



## HISTORICAL AND PHILOSOPHICAL ANALYSIS OF GEOGRAPHICAL AND CLIMATIC DETERMINANTS OF CIVILIZATIONAL MODELS

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### ABOUT ARTICLE

**Key words:** Ibn Khaldun, paradigm, civilizations, geographical determinism, Central Asia, interdisciplinarity.

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**Abstract:** The article presents a historical and philosophical analysis of the influence of geographical and climatic factors on the development of civilizations. It examines the main theories that emphasize the role of natural conditions in the formation of social structures and cultural paradigms. The ideas of philosophers and scholars such as Ibn Khaldun, Montesquieu, L.Mechnikov and J.Diamond are explored, who in their works link the development of societies with the geographical and climatic features of their environment. The author also highlights how geography and ecology have influenced the stability, evolution, and interaction of various civilizations throughout history. The article analyzes geographical determinism, as well as ecological factors such as resource availability, climatic conditions, and territorial characteristics, in the context of their impact on social processes. The study aims to identify the interconnection between the physical characteristics of the environment and social transformations, as well as assess the significance of the geographical approach for contemporary understanding of the processes of civilizational development.

**SIVILIZATSIYA MODELLARI GEOGRAFIK VA IQLIMIY  
DETERMINANTLARINING TARIXIY-FALSAFIY TAHLILI**

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**MAQOLA HAQIDA**

**Kalit so'zlar:** Ibn Xaldun, paradigma, sivilizatsiyalar, geografik determinizm, Markaziy Osiyo, interdisiplinarlik.

**Annotatsiya:** Maqola sivilizatsiyalar rivojlanishiga geografik va iqlimiy omillarning ta'sirini tarixiy-falsafiy tahlil qilishni o'z ichiga olgan. Unda tabiiy shart-sharoitlarning ijtimoiy tuzilmalar va madaniy paradigmalarning shakllanishidagi roli haqida asosiy nazariyalar ko'rib chiqilgan. Ibn Xaldun, Sh.Monteskyo, L.I.Mechnikov va J.Diamond kabi faylasuflar va olimlarning g'oyalari o'rganilgan, ular o'z asarlarida jamiyatlar rivojlanishini ularning yashash muhiti, geografik va iqlimiy xususiyatlari bilan bog'laydilar. Muallif shuningdek, geografiya va ekologiyaning turli sivilizatsiyalar barqarorligi, evolyutsiyasi va o'zaro ta'siriga qanday ta'sir ko'rsatganiga e'tibor qaratgan. Maqolada geografik determinizm, shuningdek, resurslarga kirish imkoni, iqlim sharoitlari va hududiy xususiyatlar kabi ekologik omillar, ularning ijtimoiy jarayonlarga ta'siri nuqtai nazaridan tahlil qilingan. Tadqiqot atrof-muhitning fizikaviy xususiyatlari va ijtimoiy o'zgarishlar o'rtasidagi bog'liqlikni aniqlash, shuningdek, sivilizatsion rivojlanish jarayonlarini zamonaviy tushunishda geografik yondashuvning ahamiyatini baholashga qaratilgan.

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**ИСТОРИКО-ФИЛОСОФСКИЙ АНАЛИЗ ГЕОГРАФИЧЕСКИХ И  
КЛИМАТИЧЕСКИХ ДЕТЕРМИНАНТ ЦИВИЛИЗАЦИОННЫХ МОДЕЛЕЙ**

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**О СТАТЬЕ**

**Ключевые слова:** Ибн Халдун, парадигма, цивилизации, географический детерминизм, Центральная Азия,

**Аннотация:** Статья представляет собой историко-философский анализ влияния географических и климатических

междисциплинарность.

факторов на развитие цивилизаций. В ней рассматриваются основные теории, которые подчеркивают роль природных условий в формировании социальных структур и культурных парадигм. Исследуются идеи философов и ученых, таких как Ибн Халдун, Ш.Монтескье, Л.И. Мечников и Дж.Даймонд, которые в своих трудах связывают развитие обществ с географическими и климатическими особенностями их обитания. Автор также акцентирует внимание на том, как география и экология влияли на устойчивость, эволюцию и взаимодействие различных цивилизаций на протяжении истории. В статье анализируется географический детерминизм, а также экологические факторы, такие как доступность ресурсов, климатические условия и территориальные особенности, в контексте их влияния на общественные процессы. Исследование направлено на выявление взаимосвязи между физическими характеристиками окружающей среды и социальными преобразованиями, а также на оценку значимости географического подхода для современного понимания процессов цивилизационного развития.

