

Received: 12 April 2026; Revised: 12 June 2026; Accepted: 13 August 2026; Published: 18 October 2026

Archs Sci. (2026) Volume 76(4), Pages 16-25, Paper ID 2026403.
<https://doi.org/10.68304/as/76403>

The Human Person within the Framework of Modern Constitutionalism: Historical-Legal and Functional-Technological Foundations and Principles

Ruslan Khvan¹, Mikhailo Baimuratov^{2,*}, Boris Kofman³, Denys Bobrovnyk⁴ and Yevhen Butyrin⁵

¹Candidate of Legal Sciences, an Employee of the National Tax Service of Ukraine in the Odesa Region, Odesa, Ukraine

²Doctor Habilitat of Legal Sciences, Professor, Department of Political Sciences and Law, Socio-Legal Faculty, South Ukrainian National Pedagogical University named after K.D. Ushinsky, Odesa, Ukraine

³Doctor Habilitat of Legal Sciences, Professor of the Department of Political Sciences and Law, South Ukrainian National Pedagogical University named after K. D. Ushinsky, Odesa, Ukraine

⁴Candidate of Economic Sciences, Department of Constitutional and Administrative Law, Faculty of Law, National Aviation University, Kyiv, Ukraine; Baimuratov and Partners Lawyer Alliance, Odesa, Ukraine

⁵Doctor of Juridical Sciences, Professor, Department of Social Work, Carpathian Institute of Entrepreneurship, Separate Structural Subdivision of the Higher Education Institution "Open International University of Human Development 'Ukraine'", Khust, Ukraine

Correspondence: baymuratov@ukr.net

Abstract The purpose of the study is to develop a model of human-centered adaptive constitutionalism through a detailed analysis of the historical and legal evolution of constitutional ideas concerning the human person. The research strategy integrates historical-legal, comparative-legal, systemic, and structural-functional approaches into a unified and comprehensive methodological framework. The documentary and normative source base comprises international legal instruments, documents of the United Nations, the Council of Europe and the European Union, and national legislation. The chronological scope of this comprehensive analysis extends over the period from the formation of classical constitutionalism in the eighteenth century through regulatory acts and doctrinal developments published between 2024 and 2026. The method of legal modeling was used to build the authors' concept; a forward-looking analytical approach was employed to assess the emerging trends in the further development of constitutionalism. The analysis finds that the normative focus of constitutional legitimacy is gradually shifting from the state toward the human person, individual rights, and human dignity. A comparative analysis of classical, social, global and digital constitutionalism has shown differences not only in the substantive protection and implementation of fundamental human rights, but also in the institutional and legal mechanisms for guaranteeing those rights. Traditional models were focused on limiting state power, while modern approaches increasingly seek to regulate digital platforms, algorithmic systems and transnational entities. The research demonstrates that significant risks to human rights arise not only within the field of traditional public administration, but also in the digital environment. A detailed structural architecture of human-centered adaptive constitutionalism is proposed, encompassing five closely interconnected dimensions of individual rights protection: constitutional, international, digital, algorithmic, and institutional monitoring mechanisms. The scientific novelty of the study lies in the combination of historical-legal, international-legal and digital-technological aspects within a single conceptual model. The findings and proposed conceptual framework may be used by legislators, constitutional review bodies, ombudsmen, and international institutions.

Index Terms constitutionalization, human-centered constitutionalism, international human rights standards, digital rights, functional-technological constitutionalism

I. Introduction

Contemporary developments in international law demonstrate a growing integration of legal processes that were previously understood and analyzed as largely separate and independent phenomena. Changes associated with globalization, accelerating digital transformation, and the growing influence of international institutions are fundamentally reshaping the traditional foundations of constitutional systems. The widespread use of algorithmic technologies has created a new

social and legal reality in which the forms of interaction between state institutions and individual persons are undergoing significant and far-reaching change. These developments also fundamentally reorient the logic of constitutional progress, which is increasingly assessed in terms of human dignity, personal security, and individual legal autonomy [1].

The relevance of the research stems from the fact that the classical concepts of constitutionalism were formed in the era of the predominance of a fundamentally state-centered legal

and political paradigm. Contemporary social and political reality is increasingly characterized by new and influential centers of regulatory and normative authority. In addition to the state, the implementation of fundamental human rights is increasingly influenced by international institutions, digital platforms, transnational corporations and artificial intelligence systems. This diffusion of regulatory power requires a reconsideration of the fundamental nature of constitutionalism and the development of updated approaches to defining the role of the individual within a complex, multilevel system of legal regulation [2], [3].

The fundamental problem lies in the lack of a holistic scientific model that would systematically integrate the historical and legal evolution of constitutionalism, modern international standards and the latest technological forms of exercising power. Most of the existing research considers these phenomena fragmentarily. Consequently, the mechanisms through which the constitutional legal order can adapt to challenges arising from digitalization, security threats, and globalization remain insufficiently understood and theoretically developed. This scientific gap necessitates the development of a human-centered model of adaptive constitutionalism.

II. Literature Review

Changes in the substantive scope and principal subjects of constitutionalism are increasingly attracting the attention of researchers specializing in both constitutional law and international law. Three interrelated issues are of greatest interest. The first concerns the changing status of the human person within the hierarchy of constitutional values. The second concerns the development and institutionalization of multilevel mechanisms for the legal protection of the individual. The third concerns the capacity of the constitutional legal order to respond effectively to digital transformation and ongoing challenges associated with globalization. In the foundational study by Thornhill [4], the evolution of constitutionalism is traced through an examination of the relationship between constituent power and the established constitutional legal order. The study demonstrates that contemporary constitutional processes can increasingly extend beyond the traditional boundaries of exclusively national legal regulation. Related aspects of this broader argument were developed by Wiener et al. [5], who identified human rights, democracy, and the rule of law as closely connected and defining components of contemporary global constitutionalism. Besson [6] proposes that human rights should be understood as an increasingly important category of transnational constitutional law. Her study focuses on the formation of a common normative space within which human rights play the role of a universal reference point for different legal systems. The reference work edited by Cremades and Hermida [7] brings together contemporary scholarly approaches to understanding constitutionalism and demonstrates that its scope is expanding to new segments of social relations.

