

# The Elementary Structures of International Institutional Evolution\*

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*The present article analyzes the international institutional system through the prism of evolutionary institutionalism and the theory of X- and Y-structures. These structures incorporate fundamental institutional principles which provide societal security and development. Institutions in the context of globalization accommodate the elements of both structures which can be explained with the help of the model of interrelations and transformations of institutional structures. The successive changes occur in the institutional system with the emergence of world polity which is constrained in resources. The security and development of this global system is based on the integrated set of norms and rules, and also on the universal elements of culture.*

**Keywords:** *international institutional development, evolutionary institutionalism, institutional stability, globalization, global governance.*

The current transformations of global political system are rooted in the changing power context and corresponding institutions on a global scale, accompanied by increasing international tensions and necessity to reconsider and update the principles of international institutions. The primary political aim of international institutions is to effectively maintain security and growth. The study of these phenomena in the framework of evolutionary institutionalism can help to reveal the mechanisms of current institutional evolution, namely, of its overall system dynamics, of the extent of alterations and creation of new norms and rules.

Globalization processes are characterized by increasingly complicated interdependence between all elements of global system which leads to the development of socio-natural integrity and emergence of the global political system. This is a system of globally stratified world political actors, and also a range of interacting and interdependent global institutions of political power and governance (Ilyin, Leonova, and Rozanov 2013). The global governance is a comprehensive, dynamic and complex process of coherent decision-making in the system of global politics, which is constantly evolving. It is designed to respond to the changing world (Karns and Mingst 2010). According to the UN, global governance includes a set of formal institutions and informal mechanisms, regulating intergovernmental and non-governmental organizations (Gromyko 2013).

An institution is a set of interconnected rules and practices that prescribes behavior on particular issues (Abbott, Green, and Keohane 2014). Institutions reflect the history of relations codified in principles, which summarize past decisions and allow predicting future

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relationships (Keohane 1988). Organizations are the institutions whose activity allows them to make strategic choices (Abbott, Green, and Keohane 2014). The development of international institutions is a complex process of adaptation to internal and external changes of global politics and a search for new opportunities to control these changes. Institutions do not only affect the structure and evolutionary path of global politics, but they themselves go through processes of selection and change.

According to historical institutionalism, the international institutions are capable to maintain a sustainable cooperation even in the ever-changing world politics (Finnemore and Barnett 2004). Historically specified factors become the most relevant to the following aspects of the process of institutional development (*Ibid.*): to the duration of certain types of activity and interactions; to the plurality of solutions for the problems from which advantages can be gained, and to complementarity of functional coordination and development of regulatory systems.

According to the theory of evolutionary institutionalism (North 2005), the life cycle of institutions consists of certain stages, depending on initial conditions and the developmental path. Culture is the basis for norms and the limits of social interaction, which reduces the costs of these interactions (Alston, Eggertsson, and North 1996). In the frame of civilizational components of social relations, historical experience is transferred and consolidated via material culture. Humans can change the environment by means of education and reason, thus, compensating the speed of biological evolution. New ways of adaptation emerge and later they are fixed in cultural norms.

Some biological concepts are used to study the institutional development (Ostrom 1990). In practice, a self-organizing system of governance fails to analyze all the changes that are necessary to reconfigure its rules, which is also true for many biological systems. Such a system has a two-tier structure, explained by the concepts of phenotype and genotype. The phenotypic structure reflects the behavior of individual organisms in a particular environment, the predetermined situation of interactions with the given number of players, available information, costs and opportunities, specific stimuli and results. The genotypic structure contains a set of coded instructions necessary for the reproduction of an organism with peculiar phenotype. The configuration of rules emerges as set of instructions on the means of reproduction of the system of relations between players in a particular situation influenced by biophysical world, the nature and culture of community.

It is rather difficult to create institutions intentionally, because they develop on the basis of 'natural selections', adaptive learning and self-organization. Institutions evolve in the course of actions of many people not aiming to the development of these institutions – these unintended consequences are effective and desirable (Hayek 1978). This evolutionary process occurs in a certain environment, which allows the development of institutions to be effective in this environment.

