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THE COORDINATION ASPECT OF INSTITUTIONS IN THE CONTEXT OF AN EVOLUTIONARY APPROACH TO ECONOMIC DYNAMICS

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The paper provides an insight into the dominant trends of contemporary evolutionary economics and outlines the important issues related to the articulation of this approach in thinking about the economy. The paper also affirms a proposition on institutions as carrier structures of socio-economic evolution, whose numerous effects at the societal level are decoded through the coordination function. In addition to the market, the process of coordination also employs other non-market institutional structures, whose profile and operational principles are the product of the trajectories of cultural and historical evolution, different among social orders. Projects aimed at the transformation of the economic system are to be sensitized to an objectively conditioned diversity of the institutional structures of the world economy, and in this sense, should be very careful in the installation of „universal" reform solutions.

Keywords: generalized Darwinism, replicator, interactor, institutions, coordination

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INTRODUCTION

The economy of today's, similar to other areas of social organization, is passing through an extremely dynamic era. Continuous pressures towards redesigning economic structures, shifts in power relations at different levels of the economy and increasingly regular excessive movements of economic flows undoubtedly put serious tasks before economic theory, for the most part still habituated to having a much more stable system, suitable for deliberation in equilibristic categories, as an object of observation.

There is a growing need to reflect the modern economy, given the presence, frequency and scope of the changes which it is exposed to, from the perspective that will take into account the dynamics as its substantial attribute. The conventional economic analysis, supported by the mechanistic conceptualization of the economy as a static, equilibrium system is an appropriate and logical approximation of the real economic system, with the proven educational and analytical values. However, it has become obvious that the metrics of modern, immanently dynamic economic processes elude concise conceptual relations of this

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undoubtedly powerful epistemological approach. Thus, an even modest step out of the orthodox economic epistemology into some of alternative views, which might be able to provide from reality a less remote and yet sufficiently rigorous conceptualization of economic reality, would be useful.

Beyond the boundaries of the mainstream of economic thought, evolutionary economics is a particularly popular epistemological orientation. As opposed to economic orthodoxy, which conceptually mimics classical physics, the above-mentioned approach mainly draws on the epistemological metaphor taken from the science of the evolution of biological systems. The generalization of the principle of evolution refers to a broad class of complex phenomena with the features of complex population systems, among which the economy can be counted as well. The economy is, therefore, perceived as a system whose dynamics takes place in accordance with the principles of the evolutionary variation, heredity and selection. The essential task in articulating this epistemological framework is to identify entities with quasi-genetic properties, which carry the evolution of the system. Evolutionary economics has not yet provided any unique answer to the aforementioned question, given the fact that different structures are proposed in order to fill this conceptual gap. Institutional structures certainly represent one of the possible solutions in the conceptualization of the „genetic" base of the economy. Institutions accumulate knowledge and provide recipes for the functioning of the system and socio-economic coordination, as its focal point. As the cardinal actor of coordination, the market is joined by other institutions, which, depending on the cultural circumstances, are differently established. Every socio-economic order represents a mixture of coordination mechanisms shaped by cultural and historical circumstances, including both the market and non-market institutions. Capitalism, in this sense, can be understood as a kind of a family of different models of the market economy, whose individual coordinating properties and adaptability are based on the quality of relations between the market and other institutional structures, produced by cultural and historical evolution.