Several recent scholarly publications have focused specifically on reconsidering the theoretical foundations and chang-

ing nature of constitutionalism in contemporary society. Thus, Tushnet [8] developed an analytical classification of different contemporary varieties of constitutionalism. Carrère [9] focused on the relationship between freedom, democracy and the republican model of constitutional development. Suchocka [10] identified a range of important challenges associated with contemporary crises, security risks and changes in the mechanisms of public power. Nedelsky [11] proposed a new view of constitutional development, expanding the traditional anthropocentric approach.

Another distinct and increasingly important direction of contemporary scholarly research concerns the constitutionalization of human rights. Deiak [1] conducted a theoretical and methodological analysis of these processes and determined their impact on the development of the modern legal order. Krusian [12] investigated the constitutional and legal freedom of man as a strategic goal of Ukrainian constitutionalism. Panforova [13] revealed the axiological principles of human rights and their significance for the development of modern democratic societies. Basalayeva [14] analyzed the constitutional mechanisms of citizen participation in the management of state affairs, which is directly related to the implementation of a human-centered approach.

The rapid digital transformation of constitutional law and associated governance institutions has also attracted considerable scholarly attention in recent years. Cengiz [15] identified the features of digital constitutionalism and its impact on the formation of a new balance between freedom and control. Khalilov and Qadimov [16] substantiated the need for constitutional reforms in the context of an electronic society and revealed the content of the concept of “smart” constitutionalism. Together, these findings point toward an emerging direction of scientific inquiry concerning the integration of digital technologies, constitutional safeguards, and accountability mechanisms into modern systems of constitutional governance.

The interrelated questions of the rule of law and institutional guarantees of constitutionalism are addressed by Scholtes [17], who examined the influence of the Venice Commission on the development of European constitutional doctrine. Bocharova [18] analyzed contemporary trends in constitutional thought through the prism of recent European studies. Gutmann et al. [19] assessed the impact of constitutional changes on the level of compliance with constitutional norms in different countries.

The scholarly works discussed above have significantly enriched the existing theoretical understanding of the evolution of constitutionalism, human rights, and digital transformations of the legal order. At the same time, the specific question of how historical-legal, international-legal, and digital-technological components can be integrated coherently into a single developmental model of constitutionalism remains comparatively underexplored. This is due to the interdisciplinary nature of the issue, the rapid change in the technological environment, and the fragmentation of existing conceptual approaches.

The purpose of the study is to develop a model of human-centered adaptive constitutionalism to ensure human rights in the context of the increasing uncertainty created by digital transformation and globalization.

III. Research Methodology

The epistemological and methodological foundations of this research rest on a systematic combination of general scientific, specialized legal, and interdisciplinary analytical approaches. This combination of complementary methods made it possible to examine the role of the human person within the architecture of contemporary constitutionalism and to develop the theoretical foundations of the proposed concept of adaptive human-centered constitutionalism. The historical-legal method was used to investigate the evolution of constitutional thought over time and the associated transformation of relations between public authorities, the state, and society. At the same time, formal-legal analysis was applied to examine the substantive content of constitutional provisions, international standards and documents of European institutions in the field of digital governance and the rule of law.

The comparative-legal method was employed to compare and evaluate national, supranational, and global models and institutional mechanisms for the protection of human rights. In combination with systemic analysis, this approach made it possible to identify and explain the relationships between classical constitutional institutions and contemporary forms of digital regulation. Doctrinal approaches to constitutionalization and global legal governance were examined and synthesized through the application of dialectical reasoning and complementary methods of analysis and synthesis. The structural-functional approach, in turn, served as a tool for identifying the respective institutional roles of authorities and other actors responsible for implementing legal safeguards in the context of social change.

The central conceptual contribution of the study, namely the model of human-centered adaptive constitutionalism, was developed and systematically structured using the method of legal modeling. This approach not only identified the basic principles, but also supported the design of an integrated functional and technological framework for the effective protection of fundamental rights. The prospective component of the analysis identifies possible future directions for the development of constitutional law under conditions of increasing digital integration. The information base of the study consists of scholarly publications by Ukrainian and international researchers, international legal documents, acts of the European Union, materials of the Venice Commission, documents of the United Nations, as well as applicable Ukrainian legislative and regulatory instruments in the field of constitutional law and human rights protection.

IV. Results

A. Part 1. Historical and legal evolution of the human-centric paradigm of modern constitutionalism

Constitutionalism emerged through a prolonged historical re-assessment of the relationship between the state, its public institutions, and the individual human person. At the initial stages of constitutional development, attention was focused on the issues of organizing power, allocating constitutional powers and responsibilities among different state institutions, and establishing legal restrictions for the political sovereign. The individual was at the center of these processes only indirectly. Individual rights were recognized primarily as legal instruments intended to limit and prevent unjustified interference by state authorities. A similar approach determined the content of classical constitutionalism during the 18th–19th centuries. Gradually, the situation changed. Social transformations, the democratization of political regimes, and the development of international law led to the emergence of a new model of constitutional thinking [20]. Within this developing model, the human person increasingly became the principal normative reference point and foundational subject of the constitutional legal order. The constitution consequently came to be understood as more than a document organizing the exercise of state power; it also developed into a legal mechanism for protecting human dignity, individual freedom, and personal security.

This important historical transformation was influenced particularly strongly by the major political and historical events of the mid-twentieth century. The Second World War demonstrated the limits of the traditional state-centric approach [21]. Widespread violations of human rights revealed profound weaknesses in exclusively national mechanisms for supervising and limiting the exercise of governmental power. These developments contributed to the emergence of universal international human rights standards, which established a new normative and value-based foundation for constitutional legal development. Human dignity begins to be perceived as the fundamental basis of the legitimacy of state institutions.

In this regard, the Constitution of Ukraine provides an illustrative example of a constitutional framework organized around the protection of human dignity. It recognizes the human person, life and health, honour and dignity, and inviolability and security as the highest social value [22]. This approach is not purely declarative. It determines the direction of the activities of all public authorities and establishes criteria for assessing their effectiveness. A comparable normative orientation is also reflected in key international instruments adopted within the United Nations (hereinafter, the UN) and the Council of Europe. The UN Millennium Declaration establishes the relationship between human rights, democracy and good governance as basic conditions for the development of the world community [23]. Fifteen years later, this concept was further developed in the 2030 Agenda for Sustainable Development, where human rights are integrated into social, economic and environmental policies [24]. Thus, a new type of legal thinking was formed, in which the effectiveness of the state is assessed through the actual extent to which

fundamental rights and freedoms are respected, implemented, and protected (Table 1).

