

Polycausal Concept of Social Evolution*



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Abstract. The article puts forward a polycausal concept of social evolution (PCSE) based on taking into consideration the structure of the competition mechanism. The novelty of the PCSE lies in the simultaneous consideration of a set of interrelated variables of the competition mechanism that exclude the establishment of simple cause-and-effect relationships typical of monocausal theoretical constructions. A structural scheme of the PCSE includes the subject, object, environment and the process of competition; all of them are directly associated with such civilizational phenomena as technology, institutions, culture and ecosystem; together, these variables determine the nature of economic growth and the type of capitalist (market) relations. This approach can be called a method of structural (organizational) competition. To illustrate the PCSE and test its explanatory capabilities, we look for answers to the following classic questions: Why has human civilization matured in Eurasia rather than in other continents? How did humanity manage to break out of the Malthusian trap? How can we explain the Needham Puzzle? Why are some countries and peoples rich, while others are poor? Why do some poor countries and peoples manage to catch up with rich ones, while others do not? How can we explain the “case of the USSR”? The proposed PCSE is used to reconstruct key events in the history of human civilization. For this purpose, we put forward a structural outline of social evolution, which includes basic principles and mechanisms that determine certain results of the development of human societies. In conclusion, we make an attempt to use the PCSE to designate reference points of a modern civilizational crisis.

Key words: evolution, competition, profitability, capital, economic growth.

* I would like to take this opportunity and express my deep gratitude to my anonymous reviewers for their valuable comments.

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Introduction

Currently, a general theory of social evolution is being actively constructed; this theory could provide answers to a bulk of the most vital economic questions and shed light on many historical puzzles. Among those, let us indicate only the most important and topical ones. Why did human civilization mature in Eurasia rather than on other continents? How did humanity manage to break out of the Malthusian trap¹? How can we explain the Needham Puzzle²? Why are some countries and peoples rich, while others are poor? Why do some poor countries and peoples manage to catch up with rich ones, while others do not? How can we explain the “incident of the USSR”³?

Many theories and concepts are proposed in an attempt to find answers to these questions. Granted, the very scale of these questions does not imply simple and unambiguous answers, and therefore the concepts that are being put forward coexist, sometimes entering into contradictions, and sometimes successfully complementing each other. Still, none of them brings cognitive satisfaction to researchers, and therefore the search for a comprehensive theory continues. The purpose of the article is to develop another, alternative, concept of social evolution, the novelty of which consists on the one hand in polycausality, unlike the majority of

known monocausal constructions, and on the other, in a structural and organizational approach, unlike the traditional reductionist method of identifying cause-and-effect relationships.

Prerequisites for the creation of a new concept

In this section, there is not enough room to reflect the entire range of ideas and developments regarding the driving forces of social evolution, and therefore let us focus only on two analytical trends. The first one is connected with the development of various monocausal theories and a gradual transition from them to polycausal constructions, the second one considers traditional causal chains (we shall conditionally call this approach *causal methodology*) and their abandonment in favor of organizational and managerial concepts (we call this approach *structural methodology*).

One of the most impressive monocausal theories of evolution is the empirically confirmed geographical interpretation of Jared Diamond, according to which the priority of the Eurasian continent in the development of human civilization was predetermined by several groups of natural factors [1]. However, it has been noted in the literature that this concept has two distinctive features. The first is its *explanatory limitations*: the ability to perfectly explain long-term civilizational trends in the early period of human history coexists with its chronic inability to interpret modern evolutionary shifts [2]. Its second feature is associated with *conditional monocausality*: along with geographical and natural factors, it implicitly contains a competition mechanism that is of key importance to all historical events [3; 4]. The syndrome of conditional monocausality permeates almost all advanced evolutionary concepts; their authors are aware of this, and therefore, they simply focus on the greater importance of one or another factor. This reservation will be assumed by default in further discussions.

An addition to Diamond’s concept is a study by S.G. Kirdina-Chandler, in which, on a sample of 65 countries and with the help of large-scale statistical

¹ The Malthusian trap (or the poverty trap) denotes a long-term preservation of an extremely low per capita welfare level: when positive changes in income occurred, there was an accelerated population growth and a return to the initial state. The Malthusian trap persisted for about 10 thousand years in all communities, and Europe managed to break out of it only in the 17th–18th century; currently, some African countries are still trapped in poverty.

² The Needham Puzzle (otherwise known as the Needham Paradox) is named after the British scientist Joseph Needham and consists in an inversion in the mutual evolution of Europe and China: before the 17th century, the Celestial Empire was ahead of European countries by many economic and social parameters; afterwards, it began to lag significantly behind.

³ This phenomenon means the following historical nonsense – after its establishment, the Soviet Union withstood the hardships of civil war, famine, coerced collectivization and industrialization, won the Second World War, successfully opposed the United States in the Cold War, and in 1991 ceased to exist in relatively comfortable conditions.

calculations, she demonstrates the influence of a narrow range of climatic features on the spatial location of countries with the dominance of market (Western) and non-market (non-Western) institutions. The former are characterized by the predominance of competitive self-regulation mechanisms, while the latter – by administrative methods of centralized management [5]. As it turns out, in territories with relatively mild geothermal conditions and low risks of natural disasters, countries with the dominance of Western institutions are formed; and in territories with high variations in precipitation, air temperature and high risks of natural disasters, centralized (non-market) institutional models historically prevail [5, p. 80]. However, researchers point out that the dependence identified by Kirdina-Chandler is not universal: as a rule, countries with externally imposed institutions do not fit into it [3].

An alternative to geographical concepts is found in the theory of Daron Acemoglu and James Robinson which advocates the priority of the *institutional factor* in the formation of state models in the course of social evolution. According to their views, the success or failure of a particular social system depends on which of the two types of institutions dominate it: inclusive, which involve large masses of the population in economic turnover, or extractive, aimed at preserving the privileges of a narrow group of the ruling elite [6]; a very similar institutional concept – the concept of social orders – has already been proposed by Douglass North and his colleagues [7]. However, this analytical outline is also extremely vulnerable to criticism. First, it presents Western democracies and, in particular, the U.S. political system as a kind of “end of history”, as the pinnacle of development of human civilization, which does not imply further improvement [2]. Second, the theory of inclusive institutions is too much prone to suffer from a syndrome of conditional monocausality: the authors constantly “dilute” the historical analysis with geographical and cultural factors and thereby contradict themselves [3]. Subsequent development

of these authors’ ideas in the form of the concept of the narrow corridor has only aggravated this disadvantage [8]. In the previous book, Acemoglu and Robinson demonstrated the secondary nature of the institutions of South Korea and North Korea depending on the personality of the leaders who came to power in them; while in their new work, they once again emphasized the “fatal” dependence of Athenian democracy on the unique reforms of Solon and the ingenuity of his mind.

L. Harrison consistently proved the role of personality and culture in social evolution; his theory includes two conditions for the success of man-made institutional transformations: a) the presence of a crisis or unique opportunities; b) the presence of bright reformers with progressive ideas [9, p. 190]. Although the validity of the above conditions is beyond doubt, Harrison’s concept still attaches too much importance to a random factor in the form of a timely emerging personality.

