a significant challenge. The dispute settlement mechanism under UNCLOS is exclusively available to States, leaving individuals without direct recourse. Due to the nature of their activities, victims of human rights violations at sea face significant difficulties in bringing claims against their oppressors before domestic or international courts. Even when they attempt to do so, the legal process is often prolonged and complex. Moreover, the MLC does not extend protection to certain categories of workers at sea, explicitly excluding those who work on "ships engaged in fishing or in similar pursuits and ships of traditional build such as dhows and

[37] Art. 27 of UNCLOS on Criminal Jurisdiction on a Foreign Ship.

junks."[38] Meanwhile ILO Convention No. 188[39] has only been ratified by only 19 States and lacks universal adoption; this has rendered the protection of human rights at sea less effective.

Moreover, the issue of human rights at sea is further complicated by illegal, unreported, and unregulated (IUU) fishing. There is a clear link between IUU fishing and human rights violations, particularly in terms of exploitative practices. Fishing vessel owners often show little to no regard for labor rights and human rights standards. The prevalence of IUU fishing is facilitated by the use of FOC, as well as the lack of effective monitoring and enforcement at sea. The 2018 study revealed "70 % of vessels involved in IUU fishing were, or had been, flagged in a 'tax haven' jurisdiction."[40] The absence of oversight and law enforcement, combined with overfishing, forces vessels to operate further offshore and for extended periods. This inevitably increases the risk of exploitation of migrant fishers, particularly through their prolonged confinement on vessels.

The absence of effective law enforcement mechanisms at sea has contributed to the occurrence of sexual crimes, as victims often face significant difficulties — or even insurmountable barriers — in accessing justice. This issue is particularly concerning for passengers on cruise ships, where jurisdictional complexities and the use of FOC play a crucial role. Crimes committed on cruise ships, including sexual assaults, are rarely investigated by competent authorities and often occur under ambiguous jurisdictional circumstances. As a result, many victims are denied justice after suffering abuse.[41] In practice, numerous cases of sexual assault at sea have gone unpunished because the Flag State of the vessel claims to "lack jurisdiction." A notable example occurred in 2019 when a British woman was sexually assaulted by an Italian man

[38] Para. 4 Art. 2, Maritime Labour Convention 2006.

[39] The International Labour Organization (ILO). Work in Fishing Convention, 2007 No. 188.

[40] Environmental Justice Foundation — Evidence (UNC0036). Available at: https://committees.parliament.uk/writtenevidence/40877/html/ [Accessed 25.09.2024].

[41] Human Rights at Sea — Evidence (UNC0016). Fit for Purpose in the 21st Century?

aboard a Panama-flagged cruise ship while it was sailing outside territorial waters in the Mediterranean. Although Spanish courts launched an investigation and prosecution, they ultimately ruled that they lacked jurisdiction over the case. Meanwhile, Panama, despite having jurisdiction over the vessel flying its flag, failed to take any action to provide justice for the victim.[42] This case highlights the lack of clear obligations for States when human rights violations occur at sea, particularly when the concerned State is not the flag State and has no legal or vested interest in the victim. Furthermore, this issue remains inadequately addressed under both UNCLOS and the IMO framework.

In summary, the core challenge of human rights protection at sea lies in "the fragmented nature of international law and the absence of a dedicated legal regime that unifies international human rights, refugee, labour, and law of the sea provisions."[43] This necessitates clearer legal provisions under international law to establish a solid legal foundation for effectively prosecuting crimes that violate human rights at sea. To address this issue, international law should reinforce the requirement of a genuine link between a vessel and its flag State under UNCLOS by imposing stricter regulations on open registries, thereby holding flag States accountable for human rights violations occurring on their flagged vessels. Additionally, port States should extend their jurisdiction to include human rights violations committed at sea when such vessels enter their ports.[44] In particular, supplementing and developing UNCLOS into a truly "living" international treaty — one that serves as an international legal framework effectively safeguarding human rights at sea — remains a pressing challenge for the international community, both now and in the future.

[42] International Relations and Defence Committee. Corrected Oral Evidence: UNCLOS: Fit for Purpose for the 21st Century? Available at: https://committees.parliament.uk/oralevidence/2852/html/ [Accessed 24.09.2024].

[43] Human Rights at Sea — Evidence (UNC0016). Fit for Purpose in the 21st Century?

[44] Port State control measures have been used to address marine pollution, and the 2009 FAO Agreement on Port State Measures focuses solely on combating IUU fishing. However, it has not yet been expanded to cover human rights issues, as the Agreement does not grant port states the authority or obligation to enforce measures such as investigation, judicial proceedings, and sanctions, which remain under the jurisdiction of Flag States.

III. Conclusion

Thirty-one years after its entry into force, UNCLOS has increasingly affirmed its significance and special mission as the "Constitution for the Seas and Oceans" of the international community, serving as the legal framework for States to establish and exercise their sovereignty, sovereign rights, jurisdiction, and other rights and freedoms to govern the seas and oceans for peaceful purposes. UNCLOS stands as the clearest testament to the spirit of international cooperation and the shared responsibility of the international community regarding the seas and oceans. Alongside the development of humankind, international relations grounded in international law have become increasingly consolidated and emphasized, with UNCLOS consistently maintaining a leading role, legal authority, and significance. However, UNCLOS needs to be further supplemented and developed to function as a truly "living" international treaty, capable of adapting to the evolving realities of international society and effectively addressing emerging challenges related to climate change, technological advancement, and the protection of human rights at sea and in the oceans.

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Received 07.08.2025
Revised 14.09.2025
Accepted 17.11.2025

SHORTCOMINGS OF THE MODERN ANTI-DOPING SYSTEM

Article

DOI: 10.17803/2713-0533.2026.1.35.187-215

The Doping Cases of Jannik Sinner and Iga Swiatek: Issues of Balance of Interests and Fair Adjudication in the Modern Anti-Doping System

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Abstract: The adoption of the World Anti-Doping Code (Code) at the beginning of the twenty-first century was a key step towards the harmonization of anti-doping rules at the international level. While the Code provisions have been regularly updated and improved, the basic legal mechanisms chosen by its drafters, including the principle of strict liability, as well as their practical application, continue to generate debate about the standards of fair and impartial adjudication of anti-doping rule violations and the proportionality of sanctions. In 2024, major doping scandals, which forced the public to discuss the shortcomings of the anti-doping system, have affected the tennis with the doping cases of Jannik Sinner and Iga Swiatek, the first-ranked players in men's and women's international professional tennis tours. As a result of a complex study of the Code provisions, it was established that the anti-doping system based on the principle of strict liability contains a combination of procedural and substantive legal mechanisms that lead to the public

perception that the system is unfair, allowing unequal treatment of athletes and failing to respect the balance of interests. Based on the findings, the authors propose measures aimed at improving the process of adjudication of anti-doping rule violations.

Keywords: World Anti-Doping Code; anti-doping rule violation; principle of material (objective) truth; doping; fairness; justice; balance of interests; standards of proof; strict liability; adjudication

Cite as: Gali, A.A. and Orlov, A.A., (2026). The Doping Cases of Jannik Sinner and Iga Swiatek: Issues of Balance of Interests and Fair Adjudication in the Modern Anti-Doping System. *Kutafin Law Review*, 13(1), pp. 187–215, doi: 10.17803/2713-0533.2026.1.35.187-215

Contents

I. Introduction 188
II. Principle of Strict Liability and Balance of Interests 192
III. Controversial Legal Mechanisms in the Modern Anti-Doping System 194
III.1. Core Design of Results Management Proceedings and Proofs 194
III.2. Discretion of Anti-Doping Organizations during Results Management Proceedings 197
III.3. Lack of Separation of Powers and Independent Oversight 198
III.4. Judicial Authority as a Guarantor of Rights 202
III.5. Logic behind Imposing Sport Sanctions 204
III.6. Discretion of the Judicial Authority in the Imposition of Sanctions 206
III.7. Political and Legal Factors Determining the Management of the Anti-Doping System 209
IV. Conclusion 212
References 214

I. Introduction

For the tennis sports community, the year 2024 was marked by major doping scandals: banned substances in low concentrations were found in the samples of athletes Jannik Sinner (Italy) and Iga Swiatek (Poland), who were the world number one players in the men's and women's professional tennis tours.[1]

[1] Independent tribunal rules "No Fault or Negligence" in case of Jannik Sinner. Available at: https://www.itia.tennis/news/sanctions/independent-tribunal-

The public relevance of these cases, in addition to the high status and impressive achievements of the accused athletes, was also given by the actions of the International Tennis Integrity Agency (ITIA) that is authorized to conduct results management on anti-doping rule violations against international-level tennis players. Until the final decisions in the cases, the ITIA, in accordance with the Tennis Anti-Doping Programme, did not disclose that the top-players in the men's and women's professional tours were prosecuted for anti-doping rule violations. The sanctions imposed on the athletes by the ITIA were minor: in Jannik Sinner's case, no period of ineligibility was imposed at all, since no fault or negligence was established; in Iga Swiatek's case, the period of ineligibility was reduced to one month based on no significant fault or negligence.

Subsequently, the World Anti-Doping Agency (WADA) announced that it would not appeal the decision in Iga Swiatek's case, while in Jannik Sinner's case the WADA filed an appeal to the Court of Arbitration for Sport (CAS).[2] However, then the WADA announced that the parties had reached a case resolution agreement in accordance with Art. 10.8.2 of the World Anti-Doping Code (Code) instead of continuing the CAS proceedings with independent arbitrators.[3] Article 10.8.2 of the Code allows the parties to enter into an agreement to resolve the case with imposing such sanctions as the WADA and the adjudicating anti-doping organization (i.e., the ITIA) find applicable in their sole discretion. In accordance with the case resolution agreement, Jannik Sinner was sanctioned with a three-month period of ineligibility.

rules-no-fault-or-negligence-in-case-of-italian-player-jannik-sinner/ [Accessed 15.04.2025]; Polish tennis player Iga Świątek accepts one-month suspension under Tennis Anti-Doping Programme. Available at: https://www.itia.tennis/news/sanctions/polish-tennis-player-iga-swiatek-accepts-one-month-suspension-under-tennis-anti-doping-programme/ [Accessed 15.04.2025].

[2] WADA will not appeal in case of tennis player Iga Świątek. Available at: https://www.wada-ama.org/en/news/wada-will-not-appeal-case-tennis-player-iga-swiatek [Accessed 15.04.2025]; WADA appeals case of tennis player Jannik Sinner. Available at: https://www.wada-ama.org/en/news/wada-appeals-case-tennis-player-jannik-sinner [Accessed 15.04.2025].

[3] WADA agrees to a case resolution agreement in the case of Jannik Sinner. Available at: https://www.wada-ama.org/en/news/wada-agrees-case-resolution-agreement-case-jannik-sinner [Accessed 15.04.2025].