In order to describe the mechanisms of international institutional evolution at the very fundamental level, two concepts are used, which include ambivalent elements that organize the existence of societies. A comprehensive example of such concepts is the theory of X- and Y-structures developed by Sergey Yu. Malkov (2004, 2009, 2013). These structures are studied in the context of macrohistorical analysis. It is assumed that the X- and Y-structures are capable both to transformation and to coevolution over time.

Institutions as elements of culture are designed to support sustainability of society. The so called X- and Y-structures are characterized by the greatest resistance to various

external and internal destabilizing factors, which is confirmed by the studies of socio-economic systems with different institutional arrangement (Kirdina 2004; Korotayev 2006; Malkov 2004). Depending on the purpose and external environment, a society formulates relevant principles of cooperative and regulatory framework. The X-structures originate if the main aim is security in the situation of resource scarcity, while Y-structures are created if the priority is the development under the conditions of abundant resources (Table 1).

**Table 1.** Distinctive features of the X- and Y-types of social structures (according to Malkov 2013)

Characteristic	X-structure	Y-structure
Institutional Features	1. Regulated economy 2. Directive centralized management system 3. Collectivism in the socio-psychological sphere	1. Liberal economy 2. Adaptive (democratic) management system 3. Individualism in the socio-psychological sphere
Conditions of Formation	– serious external threat; – scarcity of resources	– no serious external threats; – abundant resources
Nature of Competition	competition of societies (survival of the fittest society)	competition of individuals (survival of the fittest individual)
Goal	survival and security of the society	improving of individual welfare
Means of Achieving the Goal	unity of the weak with the strong one (strong central authority)	unity of the weak against the strong one (weak central authority)
Priorities	– improved governance; – ensuring social cohesion	– initiation of internal competition, pluralism, economic activity
Ethical System	‘declaration of good’ (ideological unity)	‘prohibition of evil’ (freedom of actions within the law)
System Threats	– disintegration (loss of social cohesion); – bureaucracy, corruption	– monopolisation of power; – property stratification
Object of Protection	social organisation (the state)	individual rights and freedoms

Table 1 illustrates that the principles of organization within X- and Y-structures are directly opposite (what is good for one structure is bad for the other and vice versa), which makes it difficult to reconcile these two elements in one socium. Nonetheless, a combination of the X- and Y-elements always exists, because any society has to solve the problems of security and development simultaneously. Within the X-society there exist systems organized according to Y-principles (*e.g.*, a market-trade segment in agrarian societies), and in the Y-societies there can be found sub-systems with X-principles (*e.g.*, army and security forces, the system of state social security in the modern Western states).

At the same time, the proportion between the X- and Y-elements does not remain the same in a particular society. Certain changes in a given proportion occur depending on the development goals and resource supply in a specific context of political relations. Such

phenomena resemble the mechanisms of transmission of genetic information and the development of a living organism as a system with its gradual and complex transformations of elements. The key mechanisms of institutional evolution can be described by the following phases:

1. Emergence of institutions is determined by the demand in governance in the frames of existing limitations and opportunities to overcome them, including the use of innovations;

2. Functioning of institutions improves the ability of social systems to survive while interacting within their environment;