An attempt to give the *cultural factor* a more objective and large-scale character was made by C. Welzel in his concept of *emancipative values* (the desire for freedom), which underlie the collective actions of both the elites and the masses [10]. However, this attempt to build a theory of social evolution on the basis of one main factor turned out to be unconvincing. First, in this scheme, the very values of freedom lead to an acceleration of technological progress, and the latter further strengthens people’s emancipative attitudes; critics believe that it is necessary to decipher the mechanism of such connections [2]. Second, the emphasis on the values of freedom does not take into account D. North’s argument regarding the dual nature of institutions [11] and D. Zolo’s political theory on the dualism of state regulation [12]; according to these concepts, we should be talking about equally important values – the *security* and *freedom* of citizens, and the *limitations of* and *incentives for* their activities [13]. Third, cultural differences in values do not provide a good explanation regarding the early periods of human history [2]. Fourth, Welzel’s concept

of emancipative values is characterized by an even greater eclectic interweaving of cultural, technological, geographical and institutional factors [3].

As for technology regarded as a major driver of social development, K. Marx supported this viewpoint in his teaching about the determining role of productive forces (technologies) in production relations (institutions): "... the capitalist mode of production presupposes ... a definite social form [Gestalt] of the conditions of production, ... it produces not merely the material products, but reproduces continually the production relations in which the former are produced..." [14, p. 893]. The criticism of this concept consists in the fact that the overwhelming majority of authoritative researchers assert the primacy of institutions over technologies [11; 15]. R. Lucas substantiates this position by referring to the period of domestication: privatization of hunting grounds or gathering rights preceded or at least developed alongside agricultural technologies; otherwise, a sacramental question arises: why domesticate an animal, since anyone has the right to kill and eat it? [15, p. 200].

At present, we can state that a long-term struggle for the theoretical primacy and dominance of geographical, institutional, technological and cultural factors driving social evolution has reached a dead end. It is possible that such a stubborn defense of the principle of monocausality of the social theory is based on the desire to find the *fundamental basis* of being, which, in turn, is rooted in monotheistic religious thinking, when priests reduce all phenomena to God (Absolute), physicists – to an elementary particle (atom), biologists – to a cell (gene), economists – to a commodity (working hour), etc. [16, p. 88]. However, today we already see the formation of an alternative position, according to which no monocausal concept is able to adequately explain social evolution; we need to move on to polycausal constructions [2]. At the same time, there exists an opinion that along with the development of civilization the role of biological and geographical factors in human life reduces

and, conversely, the importance of technology and culture increases [3]. It is noteworthy that in the past century T. McKenna already noticed the difference between the laws of development of civilization in its early and late stages: "If nature represents a principle of *economy*, then culture surely must exemplify the principle of innovation through *excess*" [17, p. 17]. This effect can be called the *McKenna inversion*. Thus, we can point out the need to construct a polycausal concept of social evolution (PCSE) and abandon fruitless attempts to reduce all the diversity of social phenomena to one group of factors.

We should emphasize that the construction of the PCSE involves essentially a transition from a causal methodology based on the understanding of long chains of cause-and-effect relationships to a structural methodology involving the consideration of complex organizational entities in conjunction with their management system. In other words, instead of studying the influence of some objects and processes on others, the structural approach requires understanding the general *rules of self-assembly* for complex organizational formations with their subsequent evolution toward increasing or decreasing their orderliness, functionality and efficiency. Such an attitude is aimed not so much at the analysis of various social phenomena, but rather at their synthesis and understanding of this very process.

We should say that structural methodology assumes an explicit interdisciplinarity or, to be more precise, polydisciplinarity; moreover, it has already been implemented many times, but unsuccessfully. Suffice it to recall the work of A.A. Malinovskii (Bogdanov) published in the 1920s; the work introduces *tectology*, a new universal organizational science [18]. In 1948, N. Wiener published a landmark work in which he introduced *cybernetics*, a new science of control and communication in the machine, animal and society [19]. Then, in 1955, W. Ross Ashby's book consolidated the position of cybernetics [20]. Finally, in 1968, L. von Bertalanffy published a treatise on the *general system*

theory, in which he contrasted integral features of different systems with the doctrine of cause-and-effect relationships [21]. These works did not go unnoticed; however, they did not contribute to the formation of a new science. Until very recently, the social sciences have continued to adhere to long-established orthodox views, trying to reduce all the diversity of phenomena to a simple – conditionally monocausal – analytical construction. It seems that it was only in 2018 that a new constructive attempt was made to move to polycasual constructions based on structural methodology by considering three main social *coordination mechanisms* (competition, power and cooperation), which are formed as a result of the interaction of cultural, institutional, technological and geographical factors. Moreover, the level of coercion built into the coordination mechanisms serves as an indicator of social progress in itself [22]. The development of this idea helped to establish a civilizational cycle of coercion with a typical growth of this phenomenon at the earliest stages of humanity, followed by a weakening of coercion at a later stage of development [3]. An important element in the structural methodology was the *principle of interrelated changes* in the main groups of factors [23], which was subsequently concretized in the form of the *principle of consistency* of these factors [24]. The scientific positions described above are a starting point for further theoretical constructions.

In substantiating my theses, I will rely on authoritative works in the field of economics, history, sociolinguistics and philosophy; natural science works in an explicit form will not be used. This approach is justified by the fact that many of these sources have already reviewed the natural scientific achievements of our time, as, for example, in J. Diamond's [1].

The polycasual concept of social evolution: the mechanism of competition

There is no doubt that the attempt made in [22] to consider social evolution through the prism of the mechanisms of interaction of subjects is a serious step forward. At the same time, while introducing the

nature of social ties makes it possible to streamline human history, it does not lead to an explanation of its most important riddles and paradoxes. To do this requires one more, additional, step: to investigate the mechanism of competition and its structure. The fact is that *any human community carries out self-assembly through the formation of a competition mechanism*, which is the most general manifestation of any interactions between people. Forms of competition can be infinitely diverse: traditional (hot), “cold”, information and hybrid warfare; trade, currency, patent wars, etc.; economic, political, administrative, technological competition, etc.; monopoly, oligopoly and other types of market power; associations, cooperation and partnership. All these forms of competition differ only in the degree of toughness, but the struggle itself never stops. We can single out the term “competitive equilibrium”, when a temporary balance of forces of competing parties arises.

Let me make a reservation right away: there can be different interpretations of existing concepts. For example, competition, power, war, cooperation, etc. can be considered as particular cases of the general mechanism of coordination of interactions between subjects [22]. However, in my opinion, the competition mechanism for social systems is something similar to the mechanism of energy-and-information interaction in physics and thus has the maximum degree of generality. Back in the 1960s, L.A. Petrushenko expressed an idea that the general *law of entropy increase* in the Universe is opposed by the equally general and global *law of autoregulation in nature* [25]. In primitive physical systems, it takes the form of quasi-management; in social systems, it takes the form of feedback control [26]. At the same time, the law of autoregulation ensures the natural unity of the comprehensiveness, organization and self-movement of a society [27]. The mechanism of competition is a manifestation of the forces of self-organization and self-regulation in biological and social systems. Consequently, the law of entropy increase leads to the destruction of the order and organization within the system, whereas