The historical differentiation and institutional transformation summarized in Table 1, demonstrates not only the expansion of the catalog of human rights. There is a change in the very nature of constitutional legitimacy. Whereas classical constitutionalism primarily concentrated on organizing and limiting state power, more recent approaches increasingly place the human person and the effective protection of individual rights at their normative center.

Modern legal science uses several interrelated categories to describe the transformation of the legal order. Constitutionalism characterizes a system of principles that limit power and guarantee human rights. Constitutionalization reflects the process of spreading these principles to new areas of social relations. Global constitutionalism describes the formation of a supranational normative space where human rights, democracy, and the rule of law function as universal regulators.

In the works of researchers Kolodiy and Ternavska [28]; Slusarenko [29], a common trend is traced. Human rights are gradually ceasing to be exclusively the subject of internal constitutional regulation. They are increasingly integrated into international law and the practice of international institutions. It is on this basis that the concept of Human Rights as Transnational Constitutional Law was formed, according to which human rights serve as a common normative platform for national and international legal orders. Such a transformation also has practical consequences. Constitutional control is no longer limited to national courts [30]. The content of constitutional norms is influenced by decisions of international judicial bodies, recommendations of the Venice Commission, acts of the European Union and UN documents (Table 2).

The comparative conceptual assessment presented in Table 2 indicates a gradual shift of the center of constitutional legitimacy from exclusively state-centered authority toward the protection of individual rights. Constitutional principles are increasingly influencing the regulation of international relations, the activities of transnational corporations and digital platforms. The development of global constitutionalism is accompanied by the formation of a new model of normative interaction between states and international institutions. Human rights occupy a central place in this model. They serve as a universal criterion for assessing the legitimacy of political power and the effectiveness of legal regulation.

The Copenhagen criteria identify stable democratic institutions, the rule of law, and respect for human rights among the political conditions that candidate countries must meet for accession to the European Union [34]. A similar approach is enshrined in the annual Rule of Law Reports of the European Commission, where the quality of functioning of state institutions is assessed through their ability to ensure individual rights [35]. The Updated Rule of Law Checklist adopted by the Venice Commission also provides a particularly relevant example of the Venice Commission, which considers human rights as a structural element of the rule of law [36].

At the same time, the scope of legal regulation is expanding.

If constitutional law previously focused on the relationship between man and state, now the subject of regulation is digital platforms, artificial intelligence systems, cross-border information flows and the activities of global corporations. That is why the UN adopted the Global Digital Compact, which establishes international principles for the protection of human rights in the digital environment [37]. Within the framework of the outlined system, the person acquires the status of a central subject, and his fundamental rights are defined as the substantive core of the transnational constitutional legal order of the twenty-first century.

B. Part 2. Man in the system of modern constitutionalism: international legal and functional and technological challenges

Developments during the early twenty-first century have demonstrated significant changes in the nature and complexity of threats affecting the functioning of constitutional systems. While during the second half of the 20th century most constitutional reforms concerned the modernization of state institutions, today the main test is the ability of the rule of law to maintain stability during complex crises. Military conflicts, mass migration, pandemic restrictions, cyber threats, and digital concentration of power have created a significantly more complex environment in which constitutionalism must continue to function. The legal and institutional developments associated with large-scale military conflicts over the past decade have made these tensions particularly visible. State institutions are increasingly required to guarantee national security while simultaneously protecting and respecting the constitutional rights and fundamental freedoms of citizens. Excessive expansion of the powers of the executive branch can undermine democratic control mechanisms. At the same time, insufficient concentration of power resources during a crisis period can jeopardize the very existence of the constitutional order [38].

The European Commission, in its annual reports on the state of the rule of law, draws attention to the growing risks of political pressure on the judiciary, the media and independent regulatory bodies [35]. These trends are not local in nature. They manifest themselves in different legal systems, regardless of the level of economic development of the state. The underlying difficulty, however, is not confined to the existence of individual crises themselves. More complex is the process of gradual change in the structure of power. An increasing share of regulatory and administrative decision-making may be influenced by actors operating to supranational institutions, digital platforms and transnational technology corporations [39], [40]. Constitutional control mechanisms have been formed for state bodies. However, new centers of influence are often located outside the traditional constitutional jurisdiction.

That is why the concept of constitutional stability is increasingly used. It is about the ability of the legal system to maintain a balance between security, freedom and democratic legitimacy even in the face of prolonged crisis processes. In the new conditions, constitutionalism is assessed not only

Table 1: Changes in the normative status of the human person throughout the historical evolution of constitutional law

Item No.	Stage of constitutional development	Source of legitimization of human rights	The dominant model of state-individual interaction	Level of legal regulation	Main regulatory acts	Constitutional effect of the action
1	Classical constitutionalism of the 18th–19th centuries.	Natural law	Limitations of state power	National	US Constitution, Declaration of the Rights of Man and of the Citizen	Formation of the institution of fundamental rights
2	Liberal-democratic constitutionalism	Popular sovereignty	Legal autonomy of the individual	National	Constitutions of European states	Guaranteeing civil liberties
3	Social constitutionalism	Social justice	Social obligations of the state	National	Social constitutions of the 20th century.	Expanding social rights
4	Post-war constitutionalism	Human dignity	Active personal protection	National and international	UDHR, ICCPR, ICESCR	Universalization of human rights
5	European constitutionalism	Rule of law	Integrated protection of rights	Supranational	ECHR, Charter of Fundamental Rights	Formation of the European legal space
6	Global constitutionalism	Generally recognized international standards	Multilevel interaction	Global	Millennium Declaration, 2030 Agenda	Transnationalization of human rights
7	Digital constitutionalism	Digital rights of the individual	Algorithmically mediated interaction	Transnational	GDPR, AI Act, Global Digital Compact	Formation of digital legal status
8	Adaptive constitutionalism	Constitutional stability	Personal protection in times of crisis	Multi-level	Rule of Law Checklist, EMFA	Stability of the constitutional order

