



# Theoretical and Methodological Approaches to Studying Artificial Intelligence in the Context of International Relations and International Law

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**ABSTRACT.** *This article addresses one of the pressing issues regarding the role of artificial intelligence (AI) in international relations and international law. The research question revolves around defining the theoretical and methodological approaches applicable to the strategic analysis of AI utilization in these fields. In the contemporary world, there is a demand at both interstate and societal levels to define the role of AI in the political and legal spheres. This is because AI development affects crucial areas of state relations such as security, international law, ethical norms, and dependencies. The prospective use of AI technologies without corresponding legal regulation may disrupt the already fragile balance of the world order, which could be exacerbated by state competition in AI technologies and AI applications in the military domain, a grey area in international law. Analyzing this issue from the perspective of international relations and international law theory allows for examining AI's impact on state interactions and developing new application strategies. Similarly, it helps understand how international law regulates state relations, including aspects related to AI applications. By examining various theoretical concepts and methodological approaches necessary for understanding AI's impact on global affairs, including its influence on diplomacy, security, and governance structures, as well as legal and ethical issues, this article contributes to Kazakhstan's evolving discourse on AI governance and its implications for state actors.*

**KEYWORDS:** *Artificial Intelligence, theory and methodology, international law, international relations.*

Artificial Intelligence (AI) is a rapidly evolving technology that is already exerting significant influence on international relations and international law. When analyzing

AI in the context of international relations and international law, it is necessary to apply a wide range of theories and methods. This will enable a more comprehensive understanding of how AI can impact these spheres.

The research problem of the article lies in determining which theoretical and methodological approaches can be used for the strategic analysis of AI in the context of international relations and international law, and how these approaches can be adapted for Kazakhstan within the framework of its international cooperation strategy. The authors of the article analyze the research problem from the perspective of international relations theory and international law. The former can be used to analyze the impact of AI on state interactions and to develop new strategies for AI utilization in international relations. The latter allows an understanding of how norms and principles of international law regulate relations between states. It can be used to analyze how AI may affect existing norms and principles of international law and to develop new legal norms to regulate AI usage.

Although the theory of AI originated in the mid-20th century, it has only gained widespread dissemination and recognition in recent decades due to the transition from theory to practice.

The theory of AI encompasses various aspects, including not only technical but also philosophical and ethical considerations.

## MAIN PART

Even though AI issues began to be addressed as early as the 1960s, the methodology for studying the problem of international cooperation in the field of AI technology usage is still in development. Currently, there are numerous different approaches to studying this problem, but none of them are universally accepted.

However, today, there is a demand at both interstate and societal levels to define the role of AI in the political and legal arenas. This is because AI development affects crucial areas of state relations: security, international law, ethical norms, dependencies, and others. In the future, the use of AI technologies without appropriate legal regulation could disrupt the already fragile balance of the world order. This disruption could arise from state competition in AI technology and the application of AI in the military domain, which exists in a “gray zone” of international law and is not regulated.

Although the theory of international relations and artificial intelligence represent two separate research areas, globalization has led to their mutual influence. The spheres of their interaction include the analysis of international cooperation using large volumes of data, such as political declarations, economic data, news articles, and social media. AI can be utilized to address various international issues, such as processing large volumes of data to combat pandemics, predicting global economic trends, and even assisting in conflict resolution. Data analysis and forecasting algorithms can help governments and international organizations respond more effectively to complex situations. However, the implementation of AI can also raise questions about transparency, fairness, and

consequences for the global community. It is necessary to strike a balance between technological capabilities and societal interests in these critical areas. Thus, achievements in AI and their impact on international cooperation, as well as their interaction, can be viewed through the lens of both mainstream international relations theories such as realism and liberalism, as well as critical theories such as interdependence, post-colonialism, constructivism, feminism, and green theory. However, in a changing world (geopolitics and technologies), these theories of international relations undergo transformations that can explain the influence of AI on key spheres of international cooperation: international security, the global economy, international organizations, and foreign policy.

### **AI THROUGH THE LENS OF THE FUNDAMENTAL THEORIES OF INTERNATIONAL RELATIONS.**

*Realism/Neorealism Theory.* The influence of the growing dominance of artificial intelligence (AI) on international relations/cooperation impacts the fundamental aspects of these theories. For instance, the assertion that states are the primary actors in international relations, existing in a state of managed anarchy, changes the light of states utilizing AI for technological advancements in their military capabilities. Despite the existence of international law and bilateral or multilateral cooperation, states may not always be certain of the intentions of other countries. Therefore, states are assumed to be rational actors, which is to say they are reasonably effective at designing strategies that maximize their chances of survival (Mearsheimer, 2014, p. 353).

