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## CIVILISATION AND ITS ENVIRONMENTAL CONSEQUENCES

**Abstract:** This work is devoted to examining civilisation's environmental consequences and the military confrontation between civilised and barbaric societies. The authors examine antique and ancient Chinese ideas about the phenomenon of barbarism, and also highlight common cultural features inherent in the Germans and Celts and opposed to Rome, and the Far Eastern nomads who were adjacent to imperial China. Moreover, the authors seek to analyse the substantial effects of civilisation on the environment and ecosystem. Having analysed the military potential of civilised societies, the authors come to the conclusion that the victory of barbarism is possible only in the case of civilisation internal collapse. The article outlines other important aspects, including the relationships between civilisation and war and between civilisation and the environment. It concludes with a discussion about rethinking and restructuring some of our perspectives on civilisation.

**Keywords:** environment, civilisation, antiquity, nomads, ecosystem

### Introduction

Generally, civilisation refers to both a process and a destination. It actually illustrates how a social collective becomes civilised or evolving from a state of nature, savagery, or barbarism to a state of civilisation [1-3]. It defines a state of human society characterised by substantial urbanization, social and professional stratification, the gratification of spare time, as well as similar improvements in the arts and sciences [4, 5]. Based on the current standards, the potential for logically complicated sociopolitical organization and self-government has long been thought of as a central necessity of civilisation [6, 7].

Anthropomorphic climate change, its related outcomes, and the natural world's delicate state, more specifically, are in the frontline of the new and arising perils to civilisation. As a matter of fact, the nature of mankind's most exploitative connection with the broader natural world, overall, is being called into inquiry and is making some of us seriously rethink that connection [8, 9].

The modern world claims to create a single global civilisation, the economic and legal order of which covers the entire globe. Undoubtedly, the single world market is functioning. Indeed, spiritual resistance to its influence is suppressed by massive

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propaganda of a Western-style consumer lifestyle, and political barriers have lost their former impenetrability [10-12]. But this has happened before: The Roman Empire and monarchic China have already demonstrated an example of the world development by a single civilisation and drawing less civilised societies into its orbit. And both world powers once found themselves in ruins, and, moreover, they were destroyed not by the more powerful neighbours, but by the very peoples who were contemptuously called "barbarians" in Rome and Luoyang [12-15].

How could this happen? To what rhythm did the forceful confrontation of civilised societies with their barbaric neighbours obey? We will try to answer these and other questions in this work.

### **Civilisation and barbarism as social and philosophical concepts**

Before we touch upon the neighbourhood and confrontation between civilisation and barbarian societies, it is necessary to characterise the concepts of "civilisation" and "barbarism". After all, no nation has ever called itself barbaric. This name is invented and put into circulation by civilised neighbours, who, in turn, rarely explain what the essence of their civilisation is and why they are not barbarians themselves. Therefore, it is possible to distinguish between civilisation and barbarism only when these phenomena are considered externally. Domestic scholar Motroshilova [5] suggested that the main criterion for a society's civilisation is the dominance of socio-historical and not natural and biological factors in its life. For example, a civilised society does not flee from drought, as medieval nomads could do, but takes irrigation work at a forced pace so that the changes in natural conditions do not affect its socio-economic climate [5]. A civilised society has many important features, among which material production increase, the growing interference of society in natural processes, the deepening division of labour, the desire for non-violent problem solution, etc. Motroshilova believes that the main distinguishing features of a civilised person are diligence, sense of justice and the desire for material comfort. Since hard work does not harmonise well with material comfort (after all, the labour process is almost never pleasant), we can assume that a civilised person is characterised by an extremely rational attitude to industrial and military labour: he works when he personally needs to achieve some personal goals - no more and no less. We add that for a civilised society, cities are the natural habitat of life. "The second nature" fully triumphs in cities, and the rhythm of life of the townspeople is set not by natural cycles, but by economic processes. Cities such as ancient Rome and Athens, medieval Luoyang and modern New York represent a world completely divorced from nature and built on rational foundations [1].