**Introduction.** The history of humanity is a complex process in which geographical and climatic conditions play a crucial role in shaping and evolving the paradigms of civilizations. Over millennia, various cultures and societies have interacted with the natural environment, adapting to it while simultaneously altering it. Geographical and climatic factors such as location, climate, the availability of natural resources, and ecological conditions have had a significant impact on the development of social and cultural structures, economic models, and political systems.

Many prominent thinkers, from ancient Greek philosophers to modern scholars, have raised questions about how natural conditions influence the development of civilizational models. This article examines key approaches and ideas proposed by philosophers and researchers such as Ibn Khaldun, Montesquieu, L.I. Mechnikov, and Jared Diamond, while also analyzing contemporary trends in understanding the role of geographical and climatic factors in the development of civilizational models.

In the context of globalization and the rapid changes in the global climate, questions about the impact of geographical and climatic factors on the development of civilizations have become

particularly relevant. Contemporary climate change processes, persistent ecological catastrophes, and the interaction of various cultures and states in a global context call for an in-depth analysis of the relationship between the natural environment and the development of social structures.

Studying the geographical and climatic determinants of civilizational models contributes to a more comprehensive understanding of the processes of human society evolution and helps develop new approaches to addressing pressing ecological and socio-political issues. In this context, the importance of interdisciplinary research that integrates knowledge from geography, philosophy, sociology, and ecology becomes evident. Examining this topic not only helps to understand past patterns but also predicts possible paths for the development of civilizations in an evolving environment.

**The analysis of literature and methods.** The study of the influence of the environment on the character of civilization was a subject of interest for such prominent philosophers of Ancient Greece as Hippocrates, Aristotle, and Strabo. The Arab philosopher Ibn Khaldun believed that the conditions for the formation of humans and human society are primarily material factors, such as the economic state of the state and the geographical environment in which society exists. He explained the geographical regularity of the development of the civilization paradigm primarily through climate [1].

This topic was further explored by scholars such as L.I. Mechnikov, Montesquieu, L.I. Reisner, and G. Buckle. Montesquieu, for instance, justified geographical determinism, emphasizing that the peculiarities of geographical location and the environment significantly impact the characteristics and properties of society. Geographical determinism, which received the most notable development among German thinkers K. Ritter and F. Ratzel, is discussed in their works as the primary regularity that determines the development of society and culture, with an emphasis on the influence of geographical factors.

The second half of the 19th century became a period when researchers such as N.Danilevsky, L.Mechnikov, and P.Milyukov began to analyze the impact of geographical factors such as climate, economic activity, and demographic features on the development of civilizations. Particularly significant is L.Mechnikov's theory of cultural genesis, outlined in his seminal work *Civilization and the Great Historical Rivers*, which was posthumously published in 1889. In this work, Mechnikov emphasizes the key role of the geographical environment in the emergence of civilizations and the evolution of society. It is also important to note that the significance of the geographical regularity for the fate of civilizations was further developed in the geopolitical theories of the 20th century, particularly in the works of the founders of geopolitics, such as R. Kjellen [2], A.T. Mahan [3], H. Mackinder [4] and others.

The research methods in this article are based on an interdisciplinary approach, combining elements of historical, philosophical, geographical, and ecological analysis. The key research methods include historical-philosophical analysis, comparative method, contextual analysis, which allows for considering the temporal and spatial aspects of the emergence and evolution of civilization paradigms, as well as analyzing the influence of specific geographical and climatic factors on social, political, and economic structures, cross-disciplinary approach, and case study method.

**Discussion.** The geographical approach to the civilizational paradigm focuses on the influence of geographical conditions on the formation and development of civilization paradigms, considering geographical features such as climate, landscape, resource availability, and their impact on the nature of civilizational models. It pays particular attention to regional characteristics and the geographical context in which the paradigms of civilizations develop and function. In this approach, the emphasis is placed on the role of geography in shaping and influencing the character and direction of social systems' development. For example, the availability of natural resources can foster economic development, while climatic conditions may influence lifestyle and cultural practices. The approach also takes into account political boundaries and territorial aspects, including the interaction of civilizational paradigms with other societies and states. Political factors, such as conflicts and cooperation, can also influence the development of civilizational models. The geographical approach considers the impact of human activity on ecosystems and the environment, as well as the effects of climate change on social processes and structures. The advantages and disadvantages of the geographical approach to the civilizational paradigm may include its ability to explain the influence of geographical context on the development of civilizations, as well as its limitations in explaining other aspects of development, such as social or cultural factors.