Such decisions made by the ITIA and the WADA have drawn criticism from the tennis community, who have highlighted the unfair treatment of athletes of different levels by the anti-doping system,[4] noted the double standards[5] and favouritism,[6] and described adjudication of cases as a "parody of justice."[7] Comparisons have been made with other famous tennis players, including the case of Simona Halep (Romania), also the former world number one player, who had a low concentration of a prohibited substance in the sample. Her case lasted about a year and a half; the ITIA imposed a four-year period of ineligibility, which the CAS reduced to nine months in March 2024;[8] the information about her provisional suspension was published by the ITIA at the same time as the adjudication of the case began, and the athlete remained supposedly guilty in the eyes of society for a long time and lost her ranking, which is essential to qualify for tournaments.[9] As S. Halep herself described: "Unfortunately, the ITF (ITIA) has postponed my hearing three times. […] Not only they are killing my reputation, but also me as a professional player, and I don't even talk about the consequences on my mental health."[10]

[4] Eccleshare, C. Jannik Sinner's doping case and what players' reaction says about tennis. *New York Times*. Available at: https://www.nytimes.com/athletic/5712885/2024/08/21/jannik-sinner-doping-case-player-reaction-moore-shapovalov-kyrgios/ [Accessed 15.04.2025].

[5] Rouquette, C. Mouratoglou on Sinner-WADA settlement: "There is no clean sport if there is a double standard." *Tennis Majors*. Available at: https://www.tennis-majors.com/atp/mouratoglou-on-sinner-wada-settlement-there-is-no-clean-sport-if-there-is-a-double-standard-809207.html [Accessed 15.04.2025].

[6] Novak Djokovic laments "favouritism" towards Jannik Sinner over doping ban. Available at: https://www.theguardian.com/sport/2025/feb/17/novak-djokovic-laments-favouritism-towards-jannik-sinner-over-doping-ban [Accessed 15.04.2025].

[7] Rouquette, C. Op. cit.

[8] Full decision in the case *Simona Halep v. ITIA* available at: https://www.itia.tennis/news/sanctions/full-decision-in-the-case-of-simona-halep-v-itia/ [Accessed 15.04.2025].

[9] Simona Halep issued provisional suspension under Tennis Anti-Doping Programme. Available at: https://www.itia.tennis/news/sanctions/simona-halep-provisional-suspension/ [Accessed 15.04.2025].

[10] Jacobs, S. "Devastated" Simona Halep slams ITIA — "They are killing my reputation." *Tennis365*. Available at: https://www.tennis365.com/tennis-news/devastated-simona-halep-itia-killing-reputation [Accessed 15.04.2025].

In 2024, controversial decisions on doping cases, which became the subject of the wide public discussion, were made not only in tennis. In January, the CAS finalized the case of Kamila Valieva with the imposition of a four-year period of ineligibility on the athlete due to her inability to prove the non-intentional violation.[11] In April, the media published previously publicly unknown information about the positive doping samples of twenty-three Chinese swimmers submitted shortly before the 2021 Olympic Games. In this case, no charges of anti-doping rule violations were made by the China Anti-Doping Agency (CHINADA), no appeal was filed by the WADA, and the athletes won, among others, gold medals at the Olympic Games.[12] The series of such results management proceedings in the doping cases has once again raised publicly the issue of the fairness of the modern anti-doping system and its effectiveness under the leadership of the WADA.

The European Court of Human Rights (ECtHR) in *Mutu and Pechstein v. Switzerland* case emphasized: "Even appearances may be of a certain importance or, in other words, 'justice must not only be done, it must also be seen to be done.' What is at stake is the confidence which the courts in a democratic society must inspire in the public."[13]

Current research in the field of psychology supports the observation made by the ECtHR: "The existence of anti-doping rules only and an authoritative body to enforce them through legal means, while necessary, is not sufficient for the sustainable implementation of policy. The anti-doping policies will have a sustained effect if the target groups (athletes and their entourage) feel a moral obligation to endorse these policies and believe that these policies are appropriate and fair.

[11] CAS 2023/A/9451 RUSADA v. K. Valieva, CAS 2023/A/9455 ISU v. K. Valieva and RUSADA, CAS 2023/A/9456 WADA v. RUSADA and K. Valieva, award of 29 January 2024.

[12] Schmidt, M. and Panja, T. Top Chinese Swimmers Tested Positive for Banned Drugs, Then Won Olympic Gold Tennis. *New York Times*. Available at: https://www.nytimes.com/2024/04/20/world/asia/chinese-swimmers-doping-olympics.html [Accessed 15.04.2025]; WADA statement on case of 23 swimmers from China. Available at: https://www.wada-ama.org/en/news/wada-statement-case-23-swimmers-china [Accessed 15.04.2025].

[13] European Court of Human Rights, *Mutu and Pechstein v. Switzerland*, 2 October 2018. Available at: https://hudoc.echr.coe.int/fre#{%22itemid%22: [%22001-186828%22]} [Accessed 15.04.2025].

The effectiveness of actions by both legislative and executive anti-doping bodies will be greater if they are perceived by the public as proper authorities vested with the right to regulate" (Bondarev et al., 2021, pp. 104–105).

II. Principle of Strict Liability and Balance of Interests

A clear challenge to the perception of the anti-doping system as a fair one is the principle of strict liability, which implies that the detection of a prohibited substance in an athlete's sample results in the automatic finding of an anti-doping rule violation under Art. 2.1 of the Code, in other words, that any athlete can be "guilty without guilt."

The principle of strict liability was enshrined in the first version of the Code in 2003.[14] The comment to Art. 2.1.1 of the 2003 version of the Code referred to the Olympic Movement Anti-Doping Code and the "vast majority of existing anti-doping rules" that adhere to this principle as the justification. However, based on the data provided by the participant of the study on harmonization of anti-doping rules, the principle of strict liability as a universal principle was new to the anti-doping system at the beginning of the 21st century, as many organizations at both the international and national level had either not yet used such a principle at all or had only just begun to recognize it in their rules (Soek, 2006, pp. 40–41, 55). Accordingly, there has not been sufficient experience in the anti-doping legal system with the application of such rules. It means, in particular, that the principle of strict liability is being tested in practice now, and the system needs to be further adjusted in the light of the relevant latest enforcement experience.

The main pragmatic argument that justifies the introduction of strict liability is that proving athlete's guilt in doping cases (as a mandatory subjective element of the violation) is difficult, especially for sports organizations, which are primarily private law entities and do not have the same powers as public investigative bodies (Soek, 2006,

[14] World Anti-Doping Code (2003 edition). Available at: https://www.wada-ama.org/sites/default/files/resources/files/wada_code_2003_en.pdf [Accessed 15.04.2025].

pp. 118–123).[15] The ideological basis for the principle of strict liability was reflected in the comment to Art. 2.1.1 of the Code 2003: "It appears to be a laudable policy objective not to repair an accidental unfairness to an individual by creating an intentional unfairness to the whole body of other competitors."[16]

However, as J. Soek rightly points out, enshrining the principle of strict liability instead of the traditional principle that guilt must be proven, leads to a diametrical change in the position of the athlete and the anti-doping organization, simply placing the athlete in an unprotected position instead of the anti-doping organization being in a weak position (Soek, 2006, p. 119). If a comparison is made with criminal justice, to which disciplinary anti-doping proceedings are recognized to be closer than to private law justice — also named as a "kind of criminal law" (Soek, 2006, p. 9) — then it can be noted that, from an ideological point of view, the Code's approach directly contradicts the principle of material (objective) truth. This principle means that the main goal of the criminal process is to fully, completely and objectively clarify all the circumstances of the case and proceeds from the consideration that the State, when creating legal proceedings, cannot be guided only by punitive considerations (Golovko, 2021, pp. 440–444). According to N.N. Polyanskiy, the following aphorism is the expression of the principle of material (objective) truth: "It is better to forgive ten guilty persons than to punish one innocent" (Polyanskiy, 1919, p. 34). So, this ideological view is opposite to the above-mentioned statement of the Code.

Thus, the principle of strict liability is not a means of balancing the interests of the participants in legal relations, as it simply changes the positioning of powers, setting a different starting point for an athlete and anti-doping organization. Its introduction into the anti-doping system is based on a tenuous ideological basis, which implies the protection of the anti-doping system as a self-value and an abstract majority to the detriment of each individual athlete. Accordingly, if a balance of

[15] Council of Europe Anti-Doping Convention (T-DO). Compliance by France with the Anti-Doping Convention. P. 5. Available at: https://rm.coe.int/project-on-compliance-withcommitments-respect-by-france-of-the-anti-d/168073ac52 [Accessed 15.04.2025].

[16] World Anti-Doping Code (2003 edition).

interests is to be achieved, the principle of strict liability in the legal system shall be accompanied by additional mechanisms to "mitigate" the unfair premise that all athletes whose samples contain prohibited substances are offenders. Equally, the presumption of innocence, which involves shifting the burden of proof to the investigative authorities, shall be accompanied by a system of state investigation that allows the guilt of criminals to be proven and them to be brought to justice, or otherwise law and order in the State will be impossible. However, by contrast, the anti-doping system incorporates into its design legal mechanisms, both procedural and substantive, which intensify the perception that the system is unfair and treats the athletes differently.

III. Controversial Legal Mechanisms in the Modern Anti-Doping System

III.1. Core Design of Results Management Proceedings and Proofs

Firstly, the results management process of anti-doping rule violation contains elements of adversarial proceeding system (compared to inquisitorial or continental), which appears to be unbalanced in the light of the chosen model of proofs.

So, in the continental model of legal proceedings based on the principle of material (objective) truth, the process of proving carried out, among others, by the court and the investigation, is aimed at establishing all the circumstances of the case, including circumstances testifying in favor of the accused. For example, Art. 20 of the Code of Criminal Procedure of the Russian Soviet Federative Socialist Republic of 1960[17] stipulated that "the court, prosecutor, investigator and interrogator are obliged to take all measures provided for by law for a comprehensive, complete and objective investigation of the circumstances of the case, to identify both incriminating and exculpatory circumstances, as well as mitigating and aggravating circumstances in favor of the accused."

[17] *Vedomosti of the Supreme Soviet of the RSFSR*. 1960. No. 40. Art. 592. Available at: http://pravo.gov.ru/proxy/ips/?docbody=&nd=196029153 [Accessed 15.04.2025]. (In Russ.).

The model of legal proceedings based on the principle of material (objective) truth is compared with the adversarial process model, which is characteristic of the countries of the Anglo-Saxon legal system, where the jury trial is widespread. In the design of the adversarial process, the emphasis is more on the contraposition of the prosecution and defense evidence, where the purpose of the party's proof is to convince the court and unprofessional jury of the truth of its allegations. The prosecution does not so much assist the court in unbiased truth-finding, but rather presents its case and selects evidence that will be more persuasive than the evidence of the defense, while the court in such model acts as a neutral arbiter (Golovko, 2021, pp. 135, 436–438; van Koppen and Penrod, 2003).