Source: conceptual synthesis developed from Basalayeva [14]; the Universal Declaration of Human Rights [25]; the UN Guiding Principles on Business and Human Rights [26]; the GDPR [27]; and the EU Artificial Intelligence Act [42]

Table 2: Comparative characteristics of models of constitutionalization of human rights in national, international and global legal orders

Item No.	Comparison criterion	Constitutionalism	Constitutionalization	Global constitutionalism	Real impact on human rights
1	Subject of regulation	State government	Legal system	World legal order	Expanding the scope of protection
2	Source of legitimacy	Constitution	Constitutional principles	Universal values	Unification of standards
3	Central subject	Citizen	Person	A person regardless of nationality	Strengthening the universality of rights
4	Action space	State	National legal system	Transnational space	Suprastate guarantees
5	Control institutions	Constitutional Court	Judicial system	International and supranational bodies	Multi-layered protection
6	Basic principle	Limitations of power	Constitutional integration	Rule of law and human rights	Increasing government accountability
7	Main risks	Concentration of power	Formalization of norms	Democratic legitimacy deficit	Conflict of jurisdictions
8	Development perspective	Constitutional democracy	Constitutional evolution	Digital and networked constitutionalism	New generations of human rights

Source: conceptual synthesis developed with reference to the EU Charter of Fundamental Rights [31]; Law of Ukraine on the Constitutional Court of Ukraine [32]; Tushnet [8]; Urbanik and Bodnar [33]

through the formal compliance of laws with the constitution. Much more important is the ability of state institutions to ensure the real protection of human rights and freedoms (Table 3).

The authors’ conceptual risk assessment in Table 3 identifies a notable and potentially important trend within the current transformation of constitutional governance. A growing number of serious risks to fundamental human rights may originate outside the traditional institutions of the state, although risks associated with public authorities also remain significant. They increasingly arise in the digital environment or are formed as a result of the activities of non-state actors. Digital transformation has changed the very architecture of interaction between people and authorities. Electronic services, artificial intelligence systems, algorithmic forecasting and digital identification are gradually integrated into the mechanisms of public administration [41], [42].

The peculiarity of the digital environment is that it combines public and private regulatory mechanisms. Decisions on access to information, visibility of content, or processing of personal data are often made by algorithms created by private companies. Individuals therefore increasingly encounter situations in which the practical enjoyment and protection of their rights are influenced by entities that formally do not belong to the public authority system [43]. That is why the concept of digital constitutionalism is being formed. Proponents of this approach argue that the guarantees traditionally associated with constitutional law should also be extended appropriately

into the digital environment. This concerns the protection of personal data, the right to digital identity, the right to algorithmic transparency, the right to an explanation of automated decisions, and the right to digital security.

A separate direction is the concept of “smart” constitutionalism. Its authors try to combine digital technologies with the principles of the rule of law and democratic control. The problem is that algorithms can significantly increase the efficiency of public administration. At the same time, algorithmic decision-making can reproduce or reinforce discriminatory practices that may be difficult to identify and challenge through traditional legal procedures and institutional safeguards.

In 2024, the UN adopted the Global Digital Compact, which established the basic principles of digital governance and the protection of human rights in the information space [37]. The document demonstrates the gradual formation of international standards of digital constitutionalism. The further development and implementation of these standards are likely to become important directions in the continuing evolution of constitutional law over the coming decades (Table 4).

The continuing development of digital technologies does not eliminate the relevance or normative importance of the classical principles of constitutionalism. On the contrary, it increases their significance. The rule of law remains a basic condition for the functioning of a democratic society, but the content of this principle is gradually expanding. Today, it covers not only the activities of state bodies, but also algorithmic

Table 3: Risks of transformation of human-centered constitutionalism in conditions of global instability

Item No.	Challenge	Source of origin	Object of influence	Level of risk to human rights	Potential impact on democratic institutions	Constitutional response mechanisms
1	Military conflicts	Armed aggression	Personal safety	Critical	Concentration of power	Judicial control over emergency measures
2	Mass migration	Humanitarian crises	Social rights	High	Burden on public institutions	Anti-discrimination mechanisms
3	Terrorism	Transnational networks	Civil liberties	High	Expanding the powers of law enforcement agencies	Constitutional control
4	Misinformation	Digital platforms	Freedom of expression	High	Manipulation of the electoral process	Independent media regulators
5	Data monopolization	Big Tech corporations	Privacy	Critical	Informal influence on politics	Data processing regulation
6	Algorithmic control	Artificial intelligence	The right to a fair decision	High	Delegation of power functions to algorithms	Algorithm audit
7	Cyber threats	Cyberspace	Digital security	High	Destabilization of government services	Digital constitutional control
8	Democratic populism	Political polarization	Political rights	Average	Weakening institutional constraints	Constitutional oversight
9	Supranationalization of regulation	International organizations	Sovereign powers	Average	Changing the structure of political responsibility	Constitutional adaptation
10	Digital inequality	Technological gap	Equal access to rights	Average	Social fragmentation	Inclusive digital policy

Source: developed by the authors as a proposed conceptual and illustrative framework; categorical assessments reflect the authors' judgments and have not been independently validated through empirical measurement

Table 4: Conceptual assessment of the potential contribution of constitutional control mechanisms to protecting categories of human rights in the digital environment

Item No.	Control mechanism	Civil rights	Political rights	Social rights	Digital rights	Right to privacy	Protection against algorithmic discrimination	Proposed overall effectiveness category
1	Constitutional Court	High	High	Average	Average	High	Average	High
2	Ombudsman	High	Average	High	High	High	Average	High
3	Venice Commission	High	High	Average	High	High	High	Very high
4	Rule of Law Checklist	High	High	High	High	High	High	Very high
5	Algorithmic audit	Low	Average	Low	Very high	Very high	Very high	High
6	Digital regulators	Average	Average	Low	Very high	High	High	High
7	International monitoring	High	High	High	Average	Average	Average	High
8	Hybrid control model	Very high	Very high	High	Very high	Very high	Very high	Maximum

Source: developed by the authors as a proposed conceptual and illustrative framework; categorical assessments reflect the authors' judgments and have not been independently validated through empirical measurement

mic systems, digital platforms and mechanisms of automated governance.