The development of AI also leads to digital platforms becoming participants in international politics on par with states. This affects public opinion on various issues and reflects on interstate relations. Consequently, a state-centric approach, within the framework of a realist perspective, must consider the significance of AI owners and their impact on civil society. The neorealist approach views AI as a risk factor for international security and the balance of power in the world. Manifestations of such influence may include information wars, including the development of combat robots (Gabova & Havanova, 2019).

Supporters of realism raise the question of the application of AI in the realm of security to gain geostrategic advantages by providing forecasts, conducting analysis, and offering modeling. For instance, a key goal of China's Next Generation Artificial Intelligence Development Plan (2017) is to achieve a level of AI that allows China to take the lead in development and security (China's State Council, 2017). The U.S. National Security Commission on Artificial Intelligence (2021) notes that AI is maliciously used by adversaries against the United States (NSCAI, 2021). A loss for the U.S. in this domain could lead to a loss of the country's competitive edge. Therefore, there is a need to intensify efforts in this area. Thus, from the perspectives of realism and neorealism, AI has become an integral part of the security realm in contemporary international relations, as technological advancements have altered the conduct of warfare, including the very nature of traditional battles.

The theory of realism explains the possibility of applying AI in the security domain, where states develop more efficient and precise weapon systems and defense mechanisms to maximize their security or enhance their power in the global arena.

From the perspective of neorealism, emphasis is placed on systemic factors influencing state behavior. Questions of power balance and strategic behavior among states can also be explored through the prism of AI utilization in security. The development and application of AI can alter the dynamics of interactions between states, creating new opportunities for influence and control. An example could be the creation and use of unmanned aerial vehicles (UAVs), which can be employed for reconnaissance, strikes against enemy targets, and territorial monitoring without direct human involvement.

These theories can explain the active development of AI in the United States and China to enhance their security and global influence. A significant motivating factor is the fear of falling behind competitors, which serves as a primary driver for AI development. Countries achieving leadership in this field gain significant advantages in the geopolitical sphere. It is worth noting that the development of AI is influenced by a complex set of factors, such as the possession of nuclear weapons, which can impact AI development strategy.

When analyzing the impact of artificial intelligence (AI) on geopolitical relations, it is pertinent to consider the neoclassical school of liberalism, which offers a fresh perspective on many established concepts. Proponents of this approach suggest measuring the balance of power not only through a state's military might but also its technological potential, economic power, human capital, and other factors. While structural realism and liberalism leave gaps in understanding the balance of power in the AI era, neoclassical realists argue that the balance of power is not static but constantly changes depending on how states develop and utilize AI. They also emphasize the necessity of cooperation between states to ensure that the use of AI contributes to the common good rather than posing a threat (Ripsman et al., 2016).

Cooperation between states and the private sector is another important issue that can be viewed through the lens of realism/neorealism. There is a risk that the private sector, especially large corporations, may exert too much influence on state policies regarding artificial intelligence (AI). For example, both in China and the USA, there is a powerful private sector involved in AI development. The Chinese government actively collaborates with the private sector but retains control over the development and application of AI. The USA seeks to consider the interests of all stakeholders - the state, private sector, academic community, and civil society. The main question is how to strike a balance between state and private initiatives in the field of artificial intelligence (Ripsman et al., 2016).

Digital platforms are owned by large multinational corporations, and AI studies provide recommendations to the owners of these platforms. The question arises as to whether the state should control and regulate these digital platforms. This is related to issues of ideology and government control. Economic activities should also remain under

the control of the state. Therefore, a problem arises of mutually beneficial coexistence between the state and multinational corporations. In the field of economics, experts raise the question of new technological competition in AI, which is perceived by states as a new oil that will accelerate economic and technological development. Technological advantage enables a state to ensure economic security. Analysis of AI in contemporary interstate relations does not demonstrate a tendency for states to unite in alliances that involve technology exchange. The work of international standardization organizations may serve as an example of the complexity of achieving consensus on AI. Countries mostly group based on similar interests.

An analysis of theoretical approaches to the study of AI from the perspectives of realism and neorealism shows that experts question the re-conceptualization of approaches from the standpoint of the practice of power and force. The main factor contradicting realism postulates that AI is primarily created by non-state actors (multinational corporations) and ideally aimed at intergovernmental cooperation in the development, management, and regulation of this sphere. Therefore, a theoretical paradigm that includes all these actors is required.