The onto-epistemological features of the geographical approach to the paradigm of civilizations are reflected in its core principles and concepts related to both ontology and epistemology. The ontological aspect of the geographical approach asserts that the geographical environment plays a key role in shaping and determining the character of civilization paradigms. This implies that physical geography, such as climate, relief, and natural resources, defines the opportunities and limitations for the development of social systems. The spatial specificity is also important, which takes into account the unique characteristics of different regions and their influence on the formation of civilizational paradigms. This includes the analysis of geographical factors such as the distribution of natural resources, climatic conditions, and geopolitical characteristics.

Proponents of geographical determinism argue that the formation of the first civilizational paradigms predominantly took place in regions with favorable natural and climatic conditions, where rivers and water resources were present. These conditions facilitated the transition to sedentism and the development of agriculture. Within the theoretical framework of these thinkers, nature and climate directly influenced people's psychological characteristics, ideas, ways of thinking, and culture, as well as the socio-economic reality. However, it is important to note that civilizational paradigms also developed in areas with less favorable climatic conditions. In this context, the epistemological approach emphasizes that knowledge and perception of the environment do not always predetermine the formation of complex socio-cultural structures. For instance, in North America, indigenous peoples, despite their deep connection to nature, did not create a civilization distinct from the traditional, organically sustainable way of life. The social existence of these peoples retained its original form, which suggests that the development of civilization is not always linked to external factors such as climate or resources, but also depends on numerous internal factors, including cultural and cognitive aspects, which influence cognitive activity and social organization.

The Arab philosopher Ibn Khaldun argued that the main determining factors in the formation of humans and human society are material conditions, such as the economic status of the state and the geographical environment. He placed particular emphasis on the influence of climate on the development of civilization, believing that climatic features determine lifestyle, dietary habits, as well as the physical and intellectual qualities of people living in a given territory. Ibn Khaldun proposed a theory of urban development of civilizations, within which urban dwellers occupy a secondary role. He believed that civilization arises primarily thanks to nomadic tribes, such as the Bedouins, who play a central role in the transition from chaos to an orderly social structure. In his view, city dwellers are more focused on consumption, while it is the nomadic peoples who lay the foundations of civilizational development.

F. Braudel and his colleagues from the Annales School made a significant contribution to the rethinking of history as a multi-layered and contextual process. In contrast to traditional historical approaches focused on events and dates, Braudel and the Annalists proposed examining the development of civilization paradigms through the lens of long-term structures (*la longue durée*) — social and economic conditions that change slowly and form the foundation of social organization over centuries. The Annales approach suggests that civilizational matrices evolve not only under the influence of political events and the decisions of individual figures, but also due to deeper, slowly changing factors such as climate and geography. Features of the natural environment, including climatic conditions, landscape, and access to seas and rivers,

leave their mark on the economy, lifestyle, and cultural characteristics of each society. Climatic conditions — ranging from stable to extreme — create different conditions for agriculture, animal husbandry, and other forms of economic activity. For example, a warm and fertile climate fosters the development of agrarian societies, while harsh climatic conditions in highlands or deserts require adaptations, such as a nomadic lifestyle. Access to seas and rivers facilitates trade and cultural exchange, accelerating economic and social development. In contrast, internal and isolated regions develop more slowly, as they are less exposed to external influences and cultural exchanges. Relief and landscape — mountains, plains, deserts, forests — also determine how civilizational models will adapt and develop. For instance, mountainous regions may protect from external invasions but complicate transportation and communication. Plains, on the other hand, are convenient for agriculture and movement, but are more vulnerable to conquests.

In the second half of the 19th century, thinkers who studied the problems of civilization, such as N.Danilevsky, L.Mechnikov, and P.Milyukov, examined the influence of geographical factors (climate, economy, demographic features) [5]. «In the theory of Lev Mechnikov, water, as the embodiment of all life, fertility, prosperity, energy, and movement, is a central category. Water is the main phenomenon of human existence and the development of civilization in general. It serves as a means of communication between cultures, mutually enriching peoples and forming a global spatio-temporal continuum in world civilization» [1,72].