Motroshilova [5] considers the dominance of natural and biological factors over socio-historical ones to be the barbarian society's key criterion. This does not mean that barbarians are completely determined by nature; moreover, any barbarian society contains the potential in its embryonic form, the development of which will lead to the achievement of a civilised state. Barbarians are familiar with the division of labour, material production, which is not always low, and the legal regulation of social processes. The thing is that all these social mechanisms in their society are not decisive yet. The scholar makes an important reservation that barbarism is both external to civilisation and internal one. Suppose external barbarism has a historical stage, after which society is likely to reach a civilised stage. In that case, internal barbarism appears in a civilised society and manifests

itself all the more vividly, the weaker the restraining political and legal mechanisms of this society become. The internal barbarian is not a stranger from wild lands but a spiritual and moral degenerate, familiar with civilised life's norms and deliberately rejecting them in favour of selfish interests. We will more than once see the manifestations of this position at the most inappropriate moments for a civilised society [9].

It is very important to note that all autochthonous civilisations known to history clearly distinguish barbarians from their world and do not regard the latter as equals. Thus, the Greek word "barbarian" has the analogue in Indian languages - "mleccha" - and, just like the Greek term, imitates an alien illegible speech [9]. In medieval China, the history of which we will touch upon in detail in the proper place of our work, barbarians were understood mainly as nomads. There was debate among officials and scholars about the human nature of barbarians. At the same time, the national and ethnic specificity was not taken into account by either the Indians, or the Chinese, or the Greeks: barbarism, in their opinion, was precisely the cultural characteristic of a particular people.

Let us briefly consider the ideas about barbarians that developed in the most eloquent ancient civilisation - ancient Greece. For the Greeks, the distinction between the Hellenes and the barbarians was primarily linguistic and secondarily cultural. That is, all peoples and tribes that did not speak Greek and whose way of life differed from Hellas were barbarians [7]. That is, both the really primitive Celts, Scythians and Meots, and the highly developed Egyptians and Persians were considered barbarians. Simultaneously, the Greeks did not deny the right to human dignity for the barbarian who adopted their culture and mastered the Greek language. This point of view was even more strengthened during the era of Hellenism, when the eastern peoples were defeated and enslaved by the Greco-Macedonian conquerors of Tsar Alexander. Thus, the Hellenistic monarchies of the Levant encouraged the desire of local residents to assimilate Greek culture. Neither the Seleucids nor the Ptolemies considered it necessary to study the languages of their eastern subjects, but the doors of the University of Alexandria were open to the representatives of all peoples if they mastered the Greek language and dressed in Athenian fashion.

Roman antiquity further reinforced the notion of barbarians as mentally disabled savages. If the Hellenistic conqueror demanded cultural assimilation from the barbarians, then the Romans hardly ever saw the barbarians as people. This is how the modern domestic scholar characterises their attitude towards the defeated inhabitants of Gaul, Germany, and Iberia: "The Romans looked with approval at the death of barbarians in circuses, and no one considered the slaughtered barbarian gladiators, as well as the prisoners killed during triumphs for the amusement of the public. Barbarians are not even second or third-class creatures. Rather, these are just some humanoid creatures, to feel sorry for, which is disrespect for a Roman" [6]. The Romans found employment for the barbarians as slaves, taxpayers, or, in the case of the greatest confidence, in the auxiliary troops' ranks, but nothing more. However, some peoples not versed in the Greek and Latin languages were still perceived by the Romans without contempt. For example, the late antique historian Ammianus Marcellinus did not consider the Persians to be barbarians, and Plutarch, narrating about Alexander the Great's campaigns, spoke with respect about the Indian Brahmin philosophers [9].