*The theory of liberalism and neoliberalism*, in our view, allows for the most accurate understanding of the nature of AI and its impact on international relations and interstate cooperation. The authors of the article based their analysis of the given problem on the conclusions of leading experts on the influence of technology on the formation of contemporary and future geopolitics. Its components include the necessity of global cooperation involving both state and non-state actors; the need to develop norms and rules for the use of AI; the importance of avoiding a loss of mutual understanding and interaction among actors in the economic and trade spheres; technology should not become a new factor in the struggle for geopolitical influence; cooperation in the field of AI can contribute to the development and strengthening of democratic principles in the world (Kastner, 2021).

Supporters of the liberal approaches believe that AI, as a technology, should not have national boundaries. Unlike realists, liberals believe that the formation of alliances in this sphere will accelerate the possibilities of AI application for the benefit of all humanity. They advocate for cooperation and mutual exchange in this field. Thus, the development of AI stimulates innovation and the emergence of new business models. Companies can create entirely new products and services based on the capabilities of AI. For people, AI enables the creation of personalized products and services, as well as improving interaction with customers through automated service systems.

Approaches from the perspective of liberalism suggest that AI is an object, and its use should adhere to ethical principles regulating AI at the national and international levels. Ethical international rules for the use of AI should be governed by norms of international law.

Research and publications underscore the necessity of regulating ethics in the field of AI using norms of international law to establish a universal and consistent ethical foundation

for AI implementation (Jobin & Ienca, 2019). The principles of new technologies are crucial because AI can bring not only benefits but also negative consequences, such as violations of human rights and national sovereignty, for example, the loss of privacy. International organizations play a significant role in this process. Collaboration in the field of AI is a complex process aimed at reaching consensus among participants.

Attempting to analyze the potential for achieving this consensus through liberalism faces several challenges. In particular, the mismatch between governments and major corporations in the AI sphere and the ideals of a free market poses a significant challenge. Moreover, the principle of market self-regulation does not work in the modern world, where artificial intelligence algorithms can set individual prices for each consumer.

But in the realm of economics and trade, AI creates certain challenges for the fundamental postulate of liberalism - trade growth leads to interdependence, which makes military confrontation practically undesirable and impossible. The market, determined by supply and demand, becomes increasingly fragmented. This occurs due to several factors. One of them is the personalization of services and goods, which means creating products tailored to individual consumers. The international market becomes fragmented, and niches targeted at a narrow target audience are created. Companies capable of effectively utilizing AI can gain competitive advantages by developing unique products and services. This can lead to the emergence of new players in the market, strengthening its fragmentation. With the development of AI technologies, it becomes easier to create and develop startups with limited resources. This can lead to the emergence of a greater number of small players contributing to market fragmentation. The Internet and AI technologies make global interaction possible. This allows companies to address diverse geographic markets where different needs and requirements may exist (Marwala & Hurwitz, 2017).

Consequently, regional and global markets, in the context of AI development, become more fragmented, with a greater number of small and medium-sized companies competing for consumer attention and loyalty. Based on the theory of liberalism, AI is more focused on individual economic freedom, societal well-being, and social justice.

In the liberal theory, the protection of individual rights and freedoms is considered a key task of the state. AI can mean supporting the development of technologies that promote personal autonomy and improve quality of life. For example, AI can be used to create personalized medical solutions, educational programs, or technologies. Liberal economics aims for minimal state intervention in market processes. In this paradigm, AI can be seen as a source of innovation and efficiency in production and services. Liberalism also aims to ensure social justice and well-being by guaranteeing citizens' basic needs. In this context, AI can be used to optimize social programs, forecast societal needs, and improve the quality of services in healthcare, education, and other areas. Liberalism supports the free flow of information and transparency in government activities. In the context of AI, this may mean the need to ensure ethical and responsible technology development, as well as provide citizens with control over how their data is used.

However, AI also introduces changes to this aspect of liberal theory, as issues related to AI, such as job automation, ethical aspects of autonomous systems, power concentration, and others, can spark debates and restrictions in the implementation of liberal principles. Overall, understanding the impact of AI on society stems from balancing individual freedoms, economic efficiency, and social justice within the context of liberal values. Primarily, this concerns the protection of individual rights and freedoms. The collection, analysis, and use of personal data can violate the right to privacy and confidentiality. The question of who is responsible for the actions of AI systems and how transparency and explainability of their decision-making are ensured can be complex and contentious. These aspects underscore the need to balance AI development with the protection of individual rights and freedoms. The advancement of cutting-edge technologies requires careful consideration and adoption of effective regulatory and ethical rules to minimize potential negative consequences and ensure AI compliance with human rights principles.