The goal of the paper is to provide an insight into the recent achievements of the streams of the economic evolutionary analysis, concentrated around these problems. In this sense, it begins with a detailed introduction to the evolutionary orientation in economic theory. Its origins are linked to the founder of the American institutional economics, Veblen, and his aspiration to establish economics as a „modern science", based on the Darwinian principles. The evolutionist moment, however, disappears from the latter flows of the institutional analysis. With the new formulation of the Darwinian approach within the science of the evolution of the living world, an interest in this epistemological approach began to emerge again. The breakthrough of the evolutionary metaphor into economics began in the early nineteen-eighties. In the last four decades, the evolutionary principles have been elaborated in various fields of the economic analysis, in the absence of a common conceptual framework. After having reviewed the aforementioned economic-theoretical trends, this paper will present the efforts towards formulating the general epistemological base of the nowadays widely dispersed evolutionary analysis of the economy. One of the popular articulations of the evolutionary approach is, certainly, Generalized Darwinism. The paper will illustrate different views on the possible ways of the conceptualization of the aforementioned epistemological framework, regarding operational principles, structural relations and the relevant constitutive units. In this respect, the paper will sketch the concepts of Hodgson-Knudsen-Vanberg and Pelikan. An integral part of the paper will also be a critique of generalizing the Darwinian evolution as a model of thinking about the economy. The paper will also present an alternative theory of socio-economic evolution, which denies the Darwinian character of the evolutionary flows in society, embodied in the „continuity thesis". The final part of the paper outlines the role of institutions as a crucial element of socio-economic evolution, with the major responsibilities in economic coordination. In this regard, the heterogeneous institutional structures that shape the coordination capacity of the society will also be taken into account.

In accordance with the objectives of the paper, the general starting p of the analysis can be formulated through the following statement: the evolutionary approach to economic theory, understood in terms of thinking of the economy as an evolutionary system, based on the Darwinian principles of variation, heredity and selection, conceptually supported by institutions as approximation replicator structures, is an appropriate form of the conceptualization of the contemporary economic dynamics.

The paper will use methods suited to the research goals, particularly relying on the analytical description.

VEBLENIAN ECONOMICS AND EVOLUTIONISM

For more than a century, there have been efforts within economic theory to conceptualize the economy as a system subjected to the laws that are applied in the world of biological evolution. A pioneer of this orientation in economic theory, Veblen, considered the constitution of economics on the Darwinist starting points as a prerequisite of its transformation into a „modern" science. He considered the mainstream of the economic thought of his time to be a „pre-Darwinian" science, focused on the taxonomy of regular relations in the economy, whose theoretical framework eluded those forces that actually drive the economic process. None of the leading schools of the economic thought of the time was spared Veblen's charges for a lack of sensibility for the achievements of modern science. Marxism and the neoclassical school were accused of an inadequate, reductionist treatment of the „human material", relying on the individual as an economic actor, whose acting is over-determined by a collective, class influence (Marxism) or by essentially inert, hedonistic human nature (the individualism of the neoclassical and the Austrian schools). He was an opponent of the determinism present within the aforementioned schools of economic thought, in terms of the ability to predict the outcomes of socio-economic dynamics (Marxian predictions about revolution and equilibrium states in the neo-classical approach) (Veblen, 1998/1898, Hodgson, 1998).

T. Veblen searched for an epistemological framework which could enable the comprehension of the motional mechanisms of the socio-economic processes and at the same time help overcome the dichotomy between methodological individualism and collectivism. The reconstituted, post-Darwinian economic science should explain the process of cultural growth determined by economic interests as well as the cumulative succession of institutions within this process (Veblen, 1998/1898, 413). In this respect, Veblen considers that economics should be transformed into an evolutionary science, which has the evolution of institutions at the center of its occupation (Hodgson, 2008, 501). Veblen found the epistemological basis for such an orientation of the economic analysis in the conceptual framework of the theory of biological evolution. The economy is viewed as a collection of units subjected to the principles of variation, heredity and selection. First, there must be a diversity of units within a population (a variation), only to be followed by an inter-generational transfer of the properties of such individual units within the population (heredity), and, finally, a mechanism that enables better-adapted organisms to have a higher proportion of the population (the principle of natural selection) (Hodgson, 2008, 501-502). As far as Veblen understands it, the main unit of the evolutionary process is institutions - the evolution of socio-economic systems can be seen as a selection of the most properly adapted habits of a thought (institutions) (Hodgson, 2005, 906-907).