The barbarians' Chinese vision was similar to the ancient one, with the only difference that the Far Eastern authors considered the main difference between barbarians and civilised people not the language, but the nomadic way of life. For example, the medieval Chinese historian and statesman Fang Xuanling [579-648] describes the "northern

barbarians” by which he meant the Huns in the following way: ”They walk with loose, hanging hair, dress in leather, eat stinking mutton, drink sour milk and, nevertheless, they thrill the lands located in the center of the Middle State, and this has been continued since antiquity. Since Heaven was not stingy to send troubles [to the Middle State], the number of these tribes increased more and more. Their customs are vicious and deceitful, reason makes them rush forward, and they have been written down in detail in previous stories” [10]. That is, according to the Chinese chronicler, nomads are insidious, aggressive and numerous savages.

However, what type of society are the ancient and Chinese authors talking about? Can we single out any socio-spiritual features that would make all societies in common, recorded by Greco-Roman and Chinese authors as barbarians?

### **Barbarian society specifics**

As we saw above, a civilised society reacts equally to all culturally different neighbours, if it has a reason to consider its culture more perfect. For example, the Greeks and Romans recorded the Persians as barbarians only from time to time. This was probably due to the fact that the Persian culture can be conditionally converted into the ancient one: a shah is not the same as a Roman emperor, but he was not inferior to the princeps concerning the firmness of his power and the functionality of the state apparatus. But the Celts, Germans and nomads were invariably perceived by their civilised neighbours as flawed savages. But maybe they weren’t savages? And maybe they had many common features among themselves that were incomprehensible to a civilised observer?

To begin with, we note that, in the opinion of modern researchers, neither the Celtic, nor the nomadic, nor the Germanic society has its own, original patterns of development. For example, the Russian expert in the field of nomadology Khazanov writes: ”Contrary to the opinion of some scholars, nomadism cannot be regarded as an autarkic system, and even more so as a special closed socio-political system corresponding to a certain stage (or stages) of evolution. In other words, autonomous internal patterns of socio-political development are not inherent in nomadism” [4]. That is, the ancient nomads are no more and no less barbarians than the ancient Germans and Celts. Their society has no fundamental characteristics that would not allow comparing it with sedentary contemporaries. Moreover, historical practice knows many examples of sedentarization, that is, the transition of steppe people to a sedentary lifestyle. If we compare the Celts and the Germans, it turns out that, despite the ethnic difference, these peoples are similar in cultural terms. The very division of the European barbarians into Gauls and Germans was made by Caesar for propaganda purposes. Simply put, of all the differences between the Celts and the Germans, only one thing was essential for the Romans: the Celts can be defeated and assimilated, but the Germans cannot yet.

For barbarians, land has an important ontological status and cannot be anyone’s personal property. This is equally true both for the Germans and Celts, who considered the land only tribal and clan property, and for the nomads, who did not want to delimit the lands lying under the sky in any way. The right to use certain territories can pass from one group to another, in particular, the nomadic term ”ulus” refers specifically to the people who dispose of certain lands, and not to land plots or geographical areas [9].

Time was understood by both European and steppe barbarians ontologically, not chronologically. For example, a German or a Hun knew about such dates as the creation of

the world or the hypothetical end of the world, but did not see the need to count the years of his life or plan it for a decade ahead.

Fate was unchanged in both the Germans and Celts' minds, and the steppe inhabitants, although open to fortune-telling. The barbarian was a fatalist, which implied his maximum involvement in his chosen activity. Perhaps this is precisely where an important difference takes place in the worldview of a civilised person and his barbarian neighbour: civilisation insists on the rationalization of life, while for barbarism, life and its course are primarily a vocation.

Wealth was understood by all barbarians exclusively materially and was perceived by them as evidence of the owner's valour. So, Caesar, describing the Suebs, notes that they willingly sell the booty, but they do not even try to make a fortune through trade, that is, the fact of the presence of booty is important for the Germans, and not its market value. Speaking about nomads, it is not easy to imagine a mobile treasury, so it remains to admit that wealth was expressed in expensive horse harness and trophy weapons for the steppe warriors, and in herds of cattle for nomadic rulers.