Thus, liberalism, artificial intelligence (AI), and human rights are closely intertwined in modern society. In the United States, there is legislation being discussed that regulates the use of licensed AI in judicial proceedings. These AIs can analyze evidence, forecast case outcomes, and even suggest decisions, raising questions of fairness, confidentiality, ethics, and what rights should be granted to AI (Baker et al., 2021).

In China, AI systems are being implemented to analyze legal data, detect fraud, and predict court case outcomes. This also raises similar questions regarding fairness, transparency, confidentiality, ethics, and human rights that need to be considered when utilizing such technologies.

All of these consequences raise concerns about the limitation of individual freedoms and even the fate of democracy (Papagiannas & Junius, 2023). For example, COVID-19 has acted as a catalyst for increased state control and the use of artificial intelligence for the surveillance of individuals.

According to the theory of liberalism, technological advancements in AI require international cooperation, which will contribute to the development and strengthening of democracy. This is particularly relevant in the realm of security. Nonetheless, the thesis that democracies do not war with each other remains relevant (Marwala & Lagazio, 2011).

AI makes information more accessible and understandable for civil society. Big data analysis can help identify important trends, facts, and arguments, which contributes to more informed discussions and decision-making. However, in the era of information warfare, misinformation distorts the boundaries of the democratic world through manipulation of public opinion, often leaving people unsure about what is real and what is apparent. Within the framework of the neoliberal approach, AI is considered a technology for the common good, applied in diplomacy, where the use of big data is directly used as a tool for predicting the digital behavior of social media users based on the analysis of opinions, preferences, and digital footprint. There are three main aspects

of using AI in diplomacy: 1) AI as a negotiation topic 2) AI as a diplomatic tool 3) AI as a factor changing the negotiation context (Höne, 2019).

*Constructivism.* Considering various aspects of the influence of artificial intelligence on interstate cooperation through the lens of constructivist theory implies paying attention to the importance of ideas, norms, and constructions in the process of developing, using, and impacting AI. The connection between constructivism and artificial intelligence can be intriguing, as both concepts relate to the creation and interpretation of worldviews. Constructivism has provided original and insightful perspectives for understanding social and international reality by focusing on the fundamental role played by ideas, identity, and norms in shaping states' preferences and shaping world politics (Jung, 2019).

The use of artificial intelligence (AI) in various fields such as cybersecurity, economics, military affairs, and diplomacy can contribute to the formation of new norms and rules of behavior on the international stage. This can also lead to the development of new international standards related to digital rights and state responsibilities. The use of AI can also influence the perception of citizens of different countries about actors on the world stage and contribute to the development of dialogue and mutual understanding between cultures, peoples, and states. Thus, constructivist theory allows us to consider AI in international relations as a factor influencing social processes, norms of behavior, and interactions among different participants on the world stage.

In the United States, the application of artificial intelligence (AI) in cybersecurity and military affairs has shaped new strategies for global security. American companies and military structures use AI to detect and prevent cyber threats, which impacts the interaction of the United States with other countries and the formation of new international norms in the field of cybersecurity (Cohen, 2023).

In the European Union, the application of AI in education, healthcare, and governance stimulates dialogue and cooperation among its members. For example, EU projects to implement AI in medicine and education contribute to knowledge exchange and the formation of common standards in these areas (Panel for the Future of Science and Technology (STOA), 2022).

In China, the rapid development of AI influences international economic relations and global trade. Chinese companies actively apply AI in trade and the digital economy, which changes the structure of global trade and shapes new norms in this sphere (Ma, 2024).

In each of these examples, the use of AI affects social processes, norms of behavior, and interactions among different participants on the world stage. This underscores the significance of the constructivist approach to analyzing the role of AI in international relations.

*Postcolonial* theory represents a critical approach to the study and analysis of international relations, focusing on the impact and consequences of colonialism and imperialism on contemporary global dynamics. Adopting a postcolonial perspective when examining



the influence of AI on international relations allows for the identification of the causes of inequality and polarization among countries in the global society amidst the development of new technologies.