The immediate followers of the Veblenian tradition showed little enthusiasm for the development of the part of his learning about the evolution of institutions. Faced with the problems of measurement, Mitchell concluded that the conclusions Veblen had mentioned in this domain were of a speculative nature and equally difficult for empirical testing as the concepts of orthodoxy (Rutherford, 1998, 473). The research conducted by other institutionalists in the United States between the two world wars did not implement Veblen's ambitions, either, mostly for the reason of the fact that they were focused on studying the problems of companies and markets, the labor and social control of the economy, assuming a static institutional structure (Rutherford, 1998). An exception to this is the Common's concept of the purposeful selection

of working rules as a method of regulating the US economy (Vanberg, 1997).

THE DARWINIAN STREAM OF CONTEMPORARY ECONOMIC EVOLUTIONISM

A sort of a wave of the implementation of the evolutionary framework in consideration of various problems of economic theory begins with the application of the Darwinian principles within the Neo-Schumpeterian analysis of the dynamics of companies and industries by Nelson and Winter (1982). The coming decades have experienced a kind of an expansion of the evolutionary analysis in terms of this approach being extended onto the different classes of economic problems: technological change, innovation systems, the study of the organization, economic growth etc. (Dollimore & Hodgson, 2014). However, many self-proclaimed evolutionary studies do not actually use the Darwinist starting point. There is an absence of a general epistemological pattern, which increases the risk of the fragmentation of the evolutionary analysis (Dollimore & Hodgson, 2014).

The revival of the interest in the evolutionary categories within economic theory itself was preceded by the consolidation of the Darwinian paradigm within the evolutionary science of the living world. In fact, until the nineteen-thirties, Darwinism was but one of the rival concepts of biological evolution. The alternative paradigms were Neo-Lamarckianism (which allows for the possibility of the inheritance of acquired characteristics), Orthogenesis (which holds that organisms are naturally predisposed to certain types of variations, which have no connection with adaptations to the environment) and Saltationism (according to which, new biological designs only occur after sudden, abrupt changes, whereas fine adjustments only improve already created designs) (Levit, Hossfeld & Witt, 2011, 551-552). Only with the modern Darwinian synthesis, provided by the integration of classical, population and molecular genetics with microsystemics, which proved to be a very good match with the available paleontological data (Levit *et al*, 2011, 553), other explanations (except for Saltationism, which still has some influence) have decreased in importance.

The Darwinian paradigm studies the dynamics of populations of organisms as a result of a permanent adaptation to changes in the environment, followed by the differential survival of certain traits in the population, in the sense that better-adapted traits persist, which is provided by natural selection. The evolutionary process is supported by the principles of the variation (targeted or random) of characteristics within a population, heredity (a mechanism that ensures an inter-generational transfer of characteristics) and selection (the survival of better-adapted traits) (Hodgson, 1994, 113).

Modern Darwinism in biology can be formulated as a theory of how complex designs of living organisms can arise from unconscious algorithms of variation, selection and retention. The mechanism consists of a variation in the genotype (the construction codes of single organisms) and the selection of the phenotype - the selective retention of behaviors successful in obtaining resources from the environment. Selective retention operates through the „generation filter": the genes of organisms that are not successful in a struggle for survival or finding partners are lost in the next round (Dennett, 1995; Stoelhorst, 2008a).

Strictly speaking, the ontological starting point of Darwinism (in this case defined outside the biological sciences) consists of highlighting changes, their causality (in the sense that changes need to be explained), continuity (the current state is derived from earlier states), and their manifestation at several levels interconnected with each other, formed in accordance with the principle of emergence (the generation of new layers through the interaction of the layers of a lower order) (Stoelhorst, 2008b). Population thinking (the description of populations by the distribution of differences among the members of a population) (Hodgson, 1994) and system thinking (the observation of populations and individuals as complex systems that are constantly adapting to the environment) (Stoelhorst, 2008b) should be added to this. The main feature of the evolutionary view is the refusal of any determinism regarding the outcome of the process of evolution (Hodgson, 1995).