Article 12.1.1 of the WADA International Standard for Testing and Investigations 2023 (ISTI)[18] identifies as possible investigative objectives the ruling out the possible violation or involvement in a violation, the developing evidence that supports the initiation of an anti-doping rule violation proceeding in accordance with Art. 8 of the Code or providing evidence of a breach of the Code or applicable International Standard. Article *1*2.2.2 of the ISTI also provides that an anti-doping organization shall ensure that investigations are conducted in a fair, objective and impartial manner.

Despite this declaration, however, the standard of proof in anti-doping rule violation cases is more of an adversarial model. Article 3.1 of the Code establishes: "The standard of proof shall be whether the anti-doping organization has established an anti-doping rule violation to the comfortable satisfaction of the hearing panel, bearing in mind the seriousness of the allegation which is made. This standard of proof in all cases is greater than a mere balance of probability but less than proof beyond a reasonable doubt."[19]

The standard of proof for an athlete under Art. 3.1 of the Code is the balance of probabilities, meaning that the arbitrators must accept an athlete' s version if they are more inclined to believe in its credibil-

[18] Available at: https://www.wada-ama.org/sites/default/files/2022-12/isti_2023_w_annex_k_final_clean.pdf [Accessed 15.04.2025].

[19] World Anti-Doping Code. 2021. Available at: https://www.wada-ama.org/sites/default/files/resources/files/2021_wada_code.pdf [Accessed 15.04.2025].

ity than to disbelieve it. In numerical terms, the arbitrators' belief in an athlete's version is described as sufficient if it is belief of more than 50 %. This interpretation is set out, for example, in the German Anti-Doping Organization's comment to Art. 3.1 of the German Anti-Doping Code.[20]

In order to be perceived as fair, these elements of the adversarial model require equality between the parties in their ability to prove their case, and not only formally but, if an ideal model is taken, also actually. Accordingly, the greater the difference between the parties' actual ability to gather evidence, the more unfair the system appears to be. Therefore, in a doping case where an athlete is placed in a position, in according with the anti-doping rules, where he must somehow gather evidence of his innocence, while the anti-doping organization under Art. 2.1 of the Code only needs to present an adverse analytical finding, the court's (arbitrators') active position and its assistance to the athlete in fulfilling his burden of proof seem particularly important.

Besides, at the same time, the ISTI contains a number of provisions, which indicate that an anti-doping organization is acting to detect doping. For example, Art. 11.1 of the ISTI requires anti-doping organizations to "ensure they are able to obtain, assess and process anti-doping intelligence from all available sources, to help deter and detect doping, to inform the development of an effective, intelligent and proportionate test distribution plan, to plan target testing, and to conduct investigations as required by Code Art. 5.7." Under Art. 12.2.2 of the ISTI, an anti-doping organization "shall gather and record all relevant information and documentation as soon as possible, in order to develop that information and documentation into admissible and reliable evidence in relation to the possible anti-doping rule violation, and/or to identify further lines of enquiry that may lead to the discovery of such evidence."

Conversely, it is not emphasized that an anti-doping organization must also gather evidence to exonerate an athlete. For example, under Art. 10.4 of the Code, an anti-doping organization may establish aggravating circumstances, but there is no mention in the Code of an

[20] Nationaler Anti-Doping Code (NADC*)*. 2021. Available at: https://www.nada.de/recht/nadc [Accessed 15.04.2025].

anti-doping organization concurrently establishing mitigating circumstances. In doing so, the Code reinforces the role of the anti-doping organization as a prosecutor and does not emphasize its role as an organization seeking to establish the truth and, where appropriate, to bring justice to all those involved in a case. Moreover, an anti-doping organization acts as both investigator and prosecutor before the arbitrators, so there is no institutional separation of investigative and prosecutorial functions. This combination also raises the perception of opposition between athletes and anti-doping organizations, creating the impression that the anti-doping organization will do everything in its power during the hearing to defend the position, which was formed during the investigation.

III.2. Discretion of Anti-Doping Organizations during Results Management Proceedings

Secondly, the anti-doping system retains the discretion of anti-doping organizations, including the one throughout the course of an adjudication process. On the one hand, this discretion gives flexibility, allowing the process to be adapted to the circumstances of a particular case. On the other hand, it can intensify the feeling of inequality, especially if there are no transparent provisions that justifies and clarifies differences between the approaches.

For example, Art. 14.3 of the Code provides that the identity of any athlete who is notified of a potential anti-doping rule violation, the prohibited substance or the prohibited method and the nature of the violation involved, and the decision on whether the athlete is subject to a provisional suspension *may be* publicly disclosed by the responsible anti-doping organization. A public disclosure is a very sensitive issue that can easily provoke public pressure and creation of a negative image of the athlete that can result in significant damage to the athlete's reputation. It seems that it would be fairer if all athletes were treated equally, and in each case the information should be disclosed after a confirmed adverse analytical finding or, conversely, no information should be disclosed before the final decision of a hearing body.

In the cases of Jannik Sinner and Iga Swiatek, the athletes timely challenged the provisional suspension and, since it did not come into force, no public disclosure in accordance with the Tennis Anti-Doping Programme was made. However, a part of the public precepted it as a "cover up" by the ITIA,[21] so it was noted: "Everything has been done by the book. The book appears in need of a rewrite."[22] It should be highlighted that during the preparations of the 2027 edition of the Code, a part of stakeholders also called for the publication of all anti-doping decisions, while the others noted that mandatory publication may conflict with the applicable law on the personal data protection.[23]

III.3. Lack of Separation of Powers and Independent Oversight

Thirdly, another issue is the lack of separation of powers in the anti-doping system, including independent oversight over anti-doping organizations' actions during the investigations, so the above-mentioned discretion can be used contrary to normative rules or in bad faith. While the WADA has taken measures to ensure that anti-doping organizations operate independently, such measures do not preclude the anti-doping organization from acting with a lack of diligence in certain cases, such as failing to actively gather evidence against an athlete and support a charge, or, in other cases, from showing extensive efforts to accuse or defend the athlete.

This situation is also characteristic of criminal proceedings in the continental process model, when the impartiality of the actions of investigative bodies is questioned. However, in the system of the state justice the quality of investigative work is compensated for by a set of control

[21] Rouquette, C. Op. cit.

[22] Futterman, M. Why Iga Swiatek's doping case being kept in secret is bad for tennis. *New York Times*. Available at: https://www.nytimes.com/athletic/5956276/2024/11/29/iga-swiatek-tennis-doping-ban/ [Accessed 15.04.2025].

[23] Stakeholder Comments. 2027 Code and International Standard Update Process: Stakeholder Consultation Phase — World Anti-Doping Code. WADA. Available at: https://www.wada-ama.org/sites/default/files/2024-10/2027%20Code%20%26%20IS%20Update%20Process%20-%20Stakeholder%20Consultation%20Phase%20-%20Code%20Comments.pdf [Accessed 15.04.2025].

mechanisms independent of each other in the general apparatus of state administration (for example, the Prosecutor General's Office of the Russian Federation adopted Order No. 544 of 17 September 2021 "On the organization of the prosecutor's supervision over the procedural activities of preliminary investigation bodies"[24]).

In the anti-doping system, the anti-doping organization holds complex powers to adopt anti-doping rules, to conduct testing and investigations, to constitute a hearing body (subject to operational independence, as it is defined in the Code, but still not entirely separate), to charge, etc. The only supervising body over the actions of anti-doping organizations is the WADA, which, in the event of a violation of the Code or the WADA International Standards, may initiate procedures to declare a signatory non-compliant with the Code. However, there are no legal control mechanisms in relation to the WADA itself, except for the right to appeal its decisions to the CAS (still certain significant decisions of the WADA are not subject to appeal under the Code).

For example, in the case of the Chinese swimmers, the WADA expressly stated that it did not appeal the CHINADA's decision to the CAS to change the finding of "no anti-doping rule violation" to a finding of "violation with no fault or negligence," even though there were legal grounds for doing so: "For largely technical reasons, the WADA did not agree entirely with the CHINADA's approach. However, having determined that it was in no position to challenge the contamination scenario, the WADA decided not to initiate 23 technical appeals to the CAS to effectively replace findings of 'no ADRV'[25] with findings of 'ADRV with no fault or negligence' on the part of the athletes. Such appeals, even if successful, would have changed absolutely nothing in terms of athlete participation at the Olympics or any other event [...]. For reasons of pragmatism and fairness towards the athletes (who would have had to face this legal challenge on the eve of the Olympic and Paralympic Games), WADA decided not to lodge what would have been a largely technical appeal [...]. It should be noted that WADA has never in its

[24] *Zakonnost'*. 2021. No. 12. (In Russ.).

[25] In the cited WADA's documents "ADRV" means "Anti-Doping Rule Violation," "NADO" means "National Anti-Doping Organization," "AAF" means "Adverse Analytical Finding."

history appealed against a finding of no ADRV to convert it into a finding of a violation with no fault. WADA is not aware that any other Anti-Doping Organizations (ADOs) have done this either. Further, when other ADOs have determined in similar circumstances (including cases where multiple athletes from the same team have been subject to food contamination) to close cases with no ADRV (when they should have been 'ADRV with no fault' cases), WADA has not appealed."[26]

However, it seems to be a highly significant issue of whether an athlete has or has not committed a violation, even with no fault or negligence, so the case is not only the matter of possible or impossible participation of actual athletes. It is, among other things, an issue of legality, fairness and principles of equality, a question of consistent practice and equal treatment by the anti-doping system. At the very least, WADA's "pragmatic" approach can be characterized as inconsistent with the principle of legality. In terms of legality, the CHINADA's decision should have been appealed if there were grounds to do so, but there is no mechanism to force the WADA to appeal or to sanction WADA's inaction. The question should be asked: why should some athletes have to go through legal proceedings and proof their versions, while others can benefit from the investigation made already by an anti-doping organization and absence of charges from it?

It should be noted that CHINADA's results management and WADA's inaction in the case of Chinese swimmers was severely criticized in the final report of the independent prosecutor, also by the law expert appointed by him.[27] For example, the appointed expert made the following conclusion: "CHINADA's handling of the case had deviated significantly and fundamentally from the procedures laid down in anti-doping standards, that these deviations were particularly serious given that they had enabled the athletes concerned — in the absence of an ap-

[26] Contamination case of swimmers from China. Fact Sheet / Frequently Asked Questions. P. 5. Available at: https://www.wada-ama.org/sites/default/files/2024-04/2024-04_fact_sheet_faq_chinese_swimming.pdf [Accessed 15.04.2025].

[27] Independent Prosecutor's final report — Cottier Report. Available at: https://www.wada-ama.org/sites/default/files/2024-09/202408_final_cottier_report_english_translation.pdf [Accessed 15.04.2025].

peal by the WADA — to benefit from an absence of an ADRV (as well as an absence of any consequences)…"[28] In response to the expert's comments, WADA further noted that "although it is not usual for a NADO to conduct an investigation following an AAF, given the role is assigned to the athlete, the WADA has already seen this happen."[29] This shows a discretionary difference in approaches that is not based on clear and precise criteria.