The advancement of artificial intelligence could trigger a new form of colonialism or exhibit colonial aspects. In the economic sphere, as well as in the realm of Big Data, states possessing advanced technologies and large datasets may employ them to dominate other countries. The development of military technologies based on AI could lead to geopolitical competition for resources. Limited access to AI technologies and resources for their development also contributes to the disparity in development between rich and poor countries.

Big Data has become a key resource across various industries, driving innovation and problem-solving. States with advanced technologies actively utilize Big Data to enhance governance, healthcare, and finance. However, developing countries find themselves at a disadvantage compared to the United States and China due to their limited access to these technologies. The use of Big Data in the context of post-colonialism theory is evident in the digital economy. For example, advanced economies may analyze data on consumer behavior in developing countries, which can lead to economic dependency and data control, perceived as a form of digital colonialism.

*The theory of neocolonialism*, in the context of studying the impact of artificial intelligence on international relations, intertwines closely with Marxist and neo-Marxist approaches. Its proponents predict that the development and influence of AI will contribute to the exacerbation of class inequality, further division of the world into “center” and “periphery,” as well as increased unemployment and migration flows. Moreover, AI technologies could be used to artificially create migration pressure on countries that do not align with the interests of leading states, and also to “punish” these countries. These processes will undoubtedly impact international relations and diplomacy. Supporters of this theory demonstrate the relevance of Marxist principles in understanding these technological advancements (Qin, 2021).

To prevent new forms of colonialism and promote fair and sustainable development in the field of AI, it is important to develop international norms and standards.

*The theory of dependency*, based on the concept of center-periphery, allows us to understand how, in the context of globalization and technological development, financing and advancement occur through the transfer of technology and investments from developed (central) countries to peripheral and semi-peripheral countries (Cardoso & Faletto, 1979). Analyzing international cooperation from the perspective of dependency theory helps understand the growing dependency of peripheral countries on central countries.

## RESEARCH METHODOLOGY

Conducting research in the field of artificial intelligence within the context of international relations requires a robust methodology capable of encompassing diverse aspects of this

issue and ensuring the high quality and reliability of the obtained results. The scholarly literature dedicated to the methodology of studying the role of artificial intelligence in international relations and law is not as extensive. Additionally, it is worth noting that these studies are conducted not only by political scientists, international specialists, and lawyers but also by representatives of other academic disciplines. This is explained by the interdisciplinary nature of this problem.

The authors of the article explored various methodologies proposed by experts to analyze the issues addressed in the article.

For instance, the authors of the monograph “Internationalization of Artificial Intelligence: Evolution and Impact of Distance Factors” propose a method based on 13 indicators to quantitatively assess the distance factors between countries from five perspectives (geographical, economic, cultural, academic, and industrial). The results obtained using this method indicated that the level of international cooperation in the field of artificial intelligence is only 15.7%. Geographical, economic, and academic distances did not significantly influence the development of international cooperation in AI, while industrial distance showed a significant positive correlation with this level. The research findings also demonstrate that developed economies, such as the United States and China, play a significant role in fostering international cooperation in artificial intelligence (Tang et al., 2022).

The role of artificial intelligence (AI) in the field of international law necessitates the development of a methodology to analyze the legal and political implications of AI usage. Indian researchers Chatterjee and Sreenivasulu examine the impact of artificial intelligence on human rights, particularly about its use in business and civil and criminal liability. They applied a case study method, analyzing various international and Indian human rights laws that may be threatened by the advancement of AI technology. By examining the example of AI's impact on human rights and existing laws in India, experts identified common challenges for human rights in the modern world (Chatterjee & Sreenivasulu, 2021). The interdisciplinary nature of research in the field of artificial intelligence (AI) in international relations and international law entails the application of quantitative analysis, which helps researchers, organizations, and states understand and measure various aspects of cooperation in the field of AI, as well as assess its effectiveness and impact. Key elements of quantitative analysis include: analyzing statistical data to identify the level of AI development in countries and regions, as well as to study the potential level of cooperation in the field of AI. Quantitative analysis helps demonstrate the impact of cooperation in the field of AI on the economy and society, including job creation, innovation levels, as well as social and ethical issues. Quantitative analysis can also be used to evaluate the effectiveness of multilateral cooperation, analyzing indicators such as the number of agreements signed, the number of events held, and the volume of funding.