Within evolutionary economics, attempts are made to adapt the starting propositions, the logic and the principles of the Darwinian approach to the study of economic reality and simultaneously translate them into an epistemological pattern that would become the framework for all, today fragmented, evolutionary branches of the economy. This epistemological pattern should naturally be quite sensitized to the specifics of the economic process.

The evolutionary viewpoint generally postulates that the economic process has properties of evolutionary dynamics. However, in interpreting the nature of economic evolution, the protagonists of the current streams of evolutionary economics diverge amongst themselves. In the most general sense, the subject of disagreement is the Darwinian nature of the evolution of the economy, which is contested within one branch of evolutionary economics. What certainly is not the subject of the dispute is the contextual nature of economic evolution. Given the fact that it takes place in real time, economic evolution is naturally „sensitive" to cultural, historical and socio-psychological circumstances (Dosi, 1991, 6).

The contemporary articulations of the Darwinian epistemological paradigm are to a significant extent met in the concept of „generalized Darwinism". Darwinism is transferred from biology to economics – therefore, in the beginning, attempts to elaborate this approach of economic reality first relied on the forms of the operation of the evolutionary principles in the biological world (Nelson & Winter, 1982; Hodgson, 1993). Over time, however, a conclusion prevailed that the economy has too large a volume of specifics that prevent us from drawing direct analogies with biological phenomena. Instead of the forced placement of economic phenomena in biological Darwinian moulds, a more appropriate strategy for constituting the evolutionary economic paradigm was launched. In fact, without abandoning the original settings, Darwinism needs to be „purified" from all content-specific biological contents in order to arrive at some sort of conceptual substratum, which could serve as a universal epistemological model for the study of the phenomena whose dynamics has evolutionary characteristics. The resulting general framework should be further developed, specifically for each class of phenomena exposed to evolutionary dynamics, in accordance with the peculiar forms of its manifestation. This led to one of the leading evolutionary trends of economic thought known as „Generalized Darwinism" that is almost turning into a separate branch of evolutionary economics today (Dollimore & Hodgson, 2014).

Generally speaking, generalized Darwinism combines efforts to generalize the Darwinian approach up to the level of an epistemological pattern suitable for the study of all the systems subjected to evolutionary dynamics and accordingly possessing very specific ontological unifying characteristics - biological, social and others. Accordingly, the so-called „Universal Darwinism" or „Generalized Darwinism" is supposed to describe the phenomena which have the properties of the so-called „Complex populations systems" (Hodgson, 2007, 265-266). Complex population systems should have the following characteristics: they are inhabited by populations of different individual units, faced with limited local resources and the problem of survival; adaptive solutions generated in the struggle for survival can be preserved over time and transferred to other individuals, through broadly defined mechanisms ensuring the operation of the principle of inheritance (Hodgson, 2007).

The articulation of Generalized Darwinism as the general epistemological framework in various complex population systems to which it can refer, must respect their peculiarities. In this sense, the elaboration of Generalized Darwinism in economic theory has the task of finding specific mechanisms, in accordance with the universal Darwinist principles, that shape the evolution of the economy. Accordingly, answers should be looked for to the questions relating to the mechanism of generating variation, natural selection mechanisms and criteria, the mechanism of inheritance etc. (Aldrich, Hodgson, Hull, Knudsen, Mokyr & Vanberg, 2008, 584-585). A fundamentally important task is to determine the entity that „bears" economic evolution, whose viability is tested by selection pressure, observed in the long-run. This entity would need to have the ability to make an intergenerational transfer of its properties, similar to genes in biological evolution. It is the genotype, the principal „target" of evolution, while its immediate objects are specific