Also, the prosecutor pointed out: "Legally, the Investigator can follow the very short explanation from the Agency, in the sense that, formally, there was no rule requiring it to act. On the other hand, given the role of the WADA, the frontline guardian of the fight against doping worldwide, this simple reference to the absence of a rule imposing action is not satisfactory. At the very least, the extraordinary nature of the case (23 swimmers, including top-class athletes, 28 positive tests out of 60 for a banned substance of therapeutic origin, etc.), could have led to coordinated and concerted reflection within the Agency, culminating in a formal and clearly expressed decision to take no action. This criticism does not allow the Investigator to consider that the Agency has favored the 23 swimmers concerned, or that some of its members have sought to do so. The reproach, easy and straightforward to formulate with the benefit of hindsight and an overall vision, concerns a shortcoming, a gap, an absence. However, this cannot be construed as a deliberate intention, nor as WADA's acceptance of CHINADA's handling of the case for the benefit of its athletes, with anti-doping rules taking a back seat."[30]

Another key conclusion of the prosecutor in the light of the present research is as follows: "Nor is it satisfactory for the Agency, despite noting that a national organization has deviated from the procedure, to make no comment on the matter, even when this deviation has had no substantive impact. In this respect, WADA's apparent silence is hardly compatible with its role as worldwide guardian of compliance with procedures, which cannot be limited to issuing and distributing direc-

[28] Independent Prosecutor's final report — Cottier Report. P. 32.
[29] Independent Prosecutor's final report — Cottier Report. P. 37.
[30] Independent Prosecutor's final report — Cottier Report. P. 41.

tives to NADOs and sports federations, without reacting in individual cases."[31]

Apart from the cited observations in respect of the specific case, it should be noted that, in general, the problem with the separation of powers in the anti-doping system was mentioned specially in the 2022 Declaration of Guiding Principles for the Future of Anti-Doping proposed by a group of national anti-doping organizations.[32] It stated, in particular, that "separation of powers through creating a system of internal checks and balances within the anti-doping community must be created, with a broad representative legislative power, as well as both executive and judicial powers which are separate, independent, impartial, apolitical and guarded from being controlled by political interests other than anti-doping and clean sports."

III.4. Judicial Authority as a Guarantor of Rights

Fourth, in criminal proceedings, the rights of suspects are ensured by placing certain decisions within the exclusive competence of the court, as well as establishing the powers of the court to correct the shortcomings of pre-trial procedures that have resulted or could have resulted in the violation of the rights of suspects.

For example, according to Art. 29.2 of the Criminal Procedure Code of the Russian Federation[33] (CPC RF), only a court, including the period during the pre-trial proceedings, has the authority to decide on a preventive measure in the form of detention, house arrest, bail, or prohibition of certain actions. In anti-doping cases, provisional suspensions shall be imposed by the anti-doping organization at its discretion (Art. 7.4 of the Code). Article 165 of the CPC RF provides for a judicial

[31] Independent Prosecutor's final report — Cottier Report. P. 56.

[32] Available at: https://www.inado.org/fileadmin/user_upload/Declaration_of_Guiding_Principles_for_the_Future_of_Anti-Doping.pdf [Accessed 15.04.2025]; Berkeley, G. NADOs call for adoption of "guiding principles" on future of anti-doping. *Inside the games*. Available at: https://www.insidethegames.biz/articles/1124428/nados-call-for-guiding-principles [Accessed 15.04.2025].

[33] Criminal Procedure Code of the Russian Federation of 18 December 2001 No. 174-FZ. Collection of the Legislation of the Russian Federation. 2001. No. 52 (Part I). Art. 4921. (In Russ.).

procedure to obtain a permission to carry out certain investigative actions (in particular, on the inspection of a dwelling in the absence of the consent of the persons living in it, on the search or seizure of a dwelling).

Article 196 of the CPC RF provides for cases where a forensic expert examination is mandatorily ordered, and Article 283 of the of the CPC RF allows the court, on its own initiative, to order a forensic expert examination at the stage of investigation of evidence. In one of the cases, the higher instance overturned the court's decision on the grounds that the court, in violation of Article 196 of the CPC RF, rejected the defendant's request, which was supported by an attorney and a state prosecutor, for the appointment of a forensic psychiatric examination to determine his sanity both at the time of the offences charged and at the time of the court's consideration of the criminal case.[34]

Article 237 of the CPC RF allows the court to return a case to the prosecutor when it is necessary to remove the obstacles to the case consideration by the court that preclude the possibility of a lawful, justified and fair judgement or other final court decision in the case and cannot be removed in court proceedings (for example, if the preliminary investigation was carried out by an improper, unauthorized or a subject to challenge person, or if a preliminary investigation was conducted in an improper form contrary to the law).[35]

Thus, in view of the fact that the court is called upon to implement the principle of material (objective) truth and to establish comprehensively, fully and objectively the circumstances of the case, the court is vested with certain powers that make it possible to guarantee the rights of the participants in criminal proceedings, to prevent arbitrary actions by the investigating authorities and to assist, *inter alia*, the defense in the collection of evidence.

[34] Judgment of the Second Cassation Court of General Jurisdiction from 5 November 2020 No. 77-1979/2020. Available at: https://2kas.sudrf.ru/modules.php?name=sud_delo&srv_num=1&name_op=doc&number=1048950&delo_id=2450001&new=2450001&text_number=1 [Accessed 15.04.2025]. (In Russ.).

[35] Resolution of the Plenum of the Supreme Court of the Russian Federation of 17 December 2024 No. 39 "On the practice of application by the courts of the norms of the Criminal Procedure Code of the Russian Federation, regulating the grounds and procedure for returning a criminal case to the prosecutor." *Bulletin of the Supreme Court of the Russian Federation*. 2025. No. 2. (In Russ.).

III.5. Logic behind Imposing Sport Sanctions

Fifthly, the manner in which sport sanctions are imposed under the Code is unbalanced. For example, the standard sanction for a presence of a prohibited substance found in an athlete's sample that is not a specified substance is a four-year period of ineligibility under Art. 10.2.1 of the Code. An athlete may establish that he or she acted unintentionally to reduce the standard period of ineligibility to two years (Art. 10.2.1.1 of the Code). An athlete may also bring evidence to show that his or her fault was not significant, in which case the period of ineligibility may be further reduced (Art. 10.6 of the Code).

In this context, close attention should be paid to how the Code defines intentional violation and lack of significant fault or negligence. Under Art. 10.2.3 of the Code, the term "intentional" identifies "those athletes or other persons who engage in conduct which they knew constituted an anti-doping rule violation or knew that there was a significant risk that the conduct might constitute or result in an anti-doping rule violation and manifestly disregarded that risk." This definition of an intentional violation set out in the Code is close to the direct and indirect intent under Russian criminal law.

Thus, in order to prove unintentional conduct, it may be not sufficient for an athlete to prove, on a subjective side, that he or she did not wish to use the prohibited substance, that he or she did not wish to enhance his or her sport performance, in other words, that he or she lacked direct intent. The athlete shall also prove that he or she was not indifferent to the probability of the prohibited substance entering his or her body — a requirement that immediately raises the burden of proof. Thus, the athlete shall demonstrate that he or she has taken certain actions to prevent any adverse analytical finding.

For example, in Kamila Valieva's case, in addition to the main version on the dessert contamination, the arbitrators also considered defensive scientific evidence and the athlete's statements. The scientific evidence, as the arbitrators concluded, was "entirely equivocal" and could support both intentional consumption and contamination versions. The athlete's witness claim standing alone was not sufficient, although the arbitrators "found her to be an honest, straightforward and

credible witness and her protestations of innocence believable." In the situation, where the athlete cannot find the original source of a prohibited substance, there are very limited means to fulfill the conditions of an unintentional violation, in accordance with the term described in Art. 10.2.3 of the Code.[36]

Then, the Code defines "No Fault or Negligence" as proving that athlete "did not know or suspect, and could not reasonably have known or suspected even with the exercise of utmost caution, that he or she had used or been administered the prohibited substance or prohibited method or otherwise violated an anti-doping rule." "No Significant Fault or Negligence" under the Code is proving that "any Fault or Negligence, when viewed in the totality of the circumstances and taking into account the criteria for No Fault or Negligence, was not significant in relationship to the anti-doping rule violation." In both cases, athletes other than protected persons and recreational athletes must establish how the substance entered their bodies.

Accordingly, proving an athlete's unintentional violation under Art. 10.2.1.1 and 10.2.3 of the Code to reduce the standard sanction from four years to two years will also tend to reduce the athlete's degree of fault under Art. 10.6 of the Code based on the criteria for "No Significant Fault or Negligence," as the standard of proof for lack of intent under the Code implies the accidental (unexpected) doping and demonstration of athlete's attentiveness to his or her surroundings, the products consumed, and other circumstances showing that the athlete cares about the any potential risks. In this regard, it is very likely that an athlete who proved a lack of intent under Art. 10.2.1.1 of the Code would be able to simultaneously reduce the sanction under Art. 10.6 of the Code, and the period of ineligibility would be less than two years.

As a result of such a regime, there is a significant gap in the length of the period of ineligibility between the group of cases where the athletes were unable to convince the arbitrators that their actions were unintentional and the group of violations where the athlete did provide some acceptable explanation: four years in one case and up to one month in the other.

[36] CAS 2023/A/9451 RUSADA v. K. Valieva, CAS 2023/A/9455 ISU v. K. Valieva and RUSADA, CAS 2023/A/9456 WADA v. RUSADA and K. Valieva, award of 29 January 2024.

III.6. Discretion of the Judicial Authority in the Imposition of Sanctions

Sixthly, it is left to the full discretion of the arbitrators to decide all matters relating to the imposition of a sanction, in particular in determining the sufficiency of the evidence to prove the unintentional violation. As I.A. Pokrovskiy noted, judicial discretion is a dangerous legal means that can significantly undermine confidence in the judicial power, so the more extensive the discretion of judges (arbitrators), the more fragile the legal system becomes (Pokrovskiy, 1998, pp. 89–106).

The drafters of the Code, in an effort to maintain a balance between the arbitrators' discretion and the precision of the rules, chose to differentiate between violations and sanctions by identifying elements of the objective side and special subjects (e.g., the use of substances of abuse or violations committed by a protected person) in order to cover the widest range of individualized situations possible.

However, at the most sensitive point, the subjective aspect of one of the main groups of cases (the presence of a non-specified substance), the arbitrators' discretion to determine whether the violation was intentional or unintentional and the athlete's degree of fault decides the athlete's fate. Any further differentiation introduced by the Code with respect to the other elements of the violations that are not related to the subjective side of the violation does not enhance fairness when its underlying problem of unequal treatment of similar cases remains unresolved.