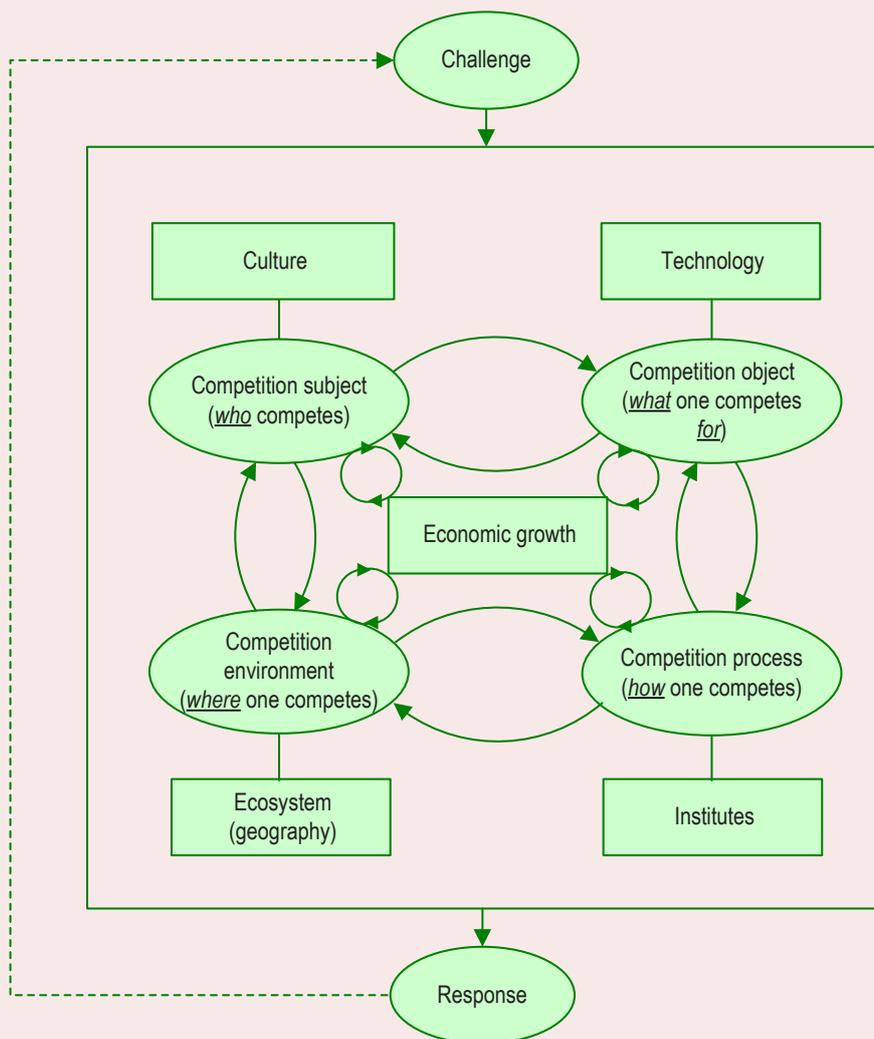
competition is mainly a manifestation of creative and ordering forces; this determines its role in the proposed PCSE.

In order to reflect all the variety of historical turns, and build a full-fledged PCSE with a high explanatory ability, it is necessary to use the structure of a competition mechanism rather than just an abstract mechanism of competition (*Fig. 1*). At the same time, the following methodological analogy comes to mind: Buddhism considers personality as a structurally ordered combination of five elementary psychophysical states, dharmas [28, p. 48]; In the PCSE, society as a whole and its individual social groups are also considered

as constructions made up of several structural elements, the effective combination of which allows this social group to compete with other similar groups in various markets. This interpretation provides an essentially dynamic picture. According to the Buddhist teaching, the human personality is a stream of constantly changing elementary psychophysical states [28, p. 50], while the PCSE considers competition mechanism as a recombination of its continuously changing structural elements.

The specific feature of the structural outline in Figure 1 is that each element of the competition mechanism is compared with a group of factors that

Figure 1. Organizational structure of the competition mechanism



traditionally appears in modern monocausal theories of evolution. As a result, the formation of the competition mechanism is automatically coupled with such groups of factors as technology, institutions, culture, geography and welfare. At the same time, in accordance with A. Toynbee's "Challenge and Response" model [29], the process of assembling a social system and forming a competition mechanism begins with an external shock (Challenge), and a modified competitive system is the reaction (Response) to this shock. The center of the assembly of the social system is the process of economic growth, which simultaneously serves as a measure of a successful or, conversely, unsuccessful Response to historical challenges.

The block diagram in Figure 1 represents the theoretical core of the PCSE and possesses an obvious potential for explaining numerous historical phenomena. Certainly, this diagram requires a lot of additional material in order to provide satisfactory answers to the questions posed at the beginning of the article. To this end, we will use the method of *key historical events* (KHE) and consider those events which marked the formation of a new evolutionary trend and the dominance of certain driving forces of social evolution [3]. Considering the history of civilizations through the prism of such milestone events, it is possible to determine with greater objectivity and impartiality a set of factors that served as original determinants of the subsequent trajectory of evolution. In addition, these events are analyzed in detail by almost all researchers, and therefore they are well described and elaborated; this creates the basis for their correct analysis and discussion for the reconstruction of human civilization.

So as to interpret further material correctly, it is necessary to define some basic terms. First, I consider the history of human *civilization* (humanity) in the time interval from the 10th millennium BC to the present day. I identify the term "civilization" with the most general categories of world economy, world system and world economic system in the understanding of I. Wallerstein [30];

despite the difference in connotations in these terms, I will use them as synonyms without losing the extent of generality in the analysis. Second, in the history of civilization, I focus on the processes of social evolution that is understood as qualitative changes in the world system or its individual regional fragments. Evolutionary shifts in the world economic system imply either an increase in its level of organization, which is equivalent to *development* or evolution in the narrow sense of the word, or a decrease in the level of organization, which is equivalent to *degradation* or *involution*. Third, social development emerges as a result of *progress* in various elements of the world system. Basically, I will also use development and progress as synonymous terms.

At the same time, no one knows the global *goals* of the social evolution of mankind, but the *criteria* (and manifestations!) of this evolution are quite understandable and universal. Positive social evolution (development, progress) implies the growth of the viability of society, the increase in its functionality and efficiency. The *viability* of a society is understood as its ability to preserve itself by responding to external challenges; the *functionality* of a social system is understood as the diversity of its operational capabilities or, what is the same thing, the number of options and ways to respond to the challenge that has arisen; *efficiency* is understood as the ratio of the results of the activities implemented by a society to the costs it incurred to obtain them, or, to paraphrase the above, the results of responding to the challenge are compared with the resources spent on this.

Reconstruction of human civilization: Hegemony of Eurasia in the 11th–2nd millennium BC

The first question we raised in the introduction is the need to explain the superiority of Eurasia in the early stages of human development. What can be the reconstruction of the specified KHE?

In my opinion, J. Diamond provides an exhaustive explanation of the indicated KHE, the essence of which boils down to the following: Eurasia possesses the richest gene pool of domestic

animals (13 out of 14 currently existing species); Eurasia has an advantageous geometric shape compared to the rest of the continents – it is stretched from east to west, rather than from south to north, like America and Africa, this promoted a rapid spread of product innovations horizontally, rather than vertically; the Eurasian continent is geographically open and does not have natural barriers – it has neither vast deserts like the Sahara, nor dangerous insects like the tsetse fly [1]. The presence of such comfortable climatic and geographical conditions led to the first great discovery of ancient man – he realized that domestication (cultivation) in the form of animal husbandry and crop production may be more convenient than hunting and gathering. Thus, the first prototype of a powerful competitive mechanism began to be formed on the Eurasian continent. In the interval between the 11th and 2nd millennia BC, a wave of discoveries and innovations in the field of domestication of plants and animals led to the emergence of new production technologies, new relationships between people (institutions), new values and attitudes of individuals (cultures) and a completely different level of well-being.

According to Diamond, the transition from a lifestyle of hunting and gathering to one of agriculture and cattle breeding on Earth occurred mainly between 6000 and 4000 BC [1, p. 194]. From this moment, the process of ethnogenesis begins, when behavioral models of different peoples are formed on the basis of specifics of geographical landscape with its subsequent radical transformation [31]. It is this process that triggers the history of mankind as such, which is a clash of different peoples, from which the most successful and competitive emerge victorious, and the less weak and adapted die and leave the historical scene. North America, South America, sub-Saharan Africa, Australia – neither of these continents received so refined a challenge from the natural ecosystem, and therefore neither of them responded so powerfully as Eurasia. Since this key historical event, the gap between the civilizations

of Eurasia and those of other parts of the world has been growing in favor of the Eurasian peoples.