units that carry the gene, presented by the phenotype in biology. In more modern evolutionary terms, these two entities are conceptualized as the replicator and the interactor (Aldrich *et al*, 2008). Replication is a causal relationship between entities where there is a substantial similarity between the original and replicated units and where the transfer of information about solutions related to survival also takes place. The replicator is an entity which transfers its structure mainly as „untouched" through successive replication (Hull, 1988, 408). On the other hand, the interactor is an entity that, as a cohesive unit, directly enters into reactions with the environment, in such a way that such an interaction becomes a differential (Hull, 1988, 408). The selection process is identified as the differential disappearance or proliferation of interactors, which ultimately leads to the differential perpetuation of the relevant replicator (Hull, 1988, 409), which occurs at the multiple, interconnected levels of the systems subjected to evolutionary dynamics.

Thus, the main actor in economic evolution should be the entity that is sufficiently durable, has the capability of replication and bears some solutions in a fight for survival. The popular version of evolutionary economics holds that the role of replicators is played by habits and routines, and that the major „candidates" for interactors are firms and similar organizations (Hodgson & Knudsen, 2004). Habits are the disposition for certain types of behavior, which are generated by the repetition of thoughts or behaviors, and are stored in the human nervous system. These dispositions are converted into behavior only in certain circumstances. Habits are as dispositions sufficiently durable to be the subject of evolution, simultaneously having the capability of replication through imitation (Hodgson & Knudsen, 2004, 286-289). The important determinants of the transformation of habits into a behavior are institutions. Social institutions stabilize and channel both habits and behavior (Hodgson & Knudsen, 2004, 289). The routines are organizational dispositions that can stimulate certain patterns of the behavior of individuals within a group, in a form of a sequential response to cues. In organizations, some sort of mixing the habits of their members takes place in the sense that the habits of a member are the environment of another member, so that such an environment can stimulate some new behaviors that can lead to changes or the replication of parts of the environment (Hodgson & Knudsen, 2004). Routines can be considered as sets of habits which, when triggered by circumstances, lead to a sequential behavior within a group. Let it again be noted that the habits and routines are subject to the evolutionary principles of variation, heredity and selection.

In the presented model, the survival of successful firms is simultaneously a selective retention of their business routines, which sequentially has a certain influence on the selection of the habits of those workers whose organizational dispositions the firm's routines are composed of, and therefore, ultimately, some sort of the selection of workers themselves, or their genetic structures, takes place (which is then equated with the „original" concept of biological evolution). Therefore, there are several sorts of replicators - routines, habits, genes - and levels at which selection works - companies and individuals. The specified selection string, even though it is exposed in this, quite a general form, implies in a sense the existence of a certain kind of synchronicity between biological and socio-economic evolution; when, however, considering the latter kind of evolutionary dynamics, selection flows at the level of the biological replicator can be ignored (Hodgson & Knudsen, 2004, 302).

A particularly important role in the above-described conceptualization of Generalized Darwinism is played by habits, as a constitutional element of the relevant layers of a system exposed to evolutionary selection. First of all, habits are replication structures at the level of individuals as actors of socio-economic processes. Also, the coherently united habits of different individuals within a firm lead to a routine, as a higher replication entity. The concept of a habit within this approach is borrowed from the American philosophy of pragmatism and instinctive psychology, in terms of dispositions for certain types of behavior, which are acquired through various mechanisms of social interaction, where replication (although not perfect) is expressed at the phenotypic level (behavior) rather than the genotypic one (the genetically defined psychological states of individuals). A further clarification of the referred-to concept has found support in the concept of a program-based behavior.