The unequal treatment of similar cases can be demonstrated in the cases of Jannik Sinner and Mariano Tammaro.[37] In the case of Jannik Sinner, the athlete claimed that the prohibited substance entered his body as a result of his physiotherapist treating a wound on the physiotherapist's finger with the "Trofodermin" spray containing clostebol and then performing physio-procedures on the athlete. In Mariano Tamma-

[37] ITIA. Independent tribunal rules "No Fault or Negligence" in case of Jannik Sinner. Available at: https://www.itia.tennis/news/sanctions/independent-tribunal-rules-no-fault-or-negligence-in-case-of-italian-player-jannik-sinner/ [Accessed 15.04.2025]; Arbitration CAS 2022/A/9141 Mariano Tammaro v. International Tennis Federation (ITF), award of 7 November 2023.

ro's case, a father used the "Trofodermin" spray on the player without his consent to treat a wound.

The similarities of circumstances are as follows: Jannik Sinner and Mariano Tammaro are both Italian tennis players who had low levels of clostebol in their samples, the clostebol entered their bodies due to the fault of their entourage, and the source of contamination was "Trofodermin." The key differences of cases are as follows: at the time of the sample collection, Jannik Sinner was a top-ranked player, and Mariano Tammaro was a beginning young professional player who participated in his first tournament in the professional tennis tour; the physiotherapist, whose fault led to the contamination of Jannik Sinner's sample, was high-professional and had worked for a professional basketball team for six and a half years prior, and the parents of Mariano Tammaro were not professional; Jannik Sinner chose his staff and assigned the physiotherapist to render medical assistance, and Mariano Tammaro did not choose his entourage and appointed his parents as medical staff; in Jannik Sinner's case, the adverse analytical finding was reported twice, in two samples, and Mariano Tammaro tested positive only once; in Jannik Sinner's case, there was cross-contamination (the spray was used on the physiotherapist's finger and contaminated the player via a skin-to-skin contact), and, in Mariano Tammaro's case, there was a direct use of the spray on the player.

In the case of Jannik Sinner, the ITIA ruled that no period of ineligibility is to be imposed, and then it was agreed on a three-month period of ineligibility. In the case of Mariano Tammaro, the ITIA ruled that two years of ineligibility is to be imposed, and then the CAS reduced the period of ineligibility to 15 months. Such an assessment of the circumstances and the imposition of sanctions appear highly arguable at least. Given the huge difference in the period of ineligibility in the cases (no period at all and two years in the first instance), it appears that the standard of conduct and caution required of a professional athlete and his professional team (Jannik Sinner) are much lower than that required of a 17-year-old beginner professional athlete and his parents (Mariano Tammaro).

Furthermore, the arbitrators emphasised different circumstances. In the case of Jannik Sinner, the arbitrators did not take into account

that the physiotherapist's conduct constituted gross negligence: he had professional experience and knowledge; he could not have been unaware of the possibility of contamination with "Trofodermin," as the contaminating effect of this product on the athletes' samples should be well-known, especially in Italy, where it is widely used (De la Torre et al., 2020); he applied the product while assisting the player and being a part of his team during the tournament; he did not wash his hands before the physio-procedures to prevent contamination, etc. By contrast, in the case of Mariano Tammaro, arbitrators indicated that the player should ask his father what he had applied and how he had made sure that the anti-doping measures were complied with; should carefully examine the bottle of spray and research the term "clostebol," consult his sports doctor and his coach, etc.

However, even if it is cross-contamination in Jannik Sinner's case and direct contamination in the case of Mariano Tammaro, or there are other slight differences in the circumstances of the cases, including the credibility of athletes' versions, a two-year gap of ineligibility simply cannot be fair. It shall be remined that two years of ineligibility also separate intentional anti-doping rule violations (in case of the presence of a prohibited substance in a sample) from non-intentional ones. So, the modern anti-doping system and the Code rules allow arbitrators to make such decisions in very similar cases, in which the difference in sanctions between the two close types of non-intentional conduct is comparable to the difference between intentional and non-intentional violation.

As I.A. Pokrovskiy pointed out on the issue of judicial discretion: "The problem remains a problem, but only it is shifted to the shoulders of individual judges and their responsibility. Where the legislator should have thought more carefully, individual judges must now think [...]. If the theory of free law-making by judges contains in itself an organic and irremovable danger of judicial discretion, if it elevates the uncertainty and vagueness of law to a principle, it obviously runs counter to the interests of the developing human personality. This latter can tolerate many restrictions on its freedom, if they are established by law and if they are clear, but it cannot tolerate dependence on anyone's discretion, even if it be the most benevolent. The desire for strict

legality is as indispensable a feature of the developing civil law as of the developing public law, and no judicial 'transpersonalism' can suppress this desire" (Pokrovskiy, 1998, pp. 104–105).

III.7. Political and Legal Factors Determining the Management of the Anti-Doping System

Seventhly, the political and legal factors determining the way in which the WADA administers the anti-doping system remain important in the context of fairness. Thus, in 2013, a working group established by WADA, with the participation of the first WADA president (Richard Pound), made a report entitled "The Lack of Effectiveness of Testing Programmes."[38]

While the working group identified many individual weaknesses in the anti-doping system, a significant number of these were limited to the low level of interest by all stakeholders in the system, e.g., international sports federations, national anti-doping organizations, athletes, public authorities and others, in conducting and improving anti-doping. The main conclusion of the working group, placed at the beginning of the report, was as follows: "The real problems are the human and political factors. There is no general appetite to undertake the effort and expense of a successful effort to deliver doping-free sport. […]. It is reflected in low standards of compliance measurement (often postponed), unwillingness to undertake critical analysis of the necessary requirements, unwillingness to follow-up on suspicions and information, unwillingness to share available information and unwillingness to commit the necessary informed intelligence, effective actions and other resources to the fight against doping in sport."[39]

The dilemma expressed in the WADA working group report has haunted the anti-doping system since its inception. On the one hand, part of the public voices insists, for various reasons, that the sports community itself must vigorously combat doping in sport: for States, anti-doping becomes a political means of deterring other States from

[38] Available at: https://www.wada-ama.org/en/resources/lack-effectiveness-testing-programs [Accessed 15.04.2025].

[39] Lack of Effectiveness of Testing Programmes. P. 3.

taking unfair advantage in the training of athletes; the medical community worries about the uncontrolled use of potentially dangerous drugs; the mass media have an interest to report high-profile doping stories and, therefore, discuss, from different points of view, the prohibition on doping (Orlov and Gali, 2023; Gali, 2023). On the other hand, not all actors in the anti-doping system, including in the sports community, are willing to equally make the efforts in the fight against doping, nor do they recognize the need for a universal anti-doping system. And, as historical experience shows, the very existence of the anti-doping system is dependent on "doping scandals" that cause a wide public outcry. It can be noted that the rounds in the development of the legal framework for anti-doping are linked to such scandals, for example, the tragic deaths of cyclists in the 1960s led to the birth of anti-doping regulation, and the 1998 Tour de France scandals led to the creation of the WADA and modern anti-doping system (Orlov and Gali, 2023, pp. 291, 303). In a 2013 interview, which marked the 25th anniversary of the Ben Johnson scandal at the 1988 Olympics, WADA's first president, Richard Pound, in response to a reporter's question, unequivocally indicated his hope that sports community would be shaken by a doping scandal (a "seismic shock") because it would bring attention to the need to fight doping in sport.[40] Some time after this interview, in December 2014, a film by Hajo Seppelt was shown,[41] which served as the occasion for the start of a long doping scandal in the Russian sport that, in turn, lead to the series of reforms in the anti-doping system and increased public attention.[42]

These observations may lead to the view that WADA's management of the anti-doping system the way it has been established since the early 2000s is based on the recognition of three political and legal factors: the declining trend in public interest in anti-doping, the need for regu-

[40] Ben Johnson: catching up with a fallen hero. Available at: https://www.cbc.ca/news/ben-johnson-catching-up-with-a-fallen-hero-1.1865773 [Accessed 15.04.2025].

[41] Oltermann, P. Russia accused of athletics doping cover-up on German TV. Available at: https://www.theguardian.com/sport/2014/dec/03/russia-accused-athletics-doping-cover-up-olympics [Accessed 15.04.2025].

[42] Progress of the Anti-Doping System in Light of the Russian Doping Crisis. Available at: https://www.wada-ama.org/sites/default/files/20190122_progress_of_the_anti-doping_system.pdf [Accessed 15.04.2025].

lar doping scandals to sustain such an interest, and the simultaneous maintenance of WADA's legitimacy.

If States and the sports community, which implement the anti-doping policy and are the sources of funding for the WADA, are not sufficiently interested in the fight against doping, there is a risk that the global anti-doping system established at the beginning of the 21st century will begin to break down and that the WADA and its officials will lose influence and resources, including funding.[43]

The principle of strict liability itself ensures that anti-doping organizations will always have doping cases and the athlete will be found guilty, even if there is no guilt. Thus, the risk that the WADA and other anti-doping organizations will be accused by anyone of failing to prosecute anti-doping rule violations, decreases. However, the principle of strict liability can also lead to undesirable consequences for the system, to an excessive number of doping cases that will demonstrate that, despite the funding and support it receives, the WADA is unable to effectively combat doping.

The WADA therefore requires legal tools to flexibly manage the anti-doping system so that doping scandals can be controlled. Such tools, including the ways to ensure confidentiality of sensitive information, have been demonstrated in the cases of Jannik Sinner, Iga Swiatek and the Chinese swimmers.

The Code and the WADA International Standards also contain a number of provisions that allow the WADA and anti-doping organizations to prevent independent arbitration from interfering with a case and avoid unwanted publicity. So, under Art. 12.3.3 of the ISTI, an anti-doping organization may internally decide not to bring forward proceedings against the athlete or other person asserting the commission of an anti-doping rule violation and shall submit that decision to the WADA and international sports federation for them to determine whether they should be appeal against it. If there is no appeal, then the information on the case remains confidential. From WADA's explanations, it seems that this provision was applied in the case of twenty-three Chinese swimmers.

[43] On the problems of WADA legitimacy see also: Bondarev et al., 2021.

Article 10.8.2 of the Code allows the parties, with WADA's involvement, to enter into a case resolution agreement, choosing the applicable sanction. This provision was applied in the case of Jannik Sinner. Under Art. 10.7.1.2 of the Code, the WADA also has the discretion not to impose sanctions when the athlete has provided substantial assistance in the finding of anti-doping rule violations. The WADA may also, in exceptional circumstances, agree on no mandatory public disclosure in response to substantial assistance. Furthermore, for WADA's decisions under Art. 10.7.1.2, 10.8.2 of the Code, it is expressly provided that they are not subject to appeal to an independent arbitration.

Given other advantages that the WADA has by virtue of the Code (the unlimited right to appeal — Art. 13 of the Code, the right to take possession of samples — Art. 6.8 of the Code, the absence of external controls, etc.), it is able to manage the adjudication process at all stages. For example, stakeholders commenting on the 2027 Draft Code also drew attention to a factor that is not mentioned in the Code, but in practice puts the WADA and a number of other anti-doping organizations in an advantageous position, such as the absence of a full and consolidated database of the CAS decisions in anti-doping cases in the public domain.[44] Together with WADA's broad rights in other areas of anti-doping regulation — for example, it is noted in the academic literature that the procedure of adding new substances and methods on the Prohibited List lacks in transparency (Norboeva and Zakharova, 2023) — WADA is able to exert a significant influence on the global anti-doping agenda.