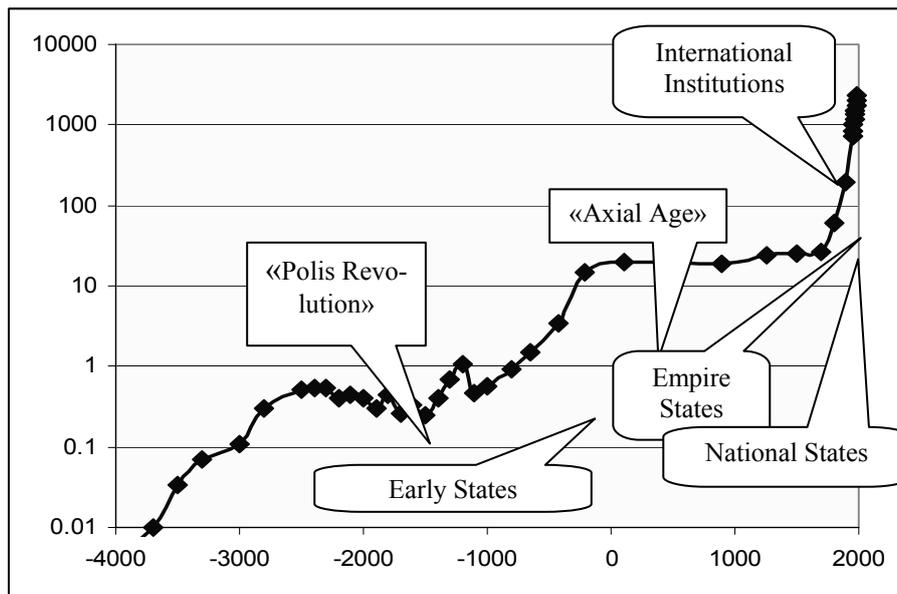
3. 'Testing' the effectiveness and sustainability of institutional development which is manifested in the increasing number of organizations that support the institution and strengthens its legitimacy (David 1994);

4. Reconfiguration of the conglomerate of institutions in a system and its development;

5. Transformation of the institutional system into a qualitatively new one under the influence of the global system.

The transition of global development parameters from exponential to logistic trends in the twentieth and twenty-first centuries significantly transforms the existing international institutions and influences the world political, social and economic structure; one can compare this with the final stage of the 'Axial Age' (between the thirteenth and third centuries BCE according to Karl Jaspers [cited in Malkov 2004]). Comparing the quantitative patterns of the world development and the evolution of sociocultural systems during the 'Axial Age' and in the second half of the twentieth century, one can notice that the systems attained the largest qualitative changes during these relatively short historical periods, when a rapid growth of material culture was accompanied by the emergence of various forms of non-material culture, which exist until today (Table 2). It is the improved living standards that contributed to the creation of complex forms of social relations, including the political ones. Fig. 1 illustrates the dynamics of urbanization over the past six thousand years, thus, reflecting the processes of politogenesis (Korotayev 2006; Malkov 2009).

The periods of world growth with predominant Y-structures are accompanied by the emergence of new political forms (city-states, centralized states, nation-states and international institutions as the evidence of political internationalisation and globalisation), whereas the periods of stable development are characterized by the existence of X-structured political forms (these are primarily the large empire states). It should be noted, that on a global scale when the limits to growth are achieved due to resource constraints, there will presumably be a unification of the two types of structures, which is already observed in social states and supranational integration entities.



**Fig. 1.** The world urban population at a logarithmic scale, in millions (for cities with population over 10,000 people) (Korotayev 2006)

**Table 2.** Key technological and cultural changes during the Axial Age and in Modern times

Axial Age (from the eighth to third centuries BCE)	New and Modern History (from the nineteenth century CE to the present)
Wide diffusion of iron weapons and tools	Technological revolution, the development of industrial mass production
Emergence of mass armies, sharp increase of invasions and conquests	Introduction of the mechanized armies with high-tech innovative weapons
Development of communications and transport infrastructure	Emergence of radio, telegraph, telephone, rail-roads, automobiles, aviation, astronautics
Emergence of world religions	Introduction and development of mass ideologies, the increasing influence of media