I note that already at the abovementioned early stage of the development of human civilization, two phenomena emerged, which, in turn, generated two social mechanisms: limitation of resources (land, animals, plants, technology, etc.) led to the emergence of *competition among communities* (collectives), and the different effectiveness of alternative activities (gathering/crop production and hunting/animal husbandry) led to *competition of professions* [1]. Thus, at the initial stage of social evolution, the mechanism of competition is *self-organized* as a result of limited resources and differentiation of production efficiency, whereas at later stages it itself becomes a source of overcoming limited resources and increasing economic efficiency due to the creative activity of individuals.

Reconstruction of human civilization: Europe vs Asia at the stage from 2000 BC to 1500 AD

The next question we put forward in the introduction is the need to explain the Needham Puzzle. In order to find an explanation to this paradox, it is necessary to review a rather extensive historical period during which Europe slowly but surely overtook Asia. As in the previous case, the initial advantage of Europe was its geographical uniqueness. According to J. Diamond, Europe suffered from chronic political fragmentation, while China was characterized by chronic political unity. At the same time, the political fragmentation of Europe and the unity of China originate in their geography, and in particular in the form of geographical borders. Europe had a broken coastline, almost isolated peninsulas and islands that were large enough and located close to the continent, while China represented an almost homogeneous geographical area. As a result, many politically independent territories with their own languages and ethnicities have developed in Europe, which was not the case in China [1, p. 526]. Thus, the ecosystem of Europe gave rise to much more powerful and sophisticated competitive mechanisms, which subsequently led to its global leadership.

However, competition, as mentioned above, can take destructive forms and lead to an endless war⁴. In this regard, the second prerequisite for the hegemony of Europe was a special mental atmosphere that had developed among the peoples of this territory. This mentality has ancient roots and represents an *ideology of individualism* reinforced by the demand for *political participation* of all full-fledged citizens of the state.

The phenomenon of political participation is apparently connected with the ancient Greek poleis, which, due to their compactness, produced a very peculiar political and state culture. For example, according to Aristotle, "... every state is a community of some kind, and every community is established with a view to some good..." [32, p. 376]. The following passage of Aristotle highlights the deep idea of the ancient world of Europe about the essence of man: "...man is by nature a political animal. And he who by nature and not by mere accident is without a state, is either a bad man or above humanity" [32, p. 378]; "... he who is unable to live in society, or who has no need because he is sufficient for himself, must be either a beast or a god: he is no part of a state" [32, p. 379]. "That they [the members of a state. *Translator's note*] should have nothing in common is clearly impossible, for the constitution is a community, and must at any rate have a common place..." [32, p. 403]. Such rigid attitudes led to the original understanding of an idiot (*idiotae*) as a person who is not able to participate in public life [33, p.70]. The loss of political capacity by a political animal (*zoon politikon*) automatically turned him into an idiot.

It is curious that this Greek tradition manifested itself in an even more refined form in the era of the Roman Republic, in which "the Romans were thoroughly politicized. They spent days and nights at the Forum; speeches by the masters of rhetoric, new laws, the struggle of politicians, court cases – that is what was the source of their amusement"

⁴ Without dwelling on this point, we note that scientific literature has considered a huge number of examples when fierce competition between manufacturers led to the collapse of entire economic sectors.

[34, p. 67]. In Rome in the 2nd century BC, all adult men were engaged in state affairs [34, p. 239]. Political activity manifested itself in the hitherto unthinkable art of eloquence; Tacitus gives it a very accurate definition: "Great and vivid eloquence is a child of self-will... We do not know ... the eloquence of the Macedonians and Persians and any other people who was held in obedience by a firm hand" [34, p. 149]. It is also noteworthy that in Rome the abandonment of public affairs in favor of entertainment was frowned upon more than in Greece. For example, theatrical plays were written, as a rule, by former slaves, and the one who acted on stage could not be a Roman citizen [34, p. 289]. Any manifestations of idle antics and jesting made a person unfit to participate in serious state affairs.

If we talk about the phenomenon of European individualism, the sociolinguistic analysis of such important linguistic constants as "society" and "state" allows us to shed more light on the situation. Language constants, as basic historical concepts, reflect the core of social reality transmitted through national languages. Thus, the analysis has shown that in Russian, Chinese and Japanese, as well as in Hindi, Urdu, Sanskrit and Arabic, the term "society" reflects the predominance of "the general over the private", the idea of unity with the priority of society as a whole over the individuals included in it. Similarly, for the peoples of these linguistic groups, the term "state" contains the figure of a supreme ruler, whose mission is to govern the subjects [35, p. 23]. Pomegranate is a visual metaphor for the term "society" in Oriental languages and cultures [35, p. 19]. To English, French and German, as well as Latin, the term "society" demonstrates the principle of its construction "from below", when integrity is understood as the association of "primary" individuals in a legitimate union, and the individual is "soldered" into "society". The term "state" for these languages has no personification and is understood as an impersonal stable legalized order of things (law) without references to power and hierarchies. Grape is a visual metaphor for the term "society" in Western languages and cultures [35, p. 21].

Historical attempts to “reinterpret” these language constants in accordance with other patterns have not been successful; this confirms the deeply rooted foundations of cultural stereotypes among different peoples of Europe and Asia [35, 2019, p. 23]. According to D. North, later it was the *impersonal institutions* of the West that served as the basis for achieving a political balance between state power and society, which in turn led to the construction of democratic European states [11].

Thus, the presence of developed competition mechanisms in Europe, alongside political civic activism and militant individualism, led to the creation of a Law binding on all, and the establishment of states with a reasonable balance of power between elites and civil society. All this made it possible to launch military and technological competition with all the ensuing consequences. None of such prerequisites has developed in China, India, Russia, Africa, or America. It was the widespread use of the competition mechanism that acted as the main driver of the transformation of the territory of Europe into a hot spot of *creative activity* of large masses of the population; this very fact served as the main source of the Needham Puzzle. Even N. Machiavelli had to state that “...in republics there is a stronger vitality, a fiercer hatred, a keener thirst for revenge. The memory of their former freedom will not let them rest” [36, p. 45].

Reconstruction of human civilization: Breaking out of the Malthusian trap after 1500 AD and the emergence of capitalism

The Needham Puzzle is closely associated with the question of European civilization finding the way out of the notorious Malthusian trap. However, to answer this question we find it expedient to focus on two additional mental features of European civilization – dialectical thinking and a vast horizon of event planning. The first feature of Europeans originates in the dialectical philosophy of Ancient Greece and finds its mature form in Christian theology, dealing with a huge number of biblical contradictions and paradoxes, the overcoming of which led to scientific dialectics in the works of G. Hegel [37]. It was dialectical logic that made it

possible to “reverse” the entire original Christian morality and not only justify, but also elevate traditional sins such as pride, the desire for wealth, loan interest, etc. into the category of virtues. The intellectual resourcefulness of representatives of European peoples was especially evident during the split of Catholicism and the birth of Protestantism, which not only gave the new system a new ethic, to which M. Weber attached great importance [38], but also reconciled any contradictions and paradoxes of life at an intellectual level⁵. Thus, Orthodox thinkers speak of eight deadly sins (gluttony, fornication or lust, avarice, anger, sadness, despondency, vainglory, pride), the severity of which increases from the lowest to the highest. Protestant Western culture grants full and unconditional justification to three of them – pride, vainglory and avarice, as well as to loan interest. Europeans accept rational pride (man is created in the image of God), Protestant ethics condones and justifies vanity and avarice (wealth is a manifestation of a person’s chosenness, which they deserved through their diligence and asceticism) [40, p. 213]. All this could not but affect the character of the White Man and made him equally ambiguous and contradictory. I agree with K. Krylov, who pointed out: “The Europeans are super-predators who created a great civilization based on refined violence” [33, p. 299].