This analysis was utilized in the research by Krarup and Horst, who examine various approaches to shaping the market and ethics of AI in EU regulatory legislation. The authors conducted a quantitative analysis of all official EU documents on AI, as well

as a detailed examination of key reports, communications, and legislative acts. Their study demonstrates that the integration of the single market plays a fundamental but often underestimated role in shaping new AI regulation. Influenced by the principle of removing barriers to competition and the free flow of data on one hand, and ensuring ethical and responsible AI on the other hand, are considered compatible and even complementary. Krarup and Horst emphasize that the integration of the single market is crucial for shaping new AI regulations in the European Union, and their research illustrates how quantitative analysis can reveal the fundamental principles underlying AI policy (Krarup & Horst, 2023).

The importance of quantitative analysis in the context of societal progress and government initiatives in developing artificial intelligence (AI), exemplified by China, is presented in the work of Gao (Gao et al., 2019).

Menzies applies quantitative analysis to investigate the challenges and opportunities of integrating AI into international business, emphasizing the necessity of quantitative analysis to assess the impact of AI technologies on legal frameworks regulating international migration and human rights (Menzies et al., 2024).

Thus, the use of quantitative analysis in studying AI in international relations and international law helps to better understand the implications of implementing these technologies for shaping international policies and legal norms.

Scholars commonly employ the comparative method to juxtapose various approaches to studying the role of artificial intelligence (AI) in the context of international relations and international law, aiming to identify commonalities and differences and to develop new analytical methods.

Comparative analysis of different aspects of AI usage in international relations can shed light on its role in global politics, economics, diplomacy, and regulation. Olive Erdely emphasizes the importance of studying how different countries and cultures apply AI in their activities on the global stage. Experts proposed using comparative analysis to assess how AI impacts international relations, diplomatic interactions, the economic sphere, and its regulation at the global level. This approach allows for a deeper and more comprehensive understanding of how AI shapes contemporary international relations and the challenges and opportunities it presents to the global community (Erdélyi & Goldsmith, 2020).

Various scholars provide valuable insights into researching the role of artificial intelligence (AI) in international relations and international law through comparative analysis. Experts emphasize the importance of the comparative method in understanding the law of international relations and international law, particularly in light of the diversification and regionalization of international relations (Magomedova, 2020). This highlights the necessity of comparative analysis for studying the implications of AI usage in these areas.

To examine the legal aspect of the issue, the methodology of "analysis of the legal and political landscape in the field of artificial intelligence" can be applied. This approach helps identify key legal principles, policies, approaches, and tools used by states to develop artificial intelligence technologies and foster cooperation in this area. It encompasses: studying fundamental legal principles, including ethics, transparency, accountability, and data confidentiality; determining core political directions and strategies aimed at supporting the development and application of AI technologies, including investments in research and development, infrastructure creation, and startup support; assessing the level of cooperation between countries in the field of artificial intelligence, including analyzing international agreements and partnership programs; identifying the main instruments and mechanisms employed by each country to advance AI technologies and cooperation in this area, such as legislative measures, financial instruments, and research projects.

The analysis of the legal and political landscape in the field of artificial intelligence requires an interdisciplinary approach that integrates methodologies from computer science, law, politics, and ethics. Several key methodologies have been proposed in the scientific literature for studying the complex interactions between artificial intelligence technologies and legal and political systems.

This method is necessary when assessing the impact of artificial intelligence on various spheres, such as financial crime (Yeoh, 2019), political risk management, (Hemphill & Kelley, 2021), and the recognition of the international legal personality of artificial intelligence (Talimonchik, 2021).

The methodology for analyzing the legal and political landscape in the field of artificial intelligence requires a comprehensive approach that takes into account the ethical, legal, and societal consequences of artificial intelligence technologies. By integrating knowledge from various fields of science and practice, researchers and policymakers can develop reliable frameworks for managing artificial intelligence.

To define the methodology for studying the role of artificial intelligence (AI) in international relations and international law, it is important to consider the interdisciplinary nature of this issue. This characteristic is crucial for research, as it involves the intertwining of methods from political, legal, and information technology sciences.

Such an approach requires the combination of various methodologies and approaches from the fields of political science, international law, and information technology. This includes the analysis of political processes, the impact of technology on the formation of legal norms, as well as the technical aspects of AI development and application. Only through a comprehensive approach can the role of AI in the international sphere and legal context be fully explored.

To analyze the issues outlined in the article, researchers can also turn to general research theories and concepts. One such concept is the onion research model proposed by Saunders et al. (2007). Saunders' model, also known as the "onion research model," is

a method developed for systematizing and categorizing various types of research. The model uses the metaphor of an onion, where each layer represents a different level of research, with increasing depth and complexity.