The exchange of gifts is the most important universal of barbaric culture. It was very important for both European and steppe barbarians not to skimp on expensive gifts and to be able to accept them without losing face. The already familiar Chinese diplomat Peng Da-ya, describing the Mongolian custom of *sahua*, seems to be copying from a Roman: "If they see someone's things and want to get them, they call it *sahua* (here and after - the author's italics). If [the owner] gives them, they say: *na-sha yin*. It means "good" in the Tatar language. If [the owner] does not give them away, they say: *mao-wu*. It means "bad" in the Tatar language" [2].

Respect for weapons and military honour can be combined into one specific cultural trait: the Germans, Celts, and nomads considered military status to be the only one suitable for a man. Thus, describing the Celts, the French Scholar J.-L. Bruno writes: "The Celts have always been more inclined to develop military power than economic. Their social relations (clientele, military brotherhood) and relations of kinship were valued higher than the possession of consumer goods or power functions" [5]. For the Germanic tribes, war was such a familiar and respectable occupation. Due to the peculiarities of their way of life, the steppe inhabitants were also characterised by a high degree of militarisation: "The nomads did not experience a shortage of riding animals, and their way of life was almost natural mastering of military skills at the same time" [4]. With such a pervasive military culture, a sedentary or a nomadic barbarian did not perceive an unarmed civilised farmer or an artisan as his equal. Therefore, the military clash of barbarism and civilisation in the case of their neighbourhood was only a matter of time.

Now it will be appropriate to trace the swinging of the pendulum of victories and defeats in the European and Far Eastern borderlands of civilisation. Let's conduct a thought experiment: put the barbaric and civilised warriors face to face.

## **Civilisation and barbarism on battle field and environmental issues**

The armed forces of nomadic and sedentary barbarians can be roughly divided into two types. The first type, naturally following from the tribal structure of society, was the tribal militia, which consisted of all the men of a given community. It gathered at the call of the council of elders and went into battle under the leadership of the bravest and most skillful tribesman. But military campaigns led by such irregular formations could only be

very short. After all, if all men are fighting, then there is no one to support this army: the barbarian peoples were not at all familiar with the concept of logistical support. Therefore, unless the entire tribe was going to move to some new homeland in full force, the invasion of thousands of barbarian hordes was nothing more than a myth. Another, more mobile and formidable type of barbarian military formations were the personal squads of some war chief. Among the Celts, the squad was built on the principle of a clientele: during peacetime a war chief kept a small detachment of strangers without a clan and a tribe. On the battlefield, these "clients" practiced the master's hospitality, simultaneously replenishing the leader's pockets and bins with trophies. The German squad, called *hird* or *fird*, also consisted of the warriors who were not blood relatives of each other, and partly replaced their family. Since during peacetime a leader (jarl, king) kept his hirdmen, it was in his own interest to intervene in any military confrontation so that the warriors would be provided at the expense of loot. On the other hand, Celtic and German warriors were united with the leader by a sacred oath of allegiance, and service to the king was not considered as the way of earning money. The Hirdmen followed their leader to victory and death, not seeking personal gain. Given the primitivism of the Celtic and German economy, the trophies could not be rich, and therefore the squads could not be numerous. The nomadic analogue of the Hirdmens were the *nukers*, whose detachments were formed according to a similar principle, but usually they were headed by some kind of tribal leader and kept at the expense of the cattle belonging to the family. Thus, while the tribes and clans of sedentary and nomadic barbarians could only deploy militias for a short time, the squads, greatly outnumbered by the militias, were constantly ready for military adventures. Another thing is that the barbarians did not know specialised military training, and therefore the tactics of such "troops" were primitive and focused on a sudden united onslaught. The Germanic hird pressed against the enemy formation with a wedge, which in the very first minutes of the battle disintegrated into a series of fights, the Celts practiced trimarkisia (a joint attack of mounted and foot soldiers), and the nomads alternated mobile shelling of the enemy from bows with close combat.