A bright illustration of the above thesis can be found in the way the European states of the 17th–18th century forced people to work and provided technological progress with workforce. Thus, on the territory of modern Germany, the order of the Landgrave of Hesse in 1616 read: “All the beggars and drunkards capable of working, who lounge

⁵ By the way, the Protestant morality defended by M. Weber did not prevent Jean Calvin from burning Michael Servetus, who discovered pulmonary circulation, at the stake [39]. How was this different from the Catholic Inquisition, which did the same to Giordano Bruno? In this case, I emphasize that all the arguments about the formation of capitalism in terms of Good and Evil, Good and Bad, are devoid of any meaningful sense. The emphasis should be on the mechanisms of competition and its results; bringing ethical entities into the analysis only prevents us from seeing the true drivers of evolution. I should also emphasize here that the civilizational victory of the West over the East says nothing about which peoples and cultures are better.

around in taverns, any idlers who have made a trade for themselves from begging alms from our subjects, are forced to work in our mines for a proper fee, and in case of unwillingness on their part, they shall be put in shackles and delivered to the mines” [41, vol. 2, p. 147]. This approach was further developed through the widespread introduction of special institutions – workhouses, almshouses and prisons. In France (in Paris) in 1656, *L’Hopital general* was opened, which combined a workhouse, a hospital for the insane, a prison, an orphanage and an almshouse for the elderly [41, vol. 2, p. 151]. The provision of customers for this institution was conducted in the most uncompromising way: “All beggars, able-bodied and disabled, of all ages, men and women alike, who are found within the city and suburbs of Paris will be imprisoned in *Hopital* and places under its jurisdiction, and will be used for public works, industrial labor and maintenance of the institution itself, by order of its directors [41, vol. 2, p. 151]. Contrary to traditional ideas about the introduction of technological progress in advanced private firms, the initial stage of capitalism was based on forced labor of vagrants, beggars and the sick. This is largely due to the quite natural reluctance of people to become appendages of new machines and mechanisms with which they had to work monotonously for many hours. It is not surprising that the masses preferred free begging to forced and low-paid labor in manufactories. In this case, there was a ban on leaving institutions like *L’Hopital general*; the runaway customers were searched for, subjected to severe corporal punishment for escaping, and brought back. Labor service in European workhouses was total: even the elderly, the crippled and the paralyzed worked [41, vol. 2, p. 152].

An extremely important fact is that all the described examples of the brutal imposition of capitalism and technological progress were absolutely legitimate. For example, in Great Britain, even in the 18th century, 223 violations of the law were punishable by death, including pickpocketing, robbery in the amount of more than 40 shillings, digging up trees from private gardens

and on the streets, etc. [42, pp. 14–15]. The institution of capital punishment was supplemented by other physical punishments, many of which were essentially equivalent to it. For example, stealing a sheep was punishable by 300 lashes, regardless of the offender’s age and gender; the punishment was too severe to endure even for young and healthy men [42, p.15]. *Dura lex, sed lex* – The law is harsh, but it is the law.

The contradictory nature of representatives of the European peoples manifested itself in their seemingly incompatible qualities like greed, cunning, cruelty, aggressiveness, religiosity and fanaticism, endurance, the ability to save, withstand hardships and make complex calculations, sacrifice, kindness, devotion to higher causes, etc. In no other part of the world have all the listed properties of human character been able to blend organically. I agree with W. Sombart who points out that the true capitalism emerged only when the European peoples formed the *spirit of capitalism*, which transformed the medieval principle of rest into capitalist anxiety, the static world into a fundamentally dynamic world [43, p. 29], and traditional skills and abilities into new specific competencies [43, p. 125].

The contradictory nature of a European individual created two poles in their character. The first pole is the *inevitability* of the White Man, manifested in the fact that he was able to destroy literally the whole world and all peoples, if it was necessary to achieve his goals. This character trait found its most refined artistic embodiment in Jack London’s symbolic story *The Inevitable White Man*. The second pole is the White Man’s *readiness to make sacrifices*, manifested in his selfless missionary activity, in his willingness to give his life for the aborigines he conquered. This trait also found artistic embodiment in Rudyard Kipling’s equally symbolic poem *The White Man’s Burden*. The combination of these two poles of character with the desire to plan their activities over huge periods of time became the spiritual and intellectual basis that made the European peoples able to create capitalism, a new economic system. As L. Summ put it, picturesquely, “the new

Florentine is educated, successful, cynical, skillfully exploiting the weaknesses of both people and gods” [36, p. 11]. The new bourgeois class combined the principle of the Gospel According to John: “In the beginning was the Word ... and the Word was God” [44, p. 1127] with the Pythagorean concept “Everything is a number” (or “Things themselves are numbers”) [45, p. 10]. By combining quality (meanings) with quantity (measure), Europeans have gained such practical functionality and efficiency that were previously simply unattainable for any peoples. In the future, this led to the creation of science and technology and, as a result, the power of the West.

It is interesting that Christianity was not only divided into denominations (Orthodoxy, Catholicism, and Protestantism in the form of numerous denominations and sects: Anglicanism, Lutheranism, Calvinism, Baptists, Methodists, Quakers, Mormons, etc.), but also united with other religions. For example, Buddha Shakyamuni was canonized as an Orthodox saint under the name of Josaphat⁶ Buddha in Byzantium [28, p. 22]. The unique Buryat monk Lama Itigilov actively communicated with representatives of the royal family and was recognized as Russia’s main Orthodox Buddhist [46, pp. 80–81]. And P. Tillich, a major Protestant thinker of the 20th century, argued that the Japanese school of Buddha Amitabha – the True Faith of the Pure Land – came close to the Protestant principle of salvation by faith and grace [28, p. 111]. Such paradoxes were based on a deep tradition of considering logical collisions in Christian theology. For example, the universe is created as a result of the self-alienation of the Spirit (God) [37, p. 137]. And what is the role of Christ? Through him, did God become man or, conversely, did man incarnate into God? In other words, is it the deification of man or the humanization of God? [37, p. 58]. And does not the very coming of Christ mean that God himself needs man in order to come to himself, so that man is the cause of God? [37, p. 63]. And the execution of God in the person

of Christ led Christians to feel that omnipotence made God incomplete [37, p. 92]. I agree with S. Žižek’s statement that it is Christianity that enacts the reflexive reversal of atheist doubt into God himself. When Christ exclaims: “Father, why have you forsaken me?”, then in the person of Christ it is God that does not believe in himself [37, p. 94]. And the very fact of God’s abandonment of Christ at the moment of his greatest suffering demonstrates that God is also imperfect – he himself is the source of opposites and, consequently, Good and Evil [37, p. 95].