IV. Conclusion

Thus, the Code currently creates a legal system where:

— the principle of strict liability applies;

— independent oversight is insufficient, including judicial oversight, of the actions of the WADA and other anti-doping organizations during the investigation;

[44] Stakeholder Comments. 2027 Code and International Standard Update Process: Stakeholder Consultation Phase — World Anti-Doping Code.

— the role of anti-doping organizations has an accusatory bias, and there is no separation between investigative and prosecutorial functions;

— there is no clear separation of norm-setting powers, executive and judicial powers in the anti-doping system;

— the court (arbitration court) has no task to assist in the establishment of material (objective) truth, including in the collection of evidence;

— an imbalance in the imposition of a period of ineligibility (within the subjective side) creates a serious gap between the sanctions imposed (ranging from one month to four years) for athletes who have met the burden of proof in relation to the non-intentional violation and athletes who cannot meet the high burden of proof;

— there is free discretion of the court to decide whether to impose sanctions and how long the period of ineligibility shall last, taking into account the subjective elements (fault) of the violation;

— the WADA has a broad ability to manage the adjudication process while keeping some of the details of the process inaccessible to the public and avoiding the intervention of an independent arbitration.

In such circumstances, even if the WADA and the anti-doping organizations act with complete independence and impartiality in all circumstances, the fairness of the anti-doping system still would be in doubt because there is insufficient "visibility" of that fairness — there is a lack of legal mechanisms to ensure that the system treats the same cases equally.

In this regard, the World Anti-Doping Program is currently in need of serious improvement. The adjudication of anti-doping rule violation could be improved in the following ways, among other things:

— implementing the principle of substantive (objective) truth;

— requiring courts (arbitrators) and anti-doping organizations to assist the athlete's side in gathering evidence and finding not only aggravating, but also mitigating circumstances;

— strengthening the independent judicial (arbitration) oversight over the actions of an anti-doping organization during the investigation and pre-hearing stages;

— increasing transparency of the results management process in such a manner that will be equal in relation to all athletes and anti-doping organizations so that they could not make unjustified exceptions in favor of certain athletes;

— modifying the regime of sanctions to narrow the gap between similar cases and distinguishing in a fairer manner situations, where (1) the intent is proven, (2) the lack of intent is not proven but the intent also is not proven, and (3) the lack of intent is proven;

— including in the Code clearer criteria for reducing a period of ineligibility; and

— establishing stricter control over the actions of the WADA itself, for example, through creating an independent oversight body or extending the right of stakeholders to appeal against WADA's actions in court (in arbitration).

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Received 19.02.2025
Revised 14.03.2025
Accepted 26.03.2025

NATIONAL PROBLEMS IN IMPLEMENTING CONSTITUTIONAL LAW

Article

DOI: 10.17803/2713-0533.2026.1.35.216-236

State of Emergency in a Caretaker Government (Iraq Constitution of 2005)

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Abstract: A state of emergency is one of the most important constitutional tools used by States to confront serious threats to security and public order, such as wars, disasters, or internal unrest. Article 61/Ninth of the Iraq Constitution of 2005 regulates the state of emergency. The Council of Ministers, in agreement with the President of the Republic, is authorized to declare it and present it to the Council of Representatives for approval by a two-thirds majority. However, the problem arises when a caretaker government exists, a government with limited powers according to Iraqi constitutional custom and rulings of the Federal Supreme Court. Its mandate is limited to managing daily and routine affairs, without making fateful or strategic decisions, such as requesting the declaration of a state of emergency. This is a fundamental decision that exceeds its limited authority. Furthermore, a state of emergency is characterized by its exceptional nature, and its declaration requires the presence of a government with full powers, as it affects fundamental rights and freedoms and has serious repercussions for the state's authorities. Since this government lacks full mandate and is constitutionally prohibited from requesting the declaration of a state of emergency, this research discusses how to deal with crises that occur during the term of

this government, and presents some constitutional and legal solutions and legitimizes the decisions, procedures, and material and legal measures taken by this government to confront exceptional circumstances. Therefore, the research aims to balance the necessity of protecting the entity of the State and respecting constitutional principles and guaranteeing rights and freedoms.

Keywords: caretaker government; emergency; Iraq Constitution; exceptional legitimacy

Cite as: Motleb, M.N., (2026). State of Emergency in a Caretaker Government (Iraq Constitution of 2005). *Kutafin Law Review,* 13(1), pp. 216–236, doi: 10.17803/2713-0533.2026.1.35.216-236

Contents

I. Introduction 217
II. The Concept of a State of Emergency 221
II.1. The Legal Definition of a State of Emergency 221
II.2. Characteristics of a State of Emergency 223
III. The Concept of a Caretaker Government 224
III.1. Definition of a Caretaker Government 224
III.2. Cases of the Government Becoming a Caretaker Government 226
IV. The State of Emergency: between Restriction and Necessity in a Caretaker Government 229
IV.1. Justifications for Restricting a Caretaker Government from Declaring a State of Emergency 230
IV.2. Justifications for Declaring a State of Emergency in a Caretaker Government 231
V. Conclusion 233
References 234

I. Introduction

The legislative and executive branches of the Republic of Iraq cooperate to address exceptional circumstances through the declaration of a state of emergency. If the declaration is approved by the legislative branch, the actions of the executive branch remain subject to legislative oversight. This is because, in a parliamentary system, the executive branch derives the legitimacy of its ordinary and extraordinary actions

from the confidence granted to it by the legislative branch. However, in some cases, the relationship between the two branches is severed, and with it, the legal basis granted to the executive branch. This limits its actions to maintaining the status quo and ensuring the continuity of public services, while avoiding actions that would require actual oversight. Nevertheless, exceptional circumstances necessitate that a caretaker government address the situation, even if these actions deviate from the principle of legality, because preserving the State's integrity and public order takes precedence over legal texts designed to serve society.

Previous Studies. The researcher reviewed a number of scientific literature that contributed to clarifying the theoretical aspect of the research.

1. Yasser Atiwi Aboud Al-Zubaidi. Problems of Assigning the Interim Prime Minister the Duties of Managing Daily Affairs According to the 2005 Constitution of the Republic of Iraq.

This study clarifies the constitutional gaps regarding the powers and limits of a resigned government, focusing on legal oversight of exceptional decisions. It is essential for understanding the interim government's ability to declare or manage a state of emergency within the constitutional framework.

2. Aqeel Taki Saleh Al-Aridhi: The Duration of a Caretaker Government and the Legal Implications of Exceeding its Term. This study examines the impact of the caretaker government's duration on the legitimacy of decisions, highlighting legislative and judicial oversight. It clarifies the relationship between the continuation of the caretaker government and the limits of its ability to make emergency decisions, a significant new development in this research.

3. Zahraa Abdul-Hafiz Mohsen and Majid Majhoul Darwish: The Caretaker Government in Iraq: Legislation and Practice. This study analyzes the legislative and practical aspects of a resigned government, focusing on the legal and political challenges of executive decisions. It helps to understand the practical constraints that a government may face when managing emergency situations.

4. Nuha Hadi Talib: The Relationship of a Caretaker Government with Other Authorities in Light of the 2005 Constitution of the Repub-

lic of Iraq. This study clarifies parliamentary and judicial oversight of a resigned government and the limits of its powers, especially in exceptional circumstances. It provides a general framework for determining the legitimacy of exceptional measures during a state of emergency.

While previous studies are important in clarifying the constitutional framework of a caretaker government, this research differs in the following points.

1. It focuses solely on the developments of a state of emergency within a caretaker government, an aspect not directly addressed in previous studies.

2. It analyzes the relationship between the duration of a caretaker government and the limits of its ability to make exceptional decisions, linking this to the practical reality of governance in Iraq after the 2005 Constitution.

3. It proposes clear constitutional solutions to address the legal vacuum in a state of emergency, adding legal value to the research and making it more contemporary and original compared to previous studies.

4. It provides a comprehensive view of the constitutional and regulatory constraints on a resigned government when managing crises, which represents a new area of knowledge that has not been emphasized in previous studies.

The importance of this research lies in the novel insights it offers by monitoring and analyzing recent constitutional and practical developments in Iraq related to regulating the state of emergency during a caretaker government period, according to the 2005 Constitution. These are developments that have not been addressed in depth in previous studies and can be highlighted as follows.

1. Increased Transitions to a Caretaker Government: in recent years, Iraq has witnessed repeated instances of the executive branch assuming a caretaker government status due to political crises and the obstruction of government formation. This reality has raised scholarly questions about the extent to which a government with limited powers can declare or manage a state of emergency.

2. Emergence of Constitutional Interpretations from the Federal Court: recent rulings issued by the Federal Court have restricted the

powers of a resigned government, but they have not explicitly defined how it should deal with a state of emergency. These developments have created an interpretative gap, which is one of the most important novel insights addressed by this research.

3. The absence of explicit regulations for declaring a state of emergency within the powers of a caretaker government: the Iraqi constitutional reality reveals that the 2005 Iraq Constitution did not differentiate between fully empowered governments and transitional governments regarding the declaration of a state of emergency. This absence has become more serious with the expansion of caretaker governments, a fundamental development that this research attempts to analyze and define its limits.

4. A new conflict between the necessities of national security and the constraints of a caretaker government: security events (terrorism, internal conflicts, political tensions) have demonstrated the State's occasional need to activate a state of emergency during periods of power transition. This represents a modern dilemma between security requirements and the daily constraints of government, a matter that has only been addressed marginally.

5. The growing need for a legislative framework regulating the relationship between a state of emergency and a caretaker government: political developments in Iraq have demonstrated an urgent need for specific legislation or a constitutional amendment that clearly defines the limits of the transitional government's powers in exceptional circumstances.

6. The scarcity of specialized Iraqi studies on the subject: this topic represents a genuine research gap. Since most studies have addressed emergencies in general, or their powers in general, without integrating the two frameworks, this research presents a novel scientific approach by linking emergencies with the caretaker government within the Iraqi context.

The main problem addressed in the present research is that the 2005 Iraq Constitution established a constitutional framework for declaring a state of emergency and specified the entities authorized to exercise these powers, but it did not clearly address the extent to which a caretaker government could exercise these exceptional powers. The

problem arises from the absence of explicit provisions defining the limits of temporary executive authority in critical circumstances. This leads to a conflict between the necessity of confronting the emergency and the restrictions imposed on the caretaker government, which is supposed to have a clearly defined mandate.

Therefore, the research problem is summarized in the following question: does the caretaker government possess the authority to declare a state of emergency according to the 2005 Constitution, and to what extent is its exercise of this authority legitimate given the ambiguity of the constitutional text and the multiplicity of political and legal interpretations?

Research Methodology. In our research on the state of emergency in a caretaker government (Iraq Constitution of 2005), we adopted an analytical approach. We analyzed the relevant constitutional texts, as needed by the research topics, to identify shortcomings, and it is divided into three sections. The first addresses the concept of a state of emergency, the second the concept of a caretaker government, and the third examines the state of emergency in terms of restriction and necessity within a caretaker government.