The updated Rule of Law Checklist considers legal certainty, the prohibition of arbitrariness, access to justice and respect for human rights as interrelated components of a single system [36]. This approach forms a new standard for assessing the constitutional order. This logic is particularly evident in the activities of the Venice Commission. The Commission assesses not only the formal compliance of legislation with the constitution. Its conclusions increasingly concern ensuring the independence of the judiciary, freedom of speech, political pluralism and digital guarantees of human rights. Thus, a renewed paradigm of constitutional supervision is emerging in the legal field. This model integrates national judicial procedures, international monitoring institutions, digital audit tools and supranational criteria for the rule of law. Despite the continuous expansion of this institutional toolkit, the human person remains at the center of the system as the principal holder of fundamental rights and a primary subject of constitutional legal relations.

C. Formation of a human-centered model of adaptive constitutionalism

The events of recent years demonstrate one pattern. Constitutional mechanisms that functioned effectively in the industrial age are increasingly facing challenges for which they were not designed. Military conflicts, digital platforms, artificial intelligence, transnational information flows, and algorithmic governance are changing the structure of power relations faster than legislation. Against this background, a gap is emerging between the dynamics of social processes and the speed of constitutional adaptation. This is very noticeable in the field of human rights protection [11], [44]. Constitutional control

has traditionally focused on the activities of state authorities. However, today, digital platforms, big data operators, algorithmic decision-making systems and international network structures have a significant impact on the implementation of individual rights. A person increasingly interacts not with a civil servant, but with a digital interface or automated system [45], [46].

The developments outlined above give rise to a distinct and increasingly important constitutional problem. Formal constitutional guarantees continue to exist, but the mechanisms for their implementation are gradually moving beyond the boundaries of traditional constitutional regulation. For these reasons, the present study identifies a clear need to form a functional-technological model of constitutionalism, which combines the classical principles of the rule of law with the tools of digital governance and international control.

The proposed conceptual model proceeds from the central assumption that the human person should remain the central element of all levels of legal and institutional regulation. This is not only about national constitutions. A similar approach should apply to international organizations, digital ecosystems, artificial intelligence systems and mechanisms for cross-border data management. The entire model should be based on three interconnected regulatory circuits. The first covers national constitutional institutions. The second includes international legal mechanisms for the protection of human rights. The third consists of digital tools for monitoring, auditing and accountability of algorithmic systems. Only their simultaneous functioning ensures an adequate level of legal protection of the individual (Table 5).

The interconnected components summarized in Table 5 demonstrate that the protection of human rights is gradually moving beyond the boundaries of classical state regulation.

Table 5: Architectonics of functional-technological human-centered constitutionalism: the authors' model of multilevel adaptation

Item No.	Model component	Main implementing entity	Regulatory toolkit	Object of protection	Expected result	Implementation level
1	Constitutional framework	State	Constitution and laws	Fundamental human rights	Legal certainty	National
2	Judicial review component	Constitutional and Supreme Courts	Constitutional control	Constitutional guarantees	Eliminating legal imbalances	National
3	International circuit	International organizations	Conventional mechanisms	Human rights	Harmonization of standards	International
4	Digital circuit	Public digital platforms	Digital governance	Digital rights	Safe digital environment	National and international
5	Algorithmic circuit	Artificial intelligence systems	Algorithmic audit	The right to a fair decision	Accountability of automated processes	Transnational
6	Anti-crisis circuit	Public authorities	Emergency constitutional mechanisms	Human security	Constitutional stability	National
7	Monitoring circuit	Ombudsmen and regulators	Legal oversight systems	Individual rights and freedoms	Prompt response to violations	Multi-level
8	Integration circuit	Supranational institutions	Uniform standards of the rule of law	Democratic guarantees	Legal compatibility of systems	Regional
9	Humanitarian circuit	International community	Solidarity mechanisms	Vulnerable population groups	Inclusiveness of legal protection	Global
10	Adaptive circuit	All system participants	Continuous update of regulatory practices	Constitutional order	Long-term sustainability	Multi-level

Source: developed by the authors as a proposed conceptual and illustrative framework; categorical assessments reflect the authors' judgments and have not been independently validated through empirical measurement

The center of gravity is shifting to a multi-level system of interaction, in which national and international institutions are expected to cooperate through coordinated and mutually reinforcing mechanisms.

Any conceptual model needs its own normative core. In this study, such a core is the system of principles of human-centered adaptive constitutionalism:

1. The first principle is the supremacy of human dignity. It is dignity that determines the content of human rights and the limits of the exercise of public power. This approach corresponds to the provisions of the Constitution of Ukraine and modern international standards for the protection of human rights [22].

2. The second principle concerns the primacy of human rights. Any decision by state bodies, international institutions or digital platforms must be assessed in terms of its impact on the exercise of individual rights and freedoms.

3. The third principle is related to constitutional adaptability. Legal systems can no longer function according to a model of normative staticity. They must respond to technological and social changes without losing fundamental values.

4. The fourth principle defines the digital security of the individual. It concerns the protection of personal data, digital identity, and informational autonomy of the individual.

5. The fifth principle involves technological accountability of public authorities. If a public authority uses algorithmic systems, citizens should have access to mechanisms to verify their legitimacy.

6. The sixth principle concerns constitutional resilience in crisis situations. Martial law, emergencies, or large-scale cyber incidents should not undermine fundamental human rights guarantees.

7. The seventh principle forms a model of multi-level constitutional governance. Human rights are protected not only by the state. International organizations, regional institutions, and specialized monitoring mechanisms are involved in this process.

8. The eighth principle reinforces international solidarity. The protection of human rights is gradually becoming a common task of the international community, as reflected in the

documents of the United Nations and the Council of Europe [24].

Nevertheless, the existence of these principles, considered in isolation, cannot by itself establish a sufficiently effective mechanism for practical implementation. They need to be integrated into the practice of lawmaking, law enforcement and international cooperation. To clarify the practical potential of these proposed principles, an implementation matrix has been developed to connect each principle with relevant constitutional, international, and digital mechanisms, as well as potential performance indicators (Table 6).