What could the civilised neighbours oppose to them? Both the Roman and Chinese empires, in their heyday, had professional armies, whose fighters carried out regular service, had government support, and therefore could afford daily training. The German historian Delbruck characterises the combat training of the Roman legionary of the 1st century AD in the following way: "According to the military regulations, Roman soldiers had to be trained in the military order, and also to fight with swords, shoot, do gymnastics and maneuver" [3]. No frontal attack was dangerous for the legionnaires in military formations and protected by uniform armour (at least until the appearance of stirrups). Chinese troops in both the Han period and the later Tang and Song dynasties were manned by the combination of conscription, volunteer and steppe archer recruits. China problem was the lack of large pastures and, therefore, the impossibility of having its own large cavalry. In particular, going to war as a horse archer was considered the privilege of an aristocrat. Therefore, a contingent of nomadic mercenaries was always present in the Chinese imperial troops, but never predominated [8]. The army of the Han dynasty consisted of conscripts, densely diluted with super-conscripts, which made it possible to accumulate professionalism in the units, while the army of the Tang dynasty was recruited according to the fubing system: for several months a year a soldier-recruit served in the army, and the rest of the time he was engaged in his economy. The lack of military experience was compensated for by high-quality weapons supplied to the troops at state

expense. To fight the steppe riders, the imperial marksmen used crossbows, and when they defended against the Mongol invasion of the 13th century they even used powder bombs in a metal shell. Thus, we can say that during the heyday of civilisation, its technical and organizational potential provides it with an overwhelming military superiority over the barbarians.

But a rational, pragmatic and not at all heroic approach to foreign policy dictates its own rules. In particular, wars against forest and steppe barbarians are economically unprofitable: the development of occupied territories and the conduct of war far from home will not be cheap, and the profit from victory will be scanty. Therefore, soon after they met, not military, but diplomatic means are used against the barbarians. In particular, frontier tribes are played off against each other with the help of a sophisticated espionage system. Imperial emissaries act by blackmail and bribery, and the most restless young barbarians are invited to join the ranks of civilised troops. To protect against the most reckless barbarian leaders, large-scale defensive structures are being built, which are called Limes in Europe, and in China such structures are known as the Great Wall. It would seem that the barbarians did not have the slightest chance to defeat civilisation, and cause any serious damage to it. The following question arises: how did it happen that the Roman and Chinese empires were defeated and torn apart by barbarian neighbours? The answer is simple and surprising: civilisation has defeated itself.

### **Domestic barbarism as an environmental and military-political factor**

As we noted above, the important features of civilisation are the desire for material comfort and a deep division of labour. Therefore, one-day management structures are inevitably separated from society and begin to play their own games, in which the working population plays only the role of resigned and disenfranchised taxpayers. The armies are finally turning into closed professional communities and defend only their own corporate interests. The civilian population feels like a stranger at home and increasingly perceives state structures as externally imposed and extremely ruinous order. The centralised state, having completed the stage of its formation, is so complicated and so deeply bureaucratised that its effectiveness depends on the coherence of its constituent parts and does not in any way correlate with the life of people who are not included in the state apparatus. During such an era officials and the military try to remove each other from power, and one-day "soldier" emperors are afraid of their own guardsmen. And at this moment that the border barbarians become dangerous: after all, they are fighting now not with civilisation, but only with the state mechanism, which all the time strives to jam itself (or eat the society at the expense of which it lives).

The Scythian War (238-271) can be considered as an example of the balance change in the confrontation between barbarism and civilisation, which took place between the Roman Empire and the tribes of the western Black Sea region, led by the Germanic Goths. Taking off another Gothic raid on the Danube provinces, Emperor Decius lost the battle and died on the battlefield (251). In military aspect, this accidental defeat did not affect the empire defence. In particular, two years later the governor of the province of Moesia, Emilian, utterly defeated the barbarians and drove them across the Danube. If this two-year campaign (251-253) is compared with the legendary invasion of the Teutons and Cimbri (II century BC), the raids on Moesia were only a pinprick for Greco-Roman civilisation. However, in the III century this civilisation was in a state of decline. Its legions had long

lived a special life, separate from society, and therefore, taking advantage of the Emperor Decius death, the victorious governor Emilian immediately declared himself as the emperor. His example was followed by other generals, Trebonian Gallus and Aurelius Valerian, and soon the armed forces of the empire began to fight selflessly with each other, leaving the damaged, but far from defeated enemy without attention.