The American scientist and recipient of the "Blue Planet" award, Jared Diamond, in his book "Guns, Germs, and Steel" [6], examines the evolution of civilizational paradigms through the lens of ecological and geographical factors, which, in his opinion, play a decisive role in determining the success or collapse of societies. He argues that it is the natural environment, not any universal human traits, that creates the diverse trajectories of civilizational development. In particular, the scientist emphasizes the importance of resources and agriculture. Access to cultivated plants and domesticated animals allowed some societies to be the first to master agriculture, providing them with food abundance and giving them the time and resources to develop complex social structures, technologies, and writing. J.Diamond's ideas in Guns, Germs, and Steel can be seen as an attempt to explain the processes of development and decline of civilizational paradigms through ecological determinism – a concept in which natural and geographical conditions determine the trajectory of societal development. In this approach, the foundation of knowledge is not universal human qualities but material conditions of existence — the availability of resources, climate and ecosystem features, which create opportunities or, conversely, constraints for the growth and complexity of social structures.



Drawing on data from biology, geography, and archaeology, Diamond builds his theories on specific, measurable factors such as climate, location, and resource availability. He uses empirical data to substantiate conclusions about how natural conditions influenced historical processes, avoiding a priori, universal assumptions. The scientist rejects universal explanations and emphasizes the diversity of historical trajectories. From an epistemological standpoint, this means recognizing that knowledge of civilizational matrices must be built according to specific conditions, rather than derived from abstract laws. According to Diamond, history is a set of contextual knowledge explaining why some societies thrived while others did not. Diamond suggests that knowledge about the development of civilizational paradigms cannot be reduced to simple formulations; it is a complex combination of factors. This position implies a more flexible and layered approach to knowledge, taking into account both natural and social aspects. The scientist argues that the evolution of civilizational paradigms should be studied through an "ecological lens," which creates an epistemological foundation linking knowledge of nature and human history. Natural conditions become the basis for understanding societal changes, structuring historical processes through ecological regularities. The philosopher argues that latitudinally extended continents, such as Eurasia, favored the spread of agricultural technologies, cultures, and languages because similar climatic conditions made it easier for cultural innovations to adapt. At the same time, geographically elongated continents along the meridian (such as the Americas) faced climate diversity and barriers, which slowed the spread of agricultural technologies and knowledge.

According to the scholar, diseases are also a factor in conquests and survival. In societies with dense populations and domesticated animals, infectious diseases like smallpox developed. Europeans, having gained immunity to a range of diseases, brought these diseases with them during colonization, leading to catastrophic consequences for the indigenous populations. Thus, Jared Diamond emphasizes that diseases play a significant role in shaping the nature of civilizations, affecting their development, survival, and relationships with other societies. This factor has several consequences:

- Formation of immune barriers and adaptation to diseases: In societies with high population density and close contact with animals, such as in Eurasia, infectious diseases like smallpox, measles, and tuberculosis arose. Dense settlements and regular contact with animals led to the evolution of the immune system, capable of developing resistance to certain infections. This immunity became an important evolutionary advantage, enhancing survival and increasing societal resilience in the face of future epidemics.



- Demographic advantage and territorial expansion: Immunity to certain diseases not only strengthened societies but also gave them an advantage in colonization. When Europeans arrived in the New World and other regions, they brought with them diseases to which the indigenous populations had no immunity. These epidemics, such as smallpox, decimated local populations, leading to demographic catastrophes. As a result, the conquerors were able to seize territories with minimal military resistance, changing the cultural and demographic makeup of regions.

- Strong dependence of social structures on the epidemiological situation: In societies where epidemics were not a frequent occurrence, social and cultural structures developed differently than in civilizations where diseases regularly reduced the population. For example, high mortality from diseases could stimulate a rigid hierarchy and control over resource distribution, which ultimately affected political structures and culture.

- Formation of perceptions of “other” cultures: Epidemics, often caused by contacts with new peoples, contributed to the formation of perceptions of “strangers” as potential threats. The connection between diseases and cultural contact strengthened cultural boundaries, fostering more insular worldview orientations.

- Changes in the landscape of colonized societies: The decline of indigenous populations led to Europe imposing its social, religious, and political institutions on the conquered lands in colonized regions. The disappearance of large indigenous communities led to the replacement of traditional cultures and ways of life, creating a new civilizational appearance with strong European influence in architecture, language, politics, and religion.