As illustrated by the conceptual implementation matrix in Table 6, European practice demonstrates that successful implementation of international standards requires not mechanical copying of legal norms, but their adaptation to the specifics of a particular legal system. That is why the effectiveness of reforms depends on the ability to combine international requirements with national constitutional traditions.

The first direction is the harmonization of legislation with the standards of the rule of law formulated by the Venice Commission [36]. The second direction covers the digital sphere. It is about the integration of mechanisms for algorithmic accountability, digital audit and personal data protection in accordance with the provisions of the Global Digital Compact [37].

The third direction concerns the modernization of the institution of constitutional control. Considered from the perspective of institutional modernization, the objects of legal and constitutional scrutiny are no longer necessarily limited to legislative and regulatory acts. The scope of constitutional control includes algorithmic solutions, digital platforms and automated management systems. The fourth direction is related to the development of international coordination in the field of human rights protection.

Based on the outlined concept, it is appropriate to propose the authors' definition of the corresponding phenomenon. Human-centric adaptive constitutionalism is a multi-level set of constitutional-legal, international-legal and digital-technological mechanisms. Their main purpose is to ensure human dignity, rights and freedoms of the individual in

Table 6: Proposed implementation map linking the principles of human-centered adaptive constitutionalism with international legal and digital governance mechanisms

Item No.	Principle	Constitutional implementation mechanism	International legal mechanism	Digital mechanism	Expected result	Proposed performance indicator
1	The supremacy of human dignity	Constitutional control	ECHR, UN	AI ethics audit	Protection of human autonomy	Rights Compliance Index
2	The priority of human rights	Judicial protection	International treaties	Human Rights Impact Assessment	Reducing rights violations	Share of complaints satisfied
3	Constitutional adaptability	Constitutional modernization	International coordination	Regulatory Sandbox	System response speed	Regulatory adaptation time
4	Digital personal security	Personal data protection	Global Digital Compact	Cybersecurity	Reducing digital risks	Number of incidents
5	Technology accountability	Parliamentary oversight	International AI standards	Algorithmic audit	Transparency of digital solutions	AI explainability level
6	Constitutional stability	Emergency mechanisms	Humanitarian law	Crisis Monitoring Systems	Institutional resilience	Resilience Index
7	Multi-level governance	Coordination of authorities	European institutions	Interoperability Governance	Policy coherence	Coordination index
8	International solidarity	Constitutional guarantees	International aid	Global digital platforms	Joint protection of rights	International Interaction Index

Source: developed by the authors as a proposed conceptual and illustrative framework; categorical assessments reflect the authors' judgments and have not been independently validated through empirical measurement

the conditions of globalization, digitalization and continuous transformations of social relations. Such an interpretation organically combines the classical principles of constitutionalism with the contemporary requirements arising from international legal developments and the expanding digital regulatory environment.

V. Discussion

The findings of the present conceptual analysis are broadly consistent with the scholarly position advanced by Thornhill [4] and Wiener et al. [5], who considered constitutionalism as a system that gradually goes beyond the national legal field and acquires a global dimension. At the same time, the research conducted clarified these approaches. The proposed model additionally takes into account the impact of digital technologies, algorithmic governance and transnational digital platforms on the mechanisms for the implementation of constitutional rights.

The arguments concerning the transnationalization of human rights are also consistent with the conceptual framework developed by Besson [6], according to which human rights constitute a common normative basis for different legal orders. At the same time, the results obtained expand this position, since the digital dimension of human rights is introduced into the structure of modern constitutionalism as an independent element. In this sense, the proposed approach also develops the scientific ideas of Cengiz [15] and Khalilov and Qadimov [16], who examined the theoretical arguments supporting digital constitutionalism and the concept of "smart constitutionalism". However, unlike the aforementioned works, digital mechanisms are treated not as a separate direction of reform, but as an integral component of a multi-level system of human-centered constitutional governance.

The findings of the study partly coincide with the position of Krusian [12], who defines human freedom as a strategic goal of Ukrainian constitutionalism. However, the approach proposed here is broader. It places not only freedom at the center, but also constitutional stability, digital security, technological accountability, and multilevel governance. This expansion to some extent complements the conceptual framework outlined by Suchocka [10] and Tushnet [8], as it unites different varieties of modern constitutionalism within a single functional-technological model.

The principal scientific contribution of the present research is the proposed and systematically developed concept of human-centered adaptive constitutionalism, which combines historical-legal, international-legal and digital-technological components of the evolution of the modern constitutional order. Unlike existing approaches, here we propose our own architectonics of multi-level adaptation and a system of principles focused on ensuring human rights in the conditions of digital transformation of society.

The contribution of the current study to the scientific discourse lies in deepening theoretical ideas about the evolution of constitutionalism and in expanding the categorical apparatus of modern constitutional and legal science. The practical significance of the work is determined by the possibility of using the proposed model during the modernization of constitutional control mechanisms, in the development of digital standards for the protection of human rights and in the process of adapting national legislation to modern international requirements.

The primarily theoretical and conceptual nature of this research should also be recognized, since it gives rise to several important methodological and practical limitations. The present study does not include direct empirical verification of the practical effectiveness of the proposed model on the materials of individual states or international organizations. In addition, the rapid development of digital technologies leaves open the possibility of further adjustment of individual elements of the concept.

Future scientific research should therefore prioritize a comparative analysis of digital constitutionalism practices in different jurisdictions, assessing the effectiveness of algorithmic audit as a tool of constitutional control, as well as with the development of a system of indicators for measuring constitutional stability in conditions of military, technological, and humanitarian crises.

VI. Conclusion

The analysis identifies a gradual shift in the principal normative foundations through which constitutional legitimacy is understood and evaluated. The state-centered model is giving way to a system where the person is the main subject of legal development. The dignity of the person, his rights and freedoms become the universal criterion for assessing the quality

of the constitutional order. At the same time, the boundaries of constitutional regulation are significantly expanding, covering the international and supranational levels. As a result, fundamental human rights acquire the meaning of a fundamental normative reference point for legal orders of both the national and supranational levels.