Thus, the first layer focuses on gathering and synthesizing existing knowledge on the research topic. The second layer is directed toward describing and documenting the phenomenon or event. The third layer focuses on the analysis and interpretation of data. The fourth layer examines the causal relationships between variables. The fifth layer is dedicated to developing and testing theories that explain the phenomena or events.

Overall, Saunders' model is a valuable tool for researchers, helping them to systematize, understand, and choose appropriate types of research (Saunders et al., 2007).

Analyzing the use of artificial intelligence in Kazakhstan, as a developing country, requires a comprehensive methodological approach that takes into account the characteristics of AI development in such nations. This includes dependence on economic, social, and technological factors, as well as issues such as a lack of qualified personnel, inadequate infrastructure, and the necessity to establish appropriate political frameworks to ensure sustainable and inclusive AI development. In this context, the technical, political, and legal expertise accumulated by more developed countries can serve as a valuable source of knowledge and successful implementation strategies in developing nations, promoting more efficient resource utilization and accelerated technology advancement.

Big Data is a crucial tool for analyzing international relations and law. Experts discuss the prospects of international legal protection of Big Data at both universal and regional levels, emphasizing the need to analyze legal measures to safeguard data in the global information society. Zhao and Tan note the extensive use of big data research methods across various disciplines, indicating a growing interest in scientific methodology through the analysis of massive datasets (Zhao & Tang, 2021). In the work of Wang and Guan, a legal modeling methodology is examined for managing large data transactions in the digital economy, emphasizing the importance of systematization, security, and transparency in constructing legal frameworks (Wang & Guan, 2022). Fuller explores how structuring Big Data can enhance democratic participation in international law, highlighting the potential of information and communication technologies to promote equal participation in legal structures (Fuller, 2014). Security and privacy issues related to Big Data are addressed by Anawar et al., underscoring the need for international collaboration to effectively mitigate risks (Anawar et al., 2022). Thus, the integration of Big Data into the study of international relations and law offers a promising path for improving legal protection, governance frameworks, and research methodologies, necessitating joint efforts to address security and privacy concerns in a global context.

Based on data related to the openness of Big Data, experience in international cooperation, and other parameters and sources (official company reports, scientific publications, web articles, and other open sources of information), the main players in the field of Big Data can be identified, such as US IT giants and “super-platforms” in China. It is necessary

to refer to case studies related to issues of data openness, international cooperation, and global processes, and select specific cases for more detailed analysis.

## DISCUSSION

The methodology and theory of artificial intelligence (AI) research in international law and international relations encompass a wide range of interdisciplinary aspects. The impact of AI on international legal regulation, state behavior, and global governance is the subject of growing academic interest. To understand the relationship between artificial intelligence and international law and relations, various theories and approaches have been proposed by authors from different countries.

Russian authors refer to doctrinal approaches to formulating the definition of artificial intelligence (Begishev et al., 2020), analyzing risks in transitioning to the digital economy (Toropova et al., 2020). Additionally, they discuss a technocratic approach to artificial intelligence and robotics (Davydov & Platonov, 2017), as well as ethical aspects of using technical means and the role of personal ethical systems in decision-making (Yastreb, 2020). The potential of artificial intelligence to influence state sovereignty within economic unions has also been studied (Bologova & Nikitina, 2019).

Scientists from the United States and China have proposed various theoretical approaches to studying artificial intelligence (AI) in the context of international law and relations. These approaches cover interdisciplinary research, historical analysis, and the study of the impact of AI on legal systems and decision-making processes. In the United States, scholars actively study AI in the context of international law and international relations, using interdisciplinary approaches aimed at rethinking the role of international organizations (Coicaud, 2008, pp. 263-297). Ethical principles are being developed as guiding principles related to AI to protect human rights (Chatterjee & Sreenivasulu, 2021).

Chinese authors suggest linking theories in the study of AI with socio-legal approaches to international law, evaluating the status quo of research in international law and history, and reflecting an interdisciplinary perspective (Jiang, 2020).

Practically all researchers emphasize the need for joint research involving international lawyers and political scientists from different countries.

These theories and discussions provide a comprehensive framework for understanding the relationship between artificial intelligence and international law and international relations. They address aspects such as definition, ethics, economics, and sovereignty, offering a multifaceted view of the consequences of artificial intelligence on the international stage.