However, all of the above has not yet helped to find a way out of the Malthusian trap, create capitalism and launch economic growth; these were only the organizational and mental prerequisites for the upcoming KHE (*Fig. 2*). Subsequent events were triggered by the emergence of the *phenomenon of superprofits* as a result of Great Geographical Discoveries and maritime trade. It has already been noted in literature that with a normal rate of return, the process of capital accumulation could stretch for a long time, and economic growth would simply not take place [47]. In the depths of the economy of the Middle Ages, there emerged a *special economic sector*, in which the return on capital reached hundreds or even thousands of percent per annum; this acted as a kind of Challenge for humanity. Trade in sugar, tobacco, coffee, cocoa, tea, slaves, rubber, drugs (opium), spices, as well as territorial transactions with native tribes, the emergence of exchange mechanisms of speculation, privateering, etc. produced stable three- and four-digit profit margins in 1500–1750 [48]. Such profitability parameters were truly a great temptation for European businesspeople. Recall the statement of T.J. Dunning: “A certain 10 per cent. will ensure its employment anywhere; 20 per cent. certain will produce eagerness; 50 per cent. positive audacity; 100 per cent. will make it ready to trample on all human laws; 300 per cent., and there is not a crime at which it will scruple... even to the chance of its owner being hanged” [49, pp. 35–36]. In the period under consideration, profitability reached from 700 to 2000%. The presence of competitive mechanisms

⁶ Derived from “Bodhisattva”.

in Europe, people's thirst for profit and religious zeal resulted in the fact that the continent quickly turned into a hot point of creative activity of large masses.

Unlike China, Europe accepted a historical Challenge: Britain, for example, developed *individualist-type* institutions (with the priority of the interests of the individual over the interests of the collective), and in China, *collectivist-type* institutions continued (with the priority of the interests of the collective over the interests of the individual). These differences were manifested most clearly in the redistribution of land. In China, the growing rural population was granted land at the expense of existing owners, while in England, on the contrary, farmers were uncompromisingly driven off the land and turned into proletarians. Consequently, in Britain, the average size of farms in the period from the 13th century to 1800 increased from 14 to 151 acres (10.8-fold); in China, in the period from 1400 to 1800, it decreased from 4.0 to 2.5 acres (1.6-fold) [50, p. 47]; the final divergence in the size of British and Chinese agricultural plots was 60.4 times. The direct consequence of such processes was the growth of inequality: according to available data, the Gini coefficient in Great Britain increased from 46% in 1688 to 60% in the 1860s [50, p. 54]. Such obvious manifestations of cruelty and "injustice" of British institutions led to the fact that in the period from 1760 to 1831 alone, the share of accumulation in the country increased from 6 to 12% [50, p. 46]. This led to acceleration of economic growth and technological progress.

It is noteworthy that all the geographical, institutional, economic and technological prerequisites discussed above were more or less typical of other parts of the world. For example, the Chinese traveler Zheng He, almost a century before Columbus, sailed on board ships four times longer than the schooners of the European discoverers of America [50, p. 40]. Nevertheless, Chinese merchants did not find anything worthy in the new lands and dutifully accepted the decision of the emperors of the Ming dynasty to ban the construction of large ships, which marked the

beginning of self-isolation of the Middle Empire over the next four centuries [50, p. 40]. Similarly, the fact that China possessed such inventions as silk, compass, gunpowder, paper, porcelain, blast furnaces and printing did not receive proper development and did not lead to the development of capitalism [50, p. 50]. Moreover, the Chinese mentality provoked a fundamental unwillingness to trade with the outside world: even at the beginning of the 19th century, China was economically self-sufficient, that is, it produced almost everything it needed, and therefore kept borders closed and minimized foreign trade. On the entire Chinese coast, only two ports, Macau and Canton (Guangzhou), were opened to ships of foreign merchants. At the same time, trade in Canton, as well as the presence of Europeans there, was surrounded by many prohibitions and administrative restrictions. European merchants had the right to stay in Canton only during the trading season (from October to March); in the remaining months, they had to close their trading posts and move to Macau. They were not allowed to enter the city; a small plot about the size of two football fields was allocated to them on the river bank behind the city wall. It housed 13 European trading posts with warehouses and infrastructure: shops, small workshops, drinking places, etc. European traders could not communicate directly with the Chinese authorities. There was a special Chinese guild of merchants, whose members could act as a guarantor for every European trading company and for every private merchant. All contacts with local officials were carried out exclusively through this guarantor. Guarantors owned trading post buildings, and the firms only rented them; besides, guarantors directly or indirectly provided their European wards with supporting staff such as translators, compradors (managers), shroffs (money changers), servants. All trading operations were carried out through the guarantors, who also carried out covert supervision of the "barbarians" entrusted to them. In fact, China implemented a recessive foreign trade principle: "We don't need you here; accept it and be thankful that we are dealing with you at all" [51].

So, the KHE in the form of the superprofit phenomenon received an adequate response from the Europeans: business activity, inequality, rapid accumulation of capital in private hands and the emergence of a layer of investors who could invest money in any endeavors at their discretion, securing property rights, including the results of intellectual (creative) activity. These circumstances “revived” J.M. Keynes’ basic psychological law of accumulation, according to which subjects with a higher income have a higher propensity for accumulation [52, pp. 158–159] and which, ultimately, gave rise to high investment activity, economic growth and technological progress [53]. Taken together, these circumstances helped the European civilization break out of the Malthusian trap (Fig. 2). As for China, it ignored the specified KHE and remained in a state of total poverty and under the influence of destructive bureaucracy. From that moment on, the divergence between the level of development of Europe and Asia only intensified.

We should mention that the formation of capitalism is directly related to the McKenna inversion. The fact is that for the Chinese and other Asian peoples, *modus operandi* consisted in the *principle of minimizing costs*; for the Europeans, the phenomenon of superprofits “suppressed” their natural desire to save resources and brought to life the *principle of maximum gains* – in profits, profit margins, revenue, production volumes, etc. From that moment on, the physical laws of being for European peoples and states recede into the background, while the vital and economic attitudes, which have been supporting economic growth for about 400–500 years, come to the fore.

The principle of maximizing the result correlates with the philosophical doctrine of energy evolutionism [54], according to which the man, in comparison with other biological species, has an excess of energy and adaptive resource [55, p. 15]. It is this quality that determines the essence of a person – to feel as much as possible and do as much as possible, for which one has to think as much as possible [55, p. 21]. M. Veller uses this quality

to explain even the phenomenon of aesthetics, generated by excessive need and the ability of the human psyche to adapt the environment to itself [56]. However, an important component of energy evolutionism consists in the fact that the energy surplus of an individual is increasing as their basic biological needs – self-preservation and reproduction – are being satisfied. During the formation of capitalism, the principle of maximizing vital energy manifested itself most fully due to the incentives and opportunities that arose. However, at more mature stages of society’s development, the principle of optimization of results and costs comes into play [25]; this gives the process of evolution flexibility and maneuverability.

I should add that the East, like the West, obviously had dialectical teaching in its intellectual arsenal. However, fundamental differences are observed even here. For example, the Chinese school of Huayan Buddhism (*Ekayāna*) formed a “soft” dialectic, in which the opposition between opposites was absent because it was smoothed out due to the “everything is present in everything” principle [28, p. 297]. On the contrary, the Western philosophical tradition of Hegel created an “uncompromising”, militant dialectic, emphasizing the contrast of opposites as a source of development and deducing from this principle the mechanisms of their mutual struggle, i.e. competition (!). In a certain sense, we can say that the religious and philosophical intellectual intransigence of the European peoples acted as the ideological basis for justifying competition in all its forms.

Reconstruction of human civilization after 1500

AD: Some get richer, others get poorer

Why are some countries and peoples rich and others poor? It can be said without prejudice that nations can be wealthy only in the conditions of an effective state. Only European countries managed to build different prototypes of an effective state in the Modern age.

In the 18th century, modern states began to emerge; the dialectic of their formation is described most precisely by the *concept of the narrow corridor* (CNC) put forward in a monograph by D.