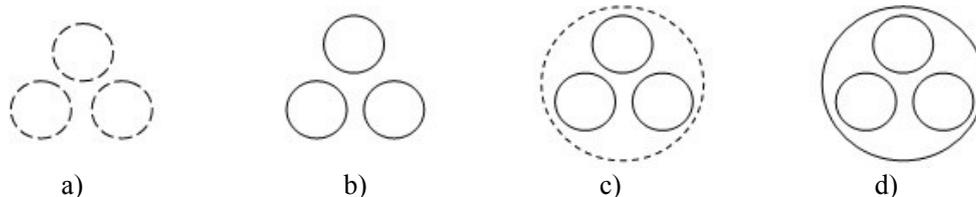
The characteristics of international institutional development in the twenty-first century can be considered in the context of X- and Y-structures and basic ideas of theories of institutional evolution. One of the major political challenges in institutional development is the contradictions and consequences of neoliberal globalization, associated with the global proliferation of relevant norms and principles. By the end of the twentieth century, globalization has led to numerous imbalances, dysfunctions and conflicts in most of the countries and societies despite the fact that it is the only 'global' political project in international relations. International institutions were created and maintained by the developed states when the latter had achieved a certain level of political development within international

system with the aim of carrying out their own policy. The other states' opportunities are strongly limited by the existing international standards and mechanisms of decision-making in the major international organizations. This situation is likely to become a source of increasing global contradictions. In these circumstances the models of cooperative informal blocks of developing states within major international organizations show a relative efficiency, as well as the practice of establishing their own international institutions. The most significant challenge for the international institutional development is the necessity to create joint institutions by the international actors which possess incomparable political influence and power.

Up to the present moment, the quantitative stabilization of international institutions is observed (Kaverin and Malkov 2014), alongside with the fact that institutions become more diverse and complex due to globalization processes, development of global relations and international organizations, and transformations of power structures in the interstate system. The transparency and legitimacy of formal international organizations have hardly increased. Almost all the international, regional and even national organizations established in the twentieth century and responsible for the governance of the highly complicated and integrated world are characterized by the lack of democracy (Nye 2011). In general, for most countries of the world the scarcity of democracy in international institutions will be one of the major problems of institutional development, alongside with the lack of appropriate political culture of institutional establishment and participation.

The multilateral structures and 'hard' international regimes of the twentieth century are increasingly unable to function properly. Preferences are given not to the regulation, binding rules, multilateral forums and bureaucracy, but to the 'soft' forms of cooperation: consultations, codes of conduct, regional and national initiatives (Governance 2025). In turn, it is the formal multilateral institutions that provide mechanisms for the resolution of international dispute, as well as the solutions with universal legitimacy and norms which establish predictable relationships based on reciprocity (*Ibid.*).

In the context of globalization, norms and principles of the X- and Y-structures tend to integrate as a result of the search for a balance between security and development common to all societies. In this case, one can speak about the origin and initial formation of global governance institutions. Generally, the dynamics of interactions and transformations of institutional structures is related with the change of development priorities – security (leading to the formation of X-structures) or growth (giving rise to Y-structures). The range of rules and principles within each structure slightly varies over time.



**Fig. 2.** Interrelations and transformations of international structures: a) dominance of Y-structures; b) dominance of X-structures; c) Y-globalization; d) X-Y-globalization

Fig. 2 illustrates the development of social interactions in terms of X- and Y-structures. The emergence and rapid development of communities proceeds on the basis of Y-structures.

X-structure elements start to appear when the relative limits of growth are achieved and relationships between participants of the system of redistribution become significant. Over time, when relations between communities strengthen, it becomes necessary to build formal institutions and common rules that bind this system of relations together (Fig. 2c). In the twenty-first century, the existing institutions based on Y-principles start to transform into the X–Y-structure (Fig. 2d) because of resource limitations to the global development. This integrated structure represents a significant extension of the content of political relations.

To sum up, the basic mechanisms of international institutional evolution can be explained in terms of X- and Y-structures in the framework of evolutionary institutionalism. These structures can be identified in the macrohistorical data of politogenesis. An interchange of principles between these structures and their coevolution is observed in the context of globalization processes and forecasted limits of the global development. These processes are explained by the following model of interrelations and transformations of international structures: the dominance of Y-structures – dominance of X-structures – Y-globalization – X–Y-globalization. The necessity to solve problems at the global scale leads to reconfiguration of existing institutional system and emergence of new structures relevant to the relations between major actors with the aim of formation of a political system that will provide and maintain global security and development.

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