Kazakhstani experts in the field of international law and international relations have not yet formed their narrative in approaches to studying AI in these areas. Mostly, AI issues are addressed by specialists in IT and business, such as finance, energy, and healthcare. At the same time, in other countries such as the United States, China, and Russia, active research on AI in the context of international law and international relations is already

underway. The analysis of works by foreign scientific institutions and experts indicates a lack of research on the development of state policy in the field of AI in developing countries like Kazakhstan. This underscores the need to initiate discussion and create a domestic discourse and narrative.

## THE EXPERIENCE FOR KAZAKHSTAN

The experience for Kazakhstan encompasses several aspects, with the primary focus being on the need to develop information technology solutions to keep pace with global technological trends. According to experts in the field, the positions of regional states in the ranking of computer services exporters are far from high (Livni, 2023). The importance of developing artificial intelligence in Kazakhstan is emphasized at the highest level of the state. For instance, the President of Kazakhstan spoke at the “Digital Bridge” forum, which became the largest platform in Central Asia for discussing the latest trends and prospects in the IT industry. In his speech, President Kassym-Jomart Tokayev noted that Kazakhstan holds a strong position as a leading digital and fintech hub in the Eurasian space (Glava gosudarstva prinyal uchastie, 2023). Indeed, in recent years, there have been certain positive trends in IT development in Kazakhstan. Ambitious state programs have been launched, with responsibility for their implementation taken on by the ministries of digital development. Additionally, a wide range of tax preferences and subsidies are provided to IT companies and startups through “special economic zones,” such as Astana Hub in Kazakhstan. President Tokayev instructed the government to ensure the construction of data centers specializing in artificial intelligence within two years. To achieve this, global players like Amazon, Google, Mastercard, and Citigroup may be involved (Glava gosudarstva prinyal uchastie, 2023).

Another important aspect of artificial intelligence (AI) development is the establishment of a common understanding of this technology among governmental bodies, businesses, the scientific community, and the public. This includes ensuring consistency of actions among various stakeholders in this field, as well as increasing awareness of the potential risks and opportunities provided by AI.

Researching theoretical and methodological approaches to the role of AI in international relations and law contributes to the formation of a domestic narrative on the issue of artificial intelligence in Kazakhstan. The methodology of the research includes analyzing the current state and prospects of AI development worldwide, studying the experiences of other countries, conducting expert surveys and focus groups, as well as analyzing social networks and other sources of information. This work contributes to the development of the domestic AI sphere, enhances Kazakhstan’s competitiveness on the global stage, and ensures the security and prosperity of Kazakhstani society.

It is important to note that creating a narrative on the issue of AI is a long-term process that requires continuous updating and adjustment.

The Kazakhstani government acknowledges the importance of harnessing the capabilities of artificial intelligence (AI) not only for addressing domestic but also external challenges. The President has emphasized the need to accelerate the development

of a modern legal regulatory framework that aligns with the best global practices and takes into account market needs and citizens' interests (Livni, 2023). This will enable the country not only to integrate into the global digital space but also to address a pragmatic task by attracting international companies to the Kazakhstani market.

To achieve these goals and address other foreign policy objectives, cooperation of the expert community on an interdisciplinary level is necessary, combining knowledge in the fields of information technology, international relations, and law.

## RESULTS

Analysis of various theoretical and methodological approaches to the role of AI in international relations and international law has revealed several key aspects:

- Interdisciplinary nature of analysis. Taking into account various factors such as economic, social, political, diplomatic, and technological aspects allow for a deeper understanding of this issue.
- Diversity of theoretical approaches. There are numerous approaches to strategic analysis, each with its own advantages and limitations. Traditional (mainstream) and more modern theories and concepts explaining the relationships between states, businesses, and civil societies were developed before the emergence of AI. Therefore, they may not always adequately cover the complex dynamics of artificial intelligence in the context of international relations and international law.
- The need for the development of new approaches in the analysis of international relations and law is driven by the rapid evolution of relations themselves, as well as the consideration of the characteristics and impact of artificial intelligence (AI). AI undergoes constant changes, opening up new perspectives and risks. Its complexity and potential impact on both positive and negative aspects require special attention in the development of theoretical and methodological frameworks. It is essential to note that underestimating the specifics of AI may hinder the assessment of its impact on international relations and law, thereby complicating regulation and the use of this technology.
- Additional discussion points include ethics, the influence of new technologies on interstate relations and relations between states and non-state actors, the role of civil society, and international cooperation.

This article does not claim to provide exhaustive answers to these questions. Instead, its authors aim to stimulate further discussion and research in this area, particularly among the expert community in Kazakhstan.

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