Acemoglu and J. Robinson [8]. According to their views and terminology, the construction of a modern effective state (Shackled Leviathan) takes place in conditions of political equilibrium – between the state (the institutional foundation of the country) and society (its culture and level of self-awareness). While in real life institutions and culture act in an indissoluble unity, they can be conditionally divided. Then, according to CNC, a lot of effective interactions between civil society (the masses) and the state (the ruling elites) form a narrow corridor; and it is possible to enter and stay in it only if many conditions are met. If these are observed, then a fruitful regime of simultaneous coupling of productive forms of competition mechanisms arises between institutions and culture, as a result of which the capacity of the state and the opportunities (freedom) of society increase. To ensure such a regime, it is necessary to implement the *Red Queen effect*, when the masses and elites make incessant efforts to the limit of their capabilities to preserve the political status quo [8]. In this case, political equilibrium is achieved and the Shackled Leviathan is created, i.e. a state with enormous organizational capabilities for creative activity. Otherwise, a war arises between the state and society, ending with the victory of either society (the masses) – with organizational anarchy and social chaos (Absent Leviathan), or the state (ruling elites) – with the despotism of the central government and the suppression of individual freedoms (Despotic Leviathan) (Fig. 2).

The extreme forms of the political process, the Absent Leviathan and the Despotic Leviathan, produce the same result – stagnation and regression – in different ways: The Shackled Leviathan, on the contrary, makes it possible to increase the *innovation susceptibility* of the economic system and launch the so-called *consistency principle* (CP), according to which the pace of economic growth positively depends on the degree of consistency between the levels of *technological, institutional and cultural* factors in a country's development; on the contrary, discrepancies in the levels of maturity of these three entities negatively affect economic growth [24].

The consistency principle works only in a modern efficient state and in practice means the existence of an extremely flexible social system in which its main links – technologies, institutions and culture – are in constant mutual interaction and mutual adaptation. The state, in the form of the Shackled Leviathan, permanently generates technological, institutional and cultural innovations or promotes their borrowing if they emerge outside its borders (Fig. 2). Otherwise, when the system goes beyond the narrow corridor of political equilibrium, technological, institutional and cultural traps are being continuously formed in society; these traps reject even existing advanced innovations and provoke more sluggish economic growth, and in some cases, impede it. In the most general and schematic form, the PCSE is presented in Figure 2.

Countries that have been able to build democratic states in the form of the Shackled Leviathan, as a rule, release the creative energy of their citizens, which in turn generates a variety of technologies, increased labor productivity and higher welfare of the nation. New technologies require adequate registration in the form of improved institutions, which changes the entire culture of the country's population. The phenomenon of the Shackled Leviathan is quite rare, and therefore there are not so many rich countries even in the modern world. If the state does manage to build a capitalist society, then it fully implements the McKenna inversion, when economic entities strive for maximum production and profit, which leads to positive social evolution.

Successes and failures in the catching up development

Next in line is the question of why some poor countries and peoples manage to reduce their lagging behind the rich, while others do not.

New production technology is the source of modern welfare. However, technologies emerge only in a certain institutional and cultural environment. In this regard, countries that adopt institutions and culture from advanced states are able to launch technological progress and economic growth. At the same time, even under totalitarian regimes,

there should be a minimum dose of democratic institutions and individualistic culture. South Korea and China eventually followed this path. The success of the PRC, which has been actively capitalizing its economy for the past 35 years, attracting foreign capital and foreign technologies, is particularly large-scale and impressive. Prior to this period, all attempts of the communist regime did not produce any positive results. Regrettably, the consistency principle requires that technologies, institutions and culture correspond to each other, which in most cases of a catch-up development leads to the Westernization of the modernized country.

An example of a chronic failure in catching up development is Russia, which for 30 years has not been able to restore the technological potential of the USSR and is characterized by extremely unstable economic growth. The reasons for the failures are obvious: constant outflow of capital abroad, the country's deprivation of its investment resources, interference of bureaucratic and law enforcement agencies in the affairs of small, medium and large businesses, lack of protection of rights to the technologies being developed, denial of modern forms of private management in corporate governance, etc. Attempts to launch technological initiatives in the conditions of old Soviet institutions and managerial culture lead to a stalemate. It can be said that technological modernization in Russia is carried out without first creating competitive mechanisms that would increase the innovative susceptibility of the economy to technological and managerial achievements.

However, in addition to ignoring competitive mechanisms and the consistency principle, Russia makes another mistake of catching up development: its rate of technological modernization and institutional reforms is excessive. For example, too rapid, large-scale, deep and inconsistent (!) institutional reforms can destroy the traditional culture of the people and cause not only a decrease in its viability, but also direct degeneration and depopulation [57]. Thus, on the one hand, society needs institutional reforms, technological progress and cultural revolutions, on the other – they must

obey the ideology of the narrow corridor and the consistency principle and should not go beyond some reasonable limits determined by the biological properties of the human body. In Russia, this principle has been violated for 30 years, which led to an imbalance of the entire economy and to the fact that the people reject even quite reasonable and progressive reforms.

Another point that helps to clarify the issue regarding the achievements and failures of catching up development is the presence or absence of strong institutions and leaders of the nation. Only with their presence is it possible to mobilize the disparate resources of the population without losing its organizational unity and maintain the planned vector of reforms. In this context, China and Russia are striking antipodes, which explains their different modernization effectiveness [58]. At the same time, the consistency principle urges reformers to creatively adapt the traditional institutions and culture of the peoples in their country to foreign production and management technologies that have come from outside. Obviously, this is an absolutely non-trivial task that not many countries, governments and leaders who have embarked on the path of modernization can cope with.

“Case of the USSR”

Perhaps the last key historical event in need of a systematic explanation is the “case of the USSR”. Oddly enough, but the explanation of this paradox lies on the surface.