Many increasingly significant challenges to human rights now emerge beyond the traditional structures through which state power has historically been exercised. Digital platforms, algorithms used for decision-making, artificial intelligence technologies and global information networks are becoming new centers of normative influence. In response to these challenges, constitutional control is taking on a multi-layered nature. It combines judicial mechanisms, international monitoring procedures, digital audit and rule of law standards, which together should ensure reliable protection of the individual.

The research accordingly substantiates the theoretical foundations of a human-centered model of adaptive constitutionalism. The proposed model integrates constitutional-legal, international-legal and digital-technological means of human protection. Its content is determined by several key principles, including the priority of human dignity, the ability of the constitutional system to adapt, ensuring digital security, technological accountability and multi-level governance. The developed model is aimed at preserving the stability of the legal order during the period of military, technological and globalization transformations, and also outlines a promising direction for the further development of international law.

Ethics Statement

This study relies strictly on the analysis of publicly available legal texts, court rulings, and theoretical literature, involving no human participants, animal subjects, or private personal data. Consequently, formal institutional ethics approval was not required. The research was conducted in full adherence to standard academic integrity and publication ethics.

Author Contributions

All authors contributed equally to the conception, development, analysis, and preparation of this manuscript. All authors have carefully read and approved the final version of the manuscript for publication.

Competing Interests

The authors declare no competing interests.

Funding

The authors received no specific financial support, research grant, or external funding for the research, authorship, or publication of this manuscript.

Data Availability

Data sharing is not applicable to this article as no primary datasets were generated or analyzed. All regulatory acts, international treaties, and judicial decisions cited are publicly

accessible through standard legal and institutional databases (e.g., UN, Council of Europe, EUR-Lex, and national legislative portals).

References

- [1] Deiak, I. (2024). Constitutionalization in the context of modern constitutionalism: Theoretical and methodological analysis. *Visegrad Journal on Human Rights*, (4), 38–43. <https://doi.org/10.61345/1339-7915.2024.4.5>
- [2] Organisation for Economic Co-operation and Development. (2023). *OECD guidelines for multinational enterprises on responsible business conduct*. OECD Publishing. <https://doi.org/10.1787/81f92357-en>
- [3] Pavel, C. E. (2025). Constituent power and constituent capacity in the making of a global constitutional treaty. *Journal of International Political Theory*, 21(2), 166–184. <https://doi.org/10.1177/17550882251351926>
- [4] Thornhill, C. (2012). Contemporary constitutionalism and the dialectic of constituent power. *Global Constitutionalism*, 1(3), 369–404. <https://www.cambridge.org/core/journals/global-constitutionalism/article/abs/contemporary-constitutionalism-and-the-dialectic-of-constituent-power/7286548FE0D2FDAA6A7617D30D5528A4>
- [5] Wiener, A., Lang, A. F., Jr., Tully, J., Maduro, M. P., & Kumm, M. (2012). Global constitutionalism: Human rights, democracy and the rule of law. *Global Constitutionalism*, 1(1), 1–15. <https://doi.org/10.1017/S2045381711000098>
- [6] Besson, S. (2017). Human rights as transnational constitutional law. In A. F. Lang, Jr., & A. Wiener (Eds.), *Handbook on global constitutionalism* (pp. 234–247). Edward Elgar Publishing. <https://doi.org/10.4337/9781783477357.00027>
- [7] Cremades, J., & Hermida, C. (Eds.). (2021–present). *Encyclopedia of contemporary constitutionalism* [Living reference work]. Springer. <https://doi.org/10.1007/978-3-319-31739-7>
- [8] Tushnet, M. (2025). Classifying varieties of constitutionalism. In M. de Visser, I. Leijten, J. de Poorter, G. van der Schyff, M. Stremler, & S. Vonk (Eds.), *European yearbook of constitutional law 2024: Varieties of constitutionalism* (pp. 9–21). T.M.C. Asser Press. https://doi.org/10.1007/978-94-6265-699-4_2
- [9] Carrère, T. (2025). Republican constitutionalism: Freedom as non-domination and the democratic challenge to liberalism. In M. de Visser, I. Leijten, J. de Poorter, G. van der Schyff, M. Stremler, & S. Vonk (Eds.), *European yearbook of constitutional law 2024: Varieties of constitutionalism* (pp. 23–46). T.M.C. Asser Press. <https://doi.org/10.1007/978-94-6265-699-4>
- [10] Suchocka, H. (2025). Contemporary challenges to constitutionalism. *Baltic Journal of Law & Politics*, 18(Special Issue), 3–13. <https://doi.org/10.2478/bjlp-2025-0002>
- [11] Nedelsky, J. (2025). Transforming constitutionalism from a more-than-human perspective. *Review of Constitutional Studies*, 29(2), 239–280. https://www.constitutionalstudies.ca/wp-content/uploads/2025/10/02_Nedelsky.pdf
- [12] Krusian, A. (2025). Constitutional and legal human freedom as the purpose of modern Ukrainian constitutionalism: Scientific and doctrinal analysis in the context of synergy with EU values. *Pravo Ukrainy*, (3), 82–96. https://pravoua.com.ua/en/store/pravoukr/pravo_2025_3/pravo_2025_3-s4217
- [13] Panforova, M. (2025). Human rights as a value in the contemporary period: Historical and philosophical analysis. *Ehrlich's Journal*, (14), 42–48. <https://doi.org/10.32782/ehrlchsjournal-2025-14.06>
- [14] Basalayeva, A. (2025). The constitutional right of a citizen to participate in the management of state affairs: Methodological principles. *Analytical and Comparative Jurisprudence*, (6, Part 1), 130–134. <https://doi.org/10.24144/2788-6018.2025.06.1.19>
- [15] Cengiz, I. F. (2025). Digital constitutionalism in creating a new constitutional equilibrium. *Istanbul Medeniyet Universitesi Hukuk Fakultesi Dergisi*, 10(1), 69–92. <https://doi.org/10.58733/imhfd.1591701>
- [16] Khalilov, Y. F., & Qadimov, A. T. (2025). The necessity of constitutional reforms in the context of an electronic society and the legal foundations of “smart constitutionalism.” *Porta Universorum*, 1(5), 13–23. <https://doi.org/10.69760/portuni.0105002>
- [17] Scholtes, J. (2025). The Venice Commission and the mental map of European constitutionalism. *Hague Journal on the Rule of Law*. Advance online publication. <https://doi.org/10.1007/s40803-025-00257-4>
- [18] Bocharova, N. V. (2025). Barometer of contemporary constitutional thought: European Yearbook of Constitutional Law. *Alfred Nobel University*