II. The Concept of a State of Emergency

Interest in the concept of a state of emergency has grown, given that exceptional circumstances are expected in today's world. Addressing these circumstances requires the executive authority to possess broad powers. Due to the seriousness of this matter, it is necessary to understand the concept of a state of emergency. This requirement is divided into two sections: the first addresses the legal definition of a state of emergency, while the second examines its characteristics.

II.1. The Legal Definition of a State of Emergency

Iraqi law defines a state of emergency as "a situation in which the Iraqi people are exposed to a grave and imminent danger that threatens individuals' lives, arising from a continuous campaign of violence by any number of people that prevents the formation of a broadly rep-

resentative government in Iraq, disrupts the peaceful political participation of all Iraqis, or serves any other purpose."[1]

In the French Emergency Law No. 3 of 1955 (Art. 1), it was defined as "the situation in which French territory, in any part thereof, or in Algeria or its overseas territories, is exposed to an imminent danger resulting in serious attacks on public order, or when events occur that, by their nature and gravity, constitute public disasters." Similarly, Art. 1 of Egyptian Emergency Law No. 162 of 1958 defined it as "the situation in which security and public order in the territory of the Republic, or a region thereof, are endangered, whether due to the outbreak of war, the existence of a situation threatening war, internal disturbances, public disasters, or the spread of an epidemic."

What concerns us in this research is the analysis of the Iraqi law, which provides an imprecise definition. The phrase "imminent and grave danger" is broad in meaning and gives the executive authority very a wide scope of powers to invoke and declare a state of emergency, especially since the sources of danger are not listed exhaustively. Furthermore, it indicates that the source of the danger the justification for declaring a state of emergency must be a threat to individuals' lives. This raises questions, as is the question of whether the State is responsible for the lives of individuals but not their property?

Furthermore, the phrase "continuous campaign empties the concept of imminent and grave danger" of its meaning. A state of emergency cannot be declared immediately upon the occurrence of a danger unless one waits until the act constituting the danger becomes continuous. This is illogical and unreasonable, as confronting exceptional circumstances requires a swift and decisive action before undesirable consequences arise. Therefore, waiting for the danger to become continuous while simultaneously waiting for the completion of constitutional declaration procedures makes it impossible to overcome the exceptional situation.

In addition, the continuation of the campaign of violence must be by any number of people to prevent the formation of a broadly representative government in Iraq... or for any other purpose. The legislator has

[1] Art. 1of National Safety Defense Order No. 1 of 2004.

defined the source of the danger as individuals, excluding other risks such as disasters and epidemics. Moreover, the legislator has prioritized declaring a state of emergency to protect political affairs, while the rights and freedoms of individuals should be the primary consideration.

II.2. Characteristics of a State of Emergency

A state of emergency is based on several characteristics, which will be discussed in the following paragraphs.

1. Exceptional legitimacy. The importance of addressing the exceptional circumstance has given the state of emergency its exceptional legitimacy, both legally and judicially. Legally, it finds its basis in the Constitution (Morsi, 2009, p. 179) or ordinary legislation.[2] This includes specifying the necessary guarantees to prevent infringement on rights and freedoms. Therefore, any measure taken by the authority implementing the state of emergency finds its basis in the Constitution or the law, and this is one element of exceptional legitimacy. In the judiciary, the Federal Court of Cassation addressed the content of the state of emergency by compensating the owner of land seized by the State for the purpose of establishing camps for displaced persons when ISIS (Islamic State in Iraq and Syria) occupied cities in Salah al-Din.[3]

2. The fundamental independence of a state of emergency. The state of emergency cannot be granted exceptional legitimacy unless there are rules regulating the work of the legislative and executive authorities in ordinary and exceptional circumstances. The reason for the distinction is that the rules designed to govern ordinary circumstances are insufficient to govern exceptional circumstances. Here, the urgent necessity to preserve the safety of the State and individuals, as well as the continuity of public services, dictates the creation of new exceptional rules that are completely different from the rules of ordinary provisions, possessing their own inherent independence to govern extremely serious circumstances (Al-Akeeli and Al-Dhaheri, 2017, p. 64).

[2] National Safety Defense Order No. 1 of 2004.

[3] Federal Court of Cassation Decision No. 5238/Civil panel/2019. Available at: www.sic.ig. [Accessed 15.10.2024].

3. Temporary application. A state of emergency is established to address an exceptional circumstance. Naturally, its existence and cessation are contingent upon the exceptional circumstance. Accordingly, the relevant legislation agrees on the duration of its declaration, implementation, and extension. The declaration of a state of emergency typically specifies its duration, after which it automatically expires unless there is a sufficient reason or justification compelling the ruling authority to extend it according to specific rules, whether stipulated in the constitution or ordinary laws. In this regard, for example, we find Art. 61/9/b of the 2005 Constitution of the Republic of Iraq, which is currently in force, stating: "A state of emergency is declared for a period of thirty days, renewable with approval each time." However, while this text specifies the duration of its application, it is criticized for not outlining the rules to be followed in the event of its extension.

III. The Concept of a Caretaker Government

One of the most prominent constitutional issues surrounding this concept, which remains unresolved, is the lack of a clear definition of a "caretaker government" in the 2005 Constitution of the Republic of Iraq. This includes the circumstances under which a government transitions to this status and its impact on addressing exceptional circumstances during its term. To clarify this, the discussion will be divided into two sections: the first will define a caretaker government, and the second will address the circumstances under which a government becomes a caretaker government.

III.1. Definition of a Caretaker Government

This government is defined as "a change in the legal status of the existing government from a government with full constitutional powers to one with limited powers, resulting from constitutional practices stemming from political realities. Its primary task is to ensure the continuity of public services and to maintain the government within the framework of existing legal systems and rules, without creating or amending those systems (Misrup, 2019, p. 92).

This definition adopts a narrow understanding of a caretaker government, limiting its actions to daily matters that maintain the uninterrupted operation of public services to meet public needs. This definition does not include urgent or emergency matters within the scope of caretaker government."

Odent defined it as "all actions that do not involve difficulties or significant political or legal choices" (Lachaize, 1952, p. 65). This definition is criticized for restricting the concept of "ongoing actions" by stipulating that they must be actions that manage public facilities and that they do not expose the responsibility of its ministerial members, as it no longer enjoys the confidence of Parliament and is no longer capable of making important political decisions (Badr, 2003, p. 599). It is worth noting that this government is based on an undefined concept. The government may be bound to its specific term, regardless of the actions it undertakes, whether ordinary or of paramount importance, or its actions may be limited to daily tasks within that term.

The Iraqi Council of Ministers' Internal Regulations No. 2 of 2019 define its actions as "taking decisions and measures that cannot be postponed and that ensure the continued and regular operation of state institutions and public facilities. This does not include, for example, proposing draft laws, contracting loans, appointing and dismissing individuals from senior state positions, or restructuring ministries and departments."[4]

It is noteworthy that the definitional phrases are broad in meaning, thus removing any legal impediment to this government declaring a state of emergency. The first part states, "Taking decisions and measures that cannot be postponed... ensuring the continued functioning of state institutions." This applies to a state of emergency, which cannot be postponed, as addressing an exceptional circumstance requires speed and decisive action, and is essential for the continuity of public services. Furthermore, this is not among the actions listed in the definition. However, the Iraq Constitution of 2005 makes only a brief reference to a caretaker government.[5] When compared to the constitutional text

[4] Art. 42/Second of the Internal Regulations of the Iraqi Council of Ministers No. 2 of 2019.

[5] Art. 61/Eighth/D and 64/Second of the 2005 Iraq Constitution.

regulating the declaration of a state of emergency.[6] It becomes impossible for this government to declare a state of emergency, as indicated by Art. 13/First, which stipulates the invalidity of any text or procedure that contradicts the provisions and articles of the Constitution.

Between the law and the constitution, the Federal Supreme Court ruled that a caretaker government does not have the authority to declare a state of emergency. The court interpreted the phrase "daily affairs" and defined the government's powers and the nature of its decisions. It concluded that this means "a government that has transitioned from a normal government with full powers to one with limited powers, tasked with managing daily affairs, including decisions and actions necessary for the continued operation of public services. This does not include decisions with political motivations that significantly impact Iraq's political, economic, and social future, nor does it include proposing draft laws, contracting loans, appointing or dismissing officials from senior government positions, or restructuring ministries and departments."[7]

However, it would have been more appropriate for the Federal Supreme Court to grant the caretaker government the authority to address urgent or exceptional matters that cannot be postponed. While this government may not be constitutionally granted full authority, practical considerations dictate that it must address the situation, as it is the closest to it and best positioned to respond to the needs of the situation if the exceptional circumstance is left unaddressed. Since there are no constitutional or legal texts to rely on, this would endanger the State and its public order. Therefore, a balance must be struck between a caretaker government and declaring a state of emergency to avoid a constitutional vacuum that could expose the State to danger.

III.2. Cases of the Government Becoming a Caretaker Government

It is natural that the relationship between the legislative and executive branches in a parliamentary system does not proceed at a consistent pace. If this relationship is disrupted, the result may be the transfor-

[6] Art. 61/Ninth of the 2005 Iraq Constitution.

[7] Federal Court Decision No. 121/Federal/2022 dated 17 May 2022. Available at: https://www.iragfsc.ig [Accessed 23.10.2024].

mation of the Council of Ministers into a caretaker government. This is not the only instance of the Council of Ministers becoming a caretaker government. There are some exceptional circumstances that the Council may face that hinder its ability to perform its duties according to the principles of the parliamentary system, leading the Council of ministers to the same outcome.

To fully understand the above and its relationship to declaring a state of emergency, we must divide this section into two parts. The first will address the legal cases, and the second will address the exceptional cases.

I. Legal cases. The Iraq Constitution of 2005 and the Internal Regulations of the Council of Ministers No. 2 of 2019 stipulate the legal cases in which the Council of Ministers becomes a caretaker government.

1. Political responsibility. If the legislative authority uses its power to withdraw confidence from the entire Council of Ministers, the Prime Minister and the ministers continue in their positions to conduct daily affairs for a period not exceeding (thirty days) until confidence is granted to the new Council of Ministers.[8] Since the confidence granted to the Council of Ministers is the basis of the actual oversight required for declaring a state of emergency, as it restricts the Council when using its exceptional powers during a state of emergency, withdrawing it renders oversight useless from a legal and political standpoint, and is limited to its moral value (Adel, 2022, p. 9). Moreover, the work of the Council of Ministers in this case is separate from the head of State, and this is completely contrary to the condition of the request to declare a state of emergency signed by the President of the Republic and the Prime Minister.[9]

2. Dissolution of Parliament. Upon the dissolution of Parliament, the government becomes a caretaker government until a new Parliament is elected and grants confidence to the new government.[10] This is to prevent the executive branch from being in a stronger position than the legislative branch (Shiha, 1987, p. 416). Just as the dissolution weakens the latter's powers, the former must be similarly weakened.