Diamond notes that ecological and climatic determinants create unique threats and opportunities for civilizational paradigms. For example, water scarcity in arid regions limits agriculture, and isolated island societies often face resource shortages, which can slow development or make them vulnerable to ecological crises. In this way, the scholar shows that ecological and geographical principles form a complex, ambiguous picture of paradigmatic development that does not adhere to universal laws. Different conditions create different paths and barriers for civilizational paradigms, which explains the significant diversity of their histories and achievements. Here, it is important to consider the epistemological aspect of the geographical approach, which emphasizes the importance of interdisciplinarity – integrating various disciplines such as geography, history, anthropology, and economics to fully understand the development of civilizational models. This approach uses methods of geographical analysis, such as cartography, spatial analysis, and geographical information systems, to study the relationships between the geographical environment and societal processes. Furthermore, the epistemological aspect emphasizes the significance of contextual understanding, where the

analysis of civilizational paradigms should be conducted with regard to their geographical environment and regional features. These ontological-epistemological features of the geographical approach to the civilizational paradigm reflect its methodological foundation, which allows for consideration of geographical factors and their impact on the development of social systems. It is also worth noting that each of these approaches offers unique insights into understanding the nature of civilizational paradigms and their formation, the study of which can provide a deep understanding of the essence and features of different civilizational models in the context of managing societal processes.

**Results.** L.Mechnikov concludes that the emergence and evolution of civilization paradigms are largely, but not entirely, determined by natural conditions. "The philosopher here speaks of the role of the human being as an active agent and his collaborative work, strenuous labor, and efforts with other people, for it is precisely him who managed to utilize rivers to sustain his own existence" [1,74]. Furthermore, L. Mechnikov identifies a key factor in the evolution of civilization paradigms – the transformation of geographical patterns of development into technological ones, which, in turn, became the foundation for achieving technological progress, including the development of tools, improvement of technologies, and other aspects contributing to the evolution of social relations.

Thus, the study established that geographical location and natural resources play an important role in the formation of civilizational models. Geographical features, such as the availability of water routes, climatic conditions, and the diversity of natural resources, have a significant impact on the economic structure, social relations, and technological development within a civilization. The analysis of climatic factors showed that temperature fluctuations, the length of the growing season for agricultural crops, as well as the frequency of natural disasters, influenced the stability of social structures and the ability of civilizations to adapt to changing conditions. Thus, climatic changes often became a catalyst for both social and technological transformations. An important feature of the interaction between geographical and climatic determinants is their ability not only to influence economic development but also to shape the cultural characteristics of society. For instance, in regions with unstable climates, more flexible and adaptive social models oriented toward survival in uncertain conditions might have developed.

It was also revealed that the transition from geographical determinism to technological progress became a key moment in the evolution of civilizations. Geographical and climatic conditions serve as the foundation for the formation of initial technological solutions, which then, in turn, contribute to the transformation of social and cultural paradigms. The study showed

that not only natural conditions but also the ability of civilizations to adapt their social and economic structures to changing geographical and climatic conditions determine their survival and development. Natural disasters, for example, prompted the need to reconsider existing models of labor organization and resource distribution.

The conducted analysis confirms the importance of a comprehensive approach to studying the interaction of geographical and climatic factors in the context of the philosophy of history. It was established that natural determinants, acting in conjunction with social and cultural processes, influence the formation and transformation of civilizational models over time.

**Conclusion and Recommendations.** Through the historical-philosophical analysis of geographical and climatic determinants of civilizational models, it was revealed that natural conditions exert a significant, although not all-encompassing, influence on the development of civilizations. Geographical location, climatic features, and the availability of natural resources serve as the foundation for the formation of economic and social structures, as well as technological progress, which in turn contributes to the transformation of social relations. An important aspect is the interaction of geographical and climatic factors with social and cultural processes, which allows for a deeper understanding of the mechanisms of the formation and evolution of civilizational models.

The analysis showed that civilizational paradigms that adapted their structures to changing natural conditions were able to thrive, while the inability to adapt often led to their decline. The transition from geographical determinism to technological progress became a key moment in the evolution of civilizations, opening new opportunities for their development.

Recommendations for researching the role of the geographical approach to the paradigms of civilizations:

- It is necessary to deepen the study of the impact of natural factors on civilizational models, which will help to better understand the mechanisms of civilization development in various historical contexts;

- To investigate the adaptive strategies of civilizational paradigms. In particular, attention should be paid to the strategies of adaptation used by civilizations in the context of changing geographical and climatic factors, which will help identify successful practices that could be useful for modern society in the face of global climate change;

- To develop new theoretical models that take into account both natural and social factors within the context of the philosophy of history. These models will assist in more accurately predicting the future development of civilizations under conditions of global changes;

- Based on historical analysis, it is recommended to use knowledge about the impact of natural factors on the development of civilizational paradigms for more effective planning of sustainable development in the face of climate change and other global challenges;

- It is important to continue cooperation between historians, philosophers, ecologists, and social scientists to create comprehensive research that considers both natural and cultural aspects of the development of civilizational paradigms.

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