In the process of searching for sufficiently convincing alternative to the concept of rational choice, Vanberg (2002) utilizes the findings of various disciplines – evolutionary biology, epistemology, psychology and the theory of bounded rationality. The findings within these disciplines about human behavior lead to a conclusion that it is somehow coded, or program-based. All human capacity of decision making, concentrated in the human mind, has a threefold origin: genetic inheritance, personal experience and socio-cultural evolution. The available repertoire of decision-making skills is formed through the selective elimination of the behavior patterns that do not bring success. All the „wisdom" of humans, therefore, is a product of the past, derived from accumulated adaptations to earlier environments that were favored by evolutionary selection, while all increment in the existing knowledge results from breakthroughs from the existing gnoseological capacity based on the principle of trial and error (Campbell, 1965, cited in: Vanberg, 2002). Structures providing a support for human decision making are organized as some sort of programs, specialized for certain kinds of problems, including social relationships (among the important ones are those for detecting transactions and avoiding agents who cheat on obligations) (Vanberg, 2002, 37). An open question of what the relative presence of programs obtained by genetic heritage and those generated by personal learning and social-cultural experience in the human mind is still remains. In the context of the presented version of Generalized Darwinism, the concept of human consciousness as a modular structure composed of genetic instructions and social-cultural backgrounds can find its place in the explanation of habits. As the core feature of socio-economic evolution, habits can be considered to be a special form of programs, in terms of findings from within the aforementioned disciplines (Aldrich *et al*, 2008, 590).

CRITICS OF GENERALIZED DARWINISM AND THE CONTINUITY THESIS

The presented generalization of the Darwinian paradigm and the manner it is adapted to the requirements of studying economic reality does not meet the widest support of the evolutionary research community within economic theory. Objections are related to the method of the construction of the aforementioned epistemological pattern as well as to the very concept of economic evolution as a process unfolding in accordance with the Darwinian model. To a considerable extent, the contestations of Generalized Darwinism in economic theory originate from the rival course of evolutionary thinking in economics, known as the continuity thesis.

The theoretical arguments supportive of the continuity thesis take a critical attitude towards the Darwinian mapping of the principles for the analysis of economic processes as their starting point. In this respect, the unjustified use of selection mechanisms in explaining economic evolution is pointed to (Cordes, 2007, 136-141). First, the nature of adaptation mechanisms in the biological and the economic domains is different. While the adaptation of biological units is a product of random genetic mutations and sexual re-combinations, economic entities have an ability to directly and consciously react to impulses from the environment, thus being even capable of reducing selection pressure. Furthermore, treating firms as one of the forms of interactors in the economy as well as attributing replicator properties to routines are subjected to criticism, too. It is pointed out that companies are able to change their routines, whereas there is no possibility of such a relation between interactors and replicators in biological systems. Given their lack of durability, the understanding of routines as replicators is also problematic as they change in the business processes relatively quickly and rather frequently. As the principle objection, this line of thinking alleges the irrelevance of the concept of natural selection, as economic actors are able to consciously choose organizational forms ensuring them a survival, according to their own selection criteria. Accordingly, the protagonists of the continuity thesis criticize Generalized Darwinism because of the drawing of uncritical analogies between economic and biological processes (Witt, 2004, 128).

The fundamental theoretical starting point of the protagonists of the continuity thesis is the one of the existence of the ontological and the historical continuities between biological and cultural evolution,

although their mechanisms are principally different. Cultural evolution takes place in accordance to specific patterns, but on the basis previously set by natural selection, and in the form of inherited human traits (Cordes, 2007, 141). Within this approach, evolution is defined as the self-transformation of a particular system guided by certain principles. During the phylogeny of the human species, natural selection has led to the formation of such a set of qualities that provide people with significantly higher rates of reproduction in relation to other species. As a result, selection pressure has significantly weakened, which, in turn, has led to the creation of conditions for the other types of evolution: cultural, economic and technological (Witt, 2004 132). The result of natural selection is that the inputs from the environment, materials and energy, are augmented by the genetic knowledge of people shaped by natural selection, which presents the input that self-transforms through the creation and diffusion of innovation. Increasing the human knowledge accumulating from one generation to another has had a decisive influence on production, thus generating economic evolution. The various means of the improvement of the expansion of