[8] Art. 61 and 76 of the 2005 Iraq Constitution.

[9] Art. 61/A of the 2005 Iraq Constitution.

[10] Art. 64/Second of the 2005 Iraq Constitution.

Furthermore, the legislature has defined the legal status during the period from the issuance of the dissolution decree until the election of the new Parliament. This status entails the cessation of Parliament's constitutional functions, namely legislation and oversight. The Federal Supreme Court confirmed this in its Decision No. 121 of 2022, when interpreting the term "caretaker government," stating that the same ruling that applies to the Council of Ministers also applies to Parliament. Thus, the powers of both branches are extinguished upon the dissolution of Parliament (Adel, 2022, p. 9). If the constitutional provisions and the Federal Supreme Court's decision are consistent with normal circumstances, how can the state possibly cope with exceptional circumstances when the powers of both branches are simultaneously stripped away.

II. Exceptional Circumstances. The Council of Ministers may encounter exceptional circumstances that transform it into a caretaker government. To clarify the details of this and its relation to a state of emergency, we must address it in two separate sections as follows.

1. Expiration of the Parliamentary Term. Article 56 of the Iraq Constitution of 2005 stipulates that the term of the electoral term shall be four calendar years, commencing with its first session and ending at the end of the fourth year. Elections for the new Council of Representatives shall be held forty-five days before the end of the previous electoral term It is clear from the constitutional timeframes regulating the life of the parliamentary term and its transfer to the new council that a constitutional vacuum would occur if the specified timeframes were not followed. This is especially true if the legislative elections are delayed beyond their scheduled date, particularly since the council loses its representative capacity forty-five days before the end of the parliamentary term. This is because the constitutional provisions regulating the work of the Council of Representatives do not indicate the possibility of the outgoing council continuing to perform its duties until the new council convenes. This has been confirmed by the court of the federal government, in its response regarding the possibility of council members retaining their representative capacity,[11] stated in this case, the council would become a caretaker government.

[11] The Federal Court Decision No. 39/Federal/2009 dated 13 May 2009. Available at: https://www.iragfsc.ig [Accessed 25.10.2024].

2. Vacancy of the Prime Minister's Office. The Iraq Constitution of 2005 stipulates that "the President of the Republic shall assume the duties of the Prime Minister in the event of a vacancy for any reason.[12] It is clear from this that the Iraqi legislature deviated from the characteristics of a parliamentary system when it transferred the powers of the Prime Minister to the President of the Republic during the period required to form a new Council of Ministers, based on Article 76 of the Constitution. Since the head of State is not responsible, how can he assume the coordinating role between the branches of government? (Al-Ani, 2007, p. 39; Shabar, 2013, p. 173).

In this regard, it is necessary to point out the relationship of the Prime Minister's position being vacant to the declaration of a state of emergency, since parliamentary oversight is a fundamental pillar for its declaration. Therefore, it cannot be declared during that period, because the President of the Republic has assumed the role of the Prime Minister, and thus parliamentary oversight is negated during the implementation of the state of emergency, because the President of the Republic is held accountable according to specific limited cases.[13] Moreover, submitting the request to declare a state of emergency requires the approval of the President of the Republic and the Prime Minister. Accordingly, we find that the solution lies in amending the constitutional text so that the Deputy Prime Minister shall replace the President when the position is vacant.

IV. The State of Emergency: between Restriction and Necessity in a Caretaker Government

Undoubtedly, restricting a caretaker government to routine or ongoing business, and excluding urgent and exceptional cases that necessitate declaring a state of emergency, is based on several justifications. However, this places the State in a difficult position between the constitutional and legal rules governing the declaration of a state of emergency and the necessity of addressing exceptional circumstances.

[12] Art. 81/First of the 2005 Iraq Constitution.

[13] Art. 61/Sixth/B of the 2005 Iraq Constitution.

Therefore, a balance must be struck between the justifications for restriction and the necessity of declaring a state of emergency in a caretaker government. This requirement will be divided into two sections: the first will address the justifications for restricting a caretaker government's ability to declare a state of emergency, while the second will address the justifications for a caretaker government to declare a state of emergency.

IV.1. Justifications for Restricting a Caretaker Government from Declaring a State of Emergency

We conclude from the texts regulating the declaration of a state of emergency, and Federal Court Decision No. 121 of 2022, which includes an interpretation of daily matters, that the reason for excluding a state of emergency from the powers of a caretaker government is due to several justifications, including the following grounds.

1. The disruption of the principle of balance between the legislative and executive branches upon which the parliamentary system is based (Al-Tahrawi, 2008, p. 248; Al-Sayed, 2014, p. 25), the dissolution of the former or the expiration of its parliamentary term is a reason for the government to become a caretaker government. Therefore, it is impossible for it to be in a legally superior position to the legislative branch if it was granted the right to declare a state of emergency. Thus, the situation between the two branches must be similar; to the extent that the legislative branch is restricted in its constitutional powers, the executive branch must be similarly restricted.

2. The violation of the principle of the government's accountability to the legislative branch (Suleiman, 2010, p. 31; Shaber, 2012, p. 51). The situation that results in the government becoming a caretaker government due to the vacancy of the Prime Minister's position or a vote of no confidence is difficult to address with this, the government continues to rule without being accountable to the legislative authority. Therefore, the government's power must be limited to actions that do not incur political responsibility, confining them to the daily tasks required for the operation of public services.

3. The people are the source of authority, and members of the legislative authority are tasked with representing them. Therefore, it is impossible to allow a caretaker government to make critical decisions such as declaring a state of emergency before the people's representatives have expressed their views on a new, temporary way for society to function (Abdel-Mutaal, 2004, p. 357).

4. The absence of parliamentary oversight leads to the tyranny of the executive branch. It is impossible to grant it sufficient power to control without oversight in exceptional circumstances by declaring a state of emergency (Mahdi, 2017, p. 664). In other words, it is far removed from questioning and accountability, and out of respect for the people's representatives, its powers are restricted. This is what the Danish Constitution of 1953 adopted, as well as the Lebanese Constitution of 1926 (Ali, 2007, p. 338). It is worth noting that the Iraqi legislator limited the state of emergency to addressing exceptional circumstances, without providing a solution to the problem that prevents declaring a state of emergency when the government becomes a caretaker government. Therefore, it is necessary to address the justifications that give the latter the right to declare a state of emergency in order to avoid a constitutional vacuum in Iraqi legislation.

IV.2. Justifications for Declaring a State of Emergency in a Caretaker Government

Our aspiration for the Iraqi legislator is to include the state of emergency within the powers of a caretaker government, given its importance in addressing exceptional circumstances and resolving the constitutional vacuum during one of the legal and exceptional situations in which the government becomes in this state. The following justifications should be taken into consideration.

1. There is no need to restrict the government from declaring a state of emergency under the pretext of the balance between the two branches of government required in a parliamentary system. The legislative authority is in a better legal position than the executive authority when withdrawing confidence from the cabinet or when a resignation is submitted, and thus the argument for balance between them is negated.

2. The argument against granting a caretaker government the power to declare a state of emergency due to the absence of parliamentary oversight is invalid. Such oversight can be absent even with a regular government in place, as in case of postponed legislative sessions or the expiration of a legislative term. Furthermore, oversight becomes ineffective if the prime minister belongs to the parliamentary majority (Saeed, 2010, p. 54).

3. The representative character of members of the legislative authority is not lost with its dissolution or the expiration of its term, provided that appropriate mechanisms are adopted to approve the declaration of a state of emergency (through standing committees, the formation of the Federal Council, or a meeting of the legislative authority in cases of necessity). Thus, the people remain the source of power, and a caretaker government can declare a state of emergency after consulting with the people's representatives. Moreover, the government has not lost the confidence of Parliament, the people's representative body, and can therefore continue to exercise its powers, adhering to this principle. This is what some constitutions have adopted, including the German Constitution of 1949 (Badawi, 1971, p. 256).

4. Among the priorities of a caretaker government are the operation of public services and the maintenance of public order. This may not be achievable under laws designed for normal circumstances, thus necessitating the caretaker government declaring a state of emergency if it is the only option to preserve the safety of the State and its public order (Lauvaux, 1983, p. 330).

5. The concept of a caretaker government is not at all rigid, as it expands and contracts according to the circumstances the State is experiencing, especially exceptional ones that require protecting the State and preserving its public order (Al-Rifou, 2020, p. 138). This is what French jurisprudence has established, taking into account emergency situations that require immediate decisions, regardless of political and legal changes (Metwally, 1963, p. 226).

6. Given the need for continued administration and the management of daily affairs related to the public interest, the actions of a caretaker government are subject to the oversight of the administrative judiciary, but not to the political oversight exercised by the legislative

authority (Dyzenhaus, 2005, p. 65). This would be another means to address the absence of parliamentary oversight when a state of emergency is declared.

We conclude from the above that there are no justifiable reasons to exclude a state of emergency from the powers of a caretaker government, as the justifications for restricting the government's authority disappear when weighed against the justifications for the necessity of declaring a state of emergency.

V. Conclusion

1. The study showed that the Iraq Constitution of 2005 provides a legal framework for declaring a state of emergency, but it leaves some legal gaps regarding the caretaker government. The texts do not clearly define the limits of this government's powers in managing emergencies, which may lead to discrepancies in the understanding and application of procedures.

2. The results indicate that managing a state of emergency during a caretaker government faces significant practical challenges, including the lack of clear procedures for parliamentary oversight and the difficulty in distinguishing between the powers of the permanent government and the caretaker government that may weaken the efficiency of decision-making during the times of crisis.

3. It can be concluded that the current mechanisms for protecting fundamental rights during a state of emergency need strengthening, as some rights may be violated due to legislative ambiguity and the lack of clear provisions to ensure a balance between public security and citizens' freedoms.

4. The study highlights significant constitutional gaps concerning the legal duration of a state of emergency and the mechanisms for judicial and parliamentary oversight of the measures taken. This indicates the need for constitutional and legislative reforms to guarantee the protection of fundamental rights and prevent the government from exceeding its powers.

On the basis of the conclusions enumerated above the author formulates the following recommendations.

1. The study recommends that the powers granted to a caretaker government during a state of emergency be clearly defined and precisely formulated in the constitution or executive legislation to ensure there is no legal vacuum that could lead to disputes or misapplication of procedures.

2. The study recommends establishing effective oversight mechanisms by the parliament and the judiciary to ensure a balance between crisis management and the protection of citizens' fundamental rights, including monitoring exceptional decisions and verifying their legality.

3. The study recommends developing clear and practical plans and procedures for managing a state of emergency, encompassing security, administrative, and judicial aspects, so that the government can implement them quickly and efficiently while safeguarding fundamental rights.

4. The study recommends conducting comprehensive comparative studies with other countries' experiences in managing emergencies under a caretaker government to benefit from best practices of foreign States and avoid past mistakes.

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Received 18.08.2025
Revised 26.09.2025
Accepted 09.10.2025

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