We will not retell the well-known historical facts. We will only note that while the military machine of ancient civilisation was idling, the Goths and their allies subjected the Black Sea coast of Asia Minor, Thrace and even Greece to a variety of land and sea raids. The civilian population was virtually without protection, and every military usurper, leading legions against competitors, did not forget to collect extortions from the frightened peasants and artisans in his favour. With such relations between the state and society, it is not at all surprising that among the civilian population there were many who wanted to help the barbarians in the massacre of soldiers and officials. If the state abandoned its citizens at a dangerous moment, then many of them quite rightly took their fate into their own hands. Many estates in Asia Minor were plundered and burned by local colonists, who met the barbarians as liberators [6]. Other civilians, on the contrary, rallied to repel the enemy on their own. Thus, in Greece, a partisan detachment led by the Athenian Dexippus acted against the Goths and their allies. And although by 269 the imperial power was in good hands again, and the barbarians were repeatedly defeated by the Roman troops and navy, the Scythian war demonstrated that the former unity no longer existed in a civilised society.

If we look for an analogy in Chinese history, then there is the example of the Three Kingdoms (220-280), which followed the fall of the Han dynasty, during which a rare usurper did not invite the nomadic Huns to help him to fight competitors. One should not be surprised that by the beginning of the IV century external barbarians felt at home on the territory of Northern China, and domestic barbarians cooperated with them willingly because they were guided not by imperial, but only by personal interests [10].

But the real collapse of civilisation comes when its armed forces no longer want, and can not defeat the barbarians. After all, the Roman and Chinese imperial soldiers depended on supplies, which is impossible without the orderly work of civilian officials. When each dignitary thinks only of himself, and the struggle for the throne does not stop, the work of bureaucratic departments experiences a collapse. Consequently, an army deprived of supply immediately disintegrates into many bands and loses all combat effectiveness. At this moment the outer barbarians almost take control of the imperial provinces with bare hands, while the inner barbarians discover many benefits from the current state of affairs. Thus, the Roman government, after the defeat of the legions by the Goths in 378, hastened to declare the barbarians as "allies" (federates) and confer the highest officer ranks on their leaders. Of course, the maintenance of the newly-minted "allies" fell on the shoulders of the imperial tax-paying population, which, unlike the barbarians, did not know how to threaten the crown with weapons. It is curious that the last emperors found money to pay tribute to the barbarians, but at the same time did not take any measures to help the numerous refugees from the devastated provinces. It got to the point that during the V century the refugees from Italy were simply sold by local officials into slavery in Carthage [2]. Of course, with such an attitude on the part of the authorities, not only civilians, but also some senior officers rushed to declare their loyalty to the barbarian leaders and opened the gates of the fortresses to them. At such a historical moment, only the fragments of civilisation remain, and both sides of the once fortified borders are flooded with barbarism, in which alien robbers and morally feral citizens coexist organically. If we look for an analogue in



Chinese history, these will be the events of the 13th century, when, during the Mongol invasion of the Jin Empire (North China), the emperors from the Song dynasty (South China) allied with the nomads and actively helped them to smash their northern compatriots [8].

## Conclusion

It can be concluded that the march of civilisation has been mainly at the cost of the environment and the natural world more generally up to this time in human history. And currently, in turn, the environment is intimidating the future of civilisation by the potentially disastrous results of climate change. In both cases, this depicts a kind of lousy circle, in which civilisation is eventually its own most dangerous enemy.

In this work, we briefly examined the rhythm of the shaping of the new civilisation and its environmental impacts and military confrontation between civilised and barbarian societies, using factual material from Roman and Chinese history. What important features of this confrontation can we highlight? First, it is the primordial superiority of the military machine of civilisation against tribal militias and volunteer squads of barbarians.