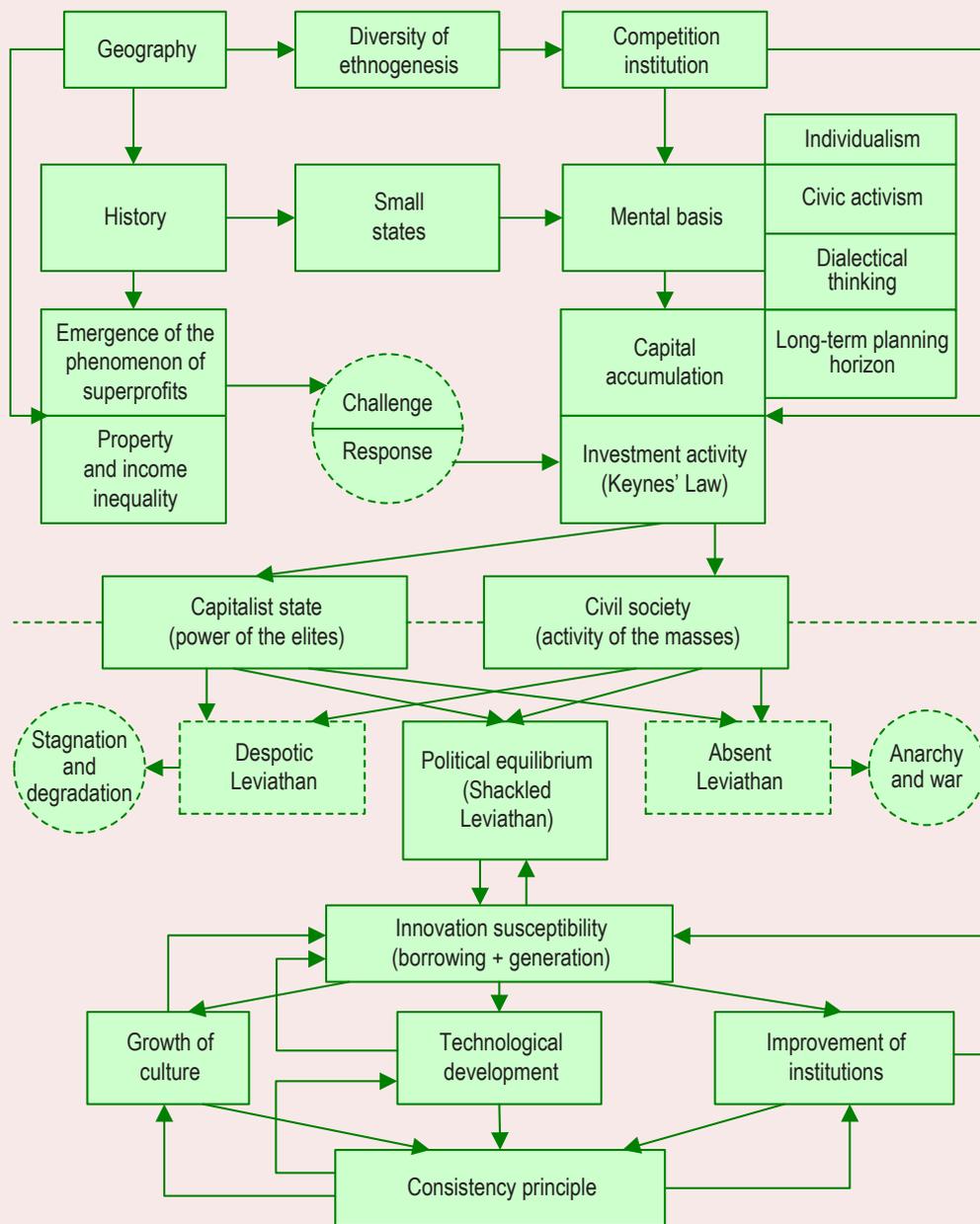
In the most general terms, the existence of the USSR from 1917 to 1970 can be characterized as an era of *total competition*. The country had to defend itself in World War I, in the Civil War, in World War II; it had to carry out industrialization and collectivization, create atomic and thermonuclear weapons, create aircraft and rocket engineering from scratch, go into space and establish a new (nuclear) energy industry. To do this, the best personnel were needed, which could be selected only if there were inclusive institutions based on fair competition and taking objective merits into consideration. Even in the aircraft industry, there was uncompromising competition between several

development companies – Sukhoi Design Bureau, Ilyushin Aviation Complex, Tupolev Design Bureau, etc. The competition of these companies for the development of new aircraft has already become a legend [59].

The situation began to change in the 1970s, when military and strategic parity with the U.S. was achieved, the communist system itself was finally built, and the party elite began to consolidate

its privileges. At that moment, the established system of the means of social mobility began to be dismantled, and the managerial, party and professional structures started their conservation [59]. In the next 15–20 years, almost all competitive institutions of the USSR in economics and politics were curtailed, which automatically reduced the country’s innovativeness in all areas, with the final dismantling of the system in 1991. The most striking

Figure 2. Structural outline of social evolution



manifestation of the erosion of Soviet culture and institutions was observed in the degradation of the composition of the top party leadership, when mediocre or, even worse, incompetent personalities became heads of state – Nikita Khrushchev, Leonid Brezhnev, Yuri Andropov, Konstantin Chernenko and Mikhail Gorbachev. In other words, the suppression of previously created competition mechanisms destroyed the state itself with all its previous achievements.

Conclusion

The polycausal concept of social evolution proposed in the article can be reduced to two simple block diagrams: Figure 1 and Figure 2. At first glance, it may seem that the new concept is more complex and confusing compared to monocausal constructions. However, that is not so; the PCSE is extremely simple and in some points is revealed and “deciphered” more fully by traditional theories and models. Its main advantage is that it makes it quite easy to identify bottlenecks in the political system of a modern state with all the conclusions and consequences that follow from this. The theoretical and instrumental core of the PCSE is the *principle of structural competition*.

Today, at best about 40 countries of the world fit the model of the Shackled Leviathan with developed competition mechanisms; the rest of the states are still far from the infamous narrow corridor. All this once again suggests that even the knowledge of how to build a modern effective society does not automatically allow this knowledge to be realized. The structural schemes in Figure 1 and Figure 2 do not pretend to be exhaustive, but they help to establish the natural sequence of the construction of modern capable states. This task is especially relevant for catching-up countries that seek to join the club of developed countries.

Another advantage of the PCSE is its fundamental *determinism*. Certainly, the world has many “generators of events” as N. Taleb has put it [60]; many of them are so rare that they are fundamentally unpredictable. However, the mechanism of interaction of generated events is

deterministic and does not involve the introduction of primitive random factors into it. The structural methodology of the PCSE, in contrast to the causal methodology, proceeds from the fact that certain *necessary* and *sufficient* conditions are required for evolutionary shifts, which change over time [47]: the European peoples were better prepared for the economic opportunities of the world system after the Great Geographical Discoveries; they formed both types of conditions, and they did not miss their chance. However, the explanation of the PCSE regarding the centuries-old dominance of the West over the East during the period of capitalism does not contain any value connotations: Asian communities have their own unique advantages, which are already gradually emerging and may prevail in the near future. This question remains open for now.

The importance of the PCSE also lies in the fact that it outlines the reference points of the modern world civilizational crisis. For example, there is no struggle of ideas in science anymore; political parties have become indistinguishable from each other; representatives of the political establishment have turned into puppet figures without their own opinions; market competition is being replaced by administrative competition; and the state authorities are trying by all means to make the population obedient. And this is typical of all countries without exception: from the USA, Germany, France and the UK to China, Russia, Israel, etc. Why is this happening?

According to the PCSE, breaking out of the Malthusian trap and the construction of capitalism occurred as a result of the emergence of *hyperactivity* on the part of large masses of the European population that are in a state of destitution and chronic poverty. Currently, the world is entering a state of a *neo-Malthusian trap*, which is characterized by a decrease in economic growth rates against the background of an immeasurably higher per capita level of welfare compared to the pre-capitalist period [61]. Strictly in accordance with J. Calhoun’s law, the high standard of living leads to a drop in people’s *social activity* due to the lack of incentives

to engage in it [62], which we observe in reality. At the same time, traditional cultural attitudes are deformed, followed by the degradation of institutions and technologies according to the consistency principle. In my opinion, the fate of the modern world is directly related to the fate of competitive mechanisms. If today's relatively efficient capitalist competitive mechanisms adapt to the challenges facing humanity, then our world will be preserved; if competitive mechanisms are suppressed and distorted to the point of losing a critical value of their effectiveness, then a very dim future is in store for our world. It is reasonable to assume that with a favorable development of events, competition as a phenomenon will persist, but its forms can change dramatically. For example, the competition will take place not so much between companies, activities and states, as between the very *social models* into which large groups of the population are arranged. At that, a huge amount of natural-scientific and social material has already been accumulated, which convincingly proves that the modern world system has exhausted traditional sources of economic growth [63]. This means that the McKenna inversion has also exhausted itself, and the maximization of everything and everything should be replaced by more subtle optimization mechanisms such as the *minimax* criterion of game theory. It is possible that social models based on Asian collectivism, rather than European or American individualism, will gain much greater advantages in such competition. At least, such an opinion is being actively voiced [58, p. 114; 50, p. 59]. Time will tell.

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