- Journal of Law*, 2(11), 20–29. <https://doi.org/10.32342/3041-2218-2025-2-11-2>
- [19] Gutmann, J., Metelska-Szaniawska, K., & Voigt, S. (2026). Can new constitutions tighten the reins? The effect of constitutional change on constitutional compliance. *Public Choice*, 207, 221–238. <https://doi.org/10.1007/s11127-025-01364-4>
- [20] Waluchow, W. (2022). Constitutionalism. In *The Stanford encyclopedia of philosophy* (Summer 2022 ed.). Stanford University. <https://plato.stanford.edu/archives/sum2022/entries/constitutionalism/>
- [21] United Nations. (1945). *Charter of the United Nations*. <https://www.un.org/en/about-us/un-charter/>
- [22] Constitution of Ukraine, No. 254k/96-VR (1996). <https://zakon.rada.gov.ua/laws/show/254%D%Z%96-%D%B%A#Text>
- [23] United Nations General Assembly. (2000). *United Nations Millennium Declaration* (A/RES/55/2). United Nations. <https://digitallibrary.un.org/record/422015>
- [24] United Nations General Assembly. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development* (A/RES/70/1). United Nations. <https://sdgs.un.org/2030agenda>
- [25] United Nations General Assembly. (1948). *Universal Declaration of Human Rights* (Resolution 217 A (III)). United Nations. <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- [26] Office of the United Nations High Commissioner for Human Rights. (2011). *Guiding principles on business and human rights: Implementing the United Nations “Protect, Respect and Remedy” framework* (HR/PUB/11/04). United Nations. <https://www.ohchr.org/en/publications/reference-publications/guiding-principles-business-and-human-rights>
- [27] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data (General Data Protection Regulation). (2016). *Official Journal of the European Union*, L 119, 1–88. <https://eur-lex.europa.eu/eli/reg/2016/679/oj/eng>
- [28] Kolodiy, A., & Ternavska, V. (2026). Subjects of forming the constitutional and legal policy in the field of human rights. *Actual Problems of Law*, (1), 37–43. <https://doi.org/10.35774/app2026.01.037>
- [29] Slusarenco, S. (2026). Dimensiunea constituțională a libertății de conștiință în statele democratice [The constitutional dimension of freedom of conscience in democratic states]. *Intellectus*, (1), 69–78. <https://doi.org/10.56329/1810-7087.26.1.07>
- [30] Law of Ukraine on the Ukrainian Parliament Commissioner for Human Rights, No. 776/97-VR (1997). <https://zakon.rada.gov.ua/laws/show/776/97-%D0%B2%D1%80#Text>
- [31] European Union. (2012). *Charter of Fundamental Rights of the European Union* (2012/C 326/02). *Official Journal of the European Union*, C 326, 391–407. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT>
- [32] Law of Ukraine on the Constitutional Court of Ukraine, No. 2136-VIII (2017). <https://zakon.rada.gov.ua/laws/show/2136-19#Text>
- [33] Urbanik, J., & Bodnar, A. (Eds.). (2021). *Waiting for the Barbarians: Law in a time of constitutional crisis: Studies offered to Miroslaw Wyrzykowski*. C.H. Beck.
- [34] European Council. (1993). *Copenhagen European Council, 21–22 June 1993: Conclusions of the presidency*. https://www.europarl.europa.eu/enlargement/ec/cop_en.htm
- [35] European Commission. (2025). *2025 rule of law report: The rule of law situation in the European Union*. https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/upholding-rule-law/rule-law/annual-rule-law-cycle/2025-rule-law-report_en
- [36] European Commission for Democracy through Law (Venice Commission). (2025). *The updated rule of law checklist* (CDL-AD(2025)002). Council of Europe. <https://www.coe.int/en/web/venice-commission/-/cdl-ad-2025-002-e>
- [37] United Nations General Assembly. (2024). *Global Digital Compact*, annex I to *The Pact for the Future* (A/RES/79/1). United Nations. <https://digitallibrary.un.org/record/4061879>
- [38] European Court of Human Rights. (2025). *Guide on Article 15 of the European Convention on Human Rights: Derogation in time of emergency* (updated 31 August 2025). Council of Europe. https://ks.echr.coe.int/documents/d/echr-ks/guide_art_15_eng
- [39] United Nations Conference on Trade and Development. (2021). *Digital economy report 2021: Cross-border data flows and development—For whom the data flow* (UNCTAD/DER/2021). United Nations. <https://unctad.org/publication/digital-economy-report-2021>
- [40] Organisation for Economic Co-operation and Development. (2020). *Going digital integrated policy framework* (OECD Digital Economy Papers No. 292). OECD Publishing. <https://doi.org/10.1787/dc930adc-en>
- [41] Organisation for Economic Co-operation and Development. (2020). *The OECD digital government policy framework: Six dimensions of a digital government* (OECD Public Governance Policy Papers No. 2). OECD Publishing. <https://doi.org/10.1787/f64fed2a-en>
- [42] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). (2024). *Official Journal of the European Union*. <https://eur-lex.europa.eu/eli/reg/2024/1689/oj>
- [43] Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market for Digital Services and amending Directive 2000/31/EC (Digital Services Act). (2022). *Official Journal of the European Union*, L 277, 1–102. <https://eur-lex.europa.eu/eli/reg/2022/2065/oj/eng>
- [44] Council of Europe. (2024). *Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law* (CETS No. 225). <https://www.coe.int/en/web/artificial-intelligence/the-framework-convention-on-artificial-intelligence>
- [45] Office of the United Nations High Commissioner for Human Rights. (2021). *The right to privacy in the digital age* (A/HRC/48/31). United Nations. <http://digitallibrary.un.org/record/3946475>
- [46] Oliinyk, O. (2025). Legal regulation of artificial intelligence in Ukraine: Challenges and prospects. *Social Development: Economic and Legal Issues*, (6). <https://doi.org/10.70651/3083-6018/2025.6.04>
-