As long as the rational attitude to military and productive labour characteristic of a civilised society persists, the insurmountable superiority of civilised troops over barbarians, who perceive the war as an organised collective robbery, remains. Secondly, a civilised society, due to internal reasons (an excessively deep division of labour, excessive desire for comfort), enters a period of decline, and then the invasions of barbarians from the outside play the role of a catalyst for socio-political decay. And, thirdly, many people live in the bosom of civilisation who perceive the socio-economic and political achievements of their society only as a personal supply, and these internal barbarians willingly cooperate with external barbarians invading across the border. It seems that this mechanism is not subject to time, and its action will inevitably manifest itself in modern global civilisation.

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## References

- [1] Kuzmin PA, Kuzmina AM, Bukharina IL, Vedernikov KE, Zaripova RS. Ecological and biochemical peculiarities of maple genus in the urban environment (Case study: Norway and Ash-leaved maple). *Caspian J Environ Sci.* 2020;18(5):405-10. DOI: 10.22124/cjes.2020.4465.
- [2] Barth B, Hobson R. *Civilizing Missions from the 19th to the 21st Centuries, or from Uplifting to Democratization.* In *Civilizing Missions in the Twentieth Century.* Leiden, Boston: Brill; 2020: pp. 1-20.
- [3] Peng T, Deng H. Evaluating urban resource and environment carrying capacity by using an innovative indicator system based on eco-civilization - a case study of Guiyang. *Environ Sci Pollut Res.* 2021;28(6):6941-55. DOI: 10.1007/s11356-020-11020-7.
- [4] Bobilev SN. Environmental consequences of COVID-19 on the global and Russian economics. *Population Economics.* 2020;4:43. DOI: 10.3897/popecon.4.e53279.
- [5] Motroshilova NV. *Civilization and barbarism in the era of global crises;* Moscow: IFRAN; 2010.
- [6] Newman GR. *Civilization and Barbarism: Punishing Criminals in the Twenty-First Century.* Suny Press; 2020. ISBN: 9781438478135.
- [7] Petersen B. *Civilization and the environment: The Norse and Ancient Egypt.* *Culture Society Praxis.* 2020;12(2):4-12. Available from: <https://digitalcommons.csumb.edu/csp/vol12/iss2/4>.

- [8] Pierce K. *The Warriors of China. Under the Banner of the Heavenly Dragon. 1500 B.C. - 1840 A.D.* Moscow: Eksmo, 2008.
- [9] Prokop P. Where the Meghalayan meets the anthropocene: stratigraphic signals of human-environmental interactions on the periphery of Indian civilisation. *Geographia Polonica*. 2020;93(4):505-23. DOI: 10.7163/GPol.0185.
- [10] MacDonald K. Civilization and its discontents revisited: Freud as an evolutionary biologist. *J Social and Biol Struct*. 1986;9(4):307-18. DOI: 10.1016/S0140-1750(86)90177-6.
- [11] Ruuska T, Heikkurinen P, Wilén K. Domination, power, supremacy: Confronting anthropolitics with ecological realism. *Sustainability*. 2020;12(7):2617. DOI: 10.3390/su12072617.
- [12] Linklater A. *The Idea of Civilization and the Making of the Global Order*. Bristol University Press; 2020. ISBN: 9781529213911.
- [13] Gagnier R. From barbarism to decadence without the intervening civilization: or, living in the aftermath of anticipated futures. *Feminist Modernist Studies*. 2021;4:1-6. DOI: 10.1080/24692921.2021.1950470.
- [14] van Krieken R. Covid-19 and the civilizing process. *J Sociology*. 2020;56(4):714-25. DOI: 10.1177%2F1440783320980854.
- [15] S'ahel R. China's approach to the environmental civilization. *Human Affairs*. 2020;30(2):164-73. DOI: 10.1515/humaff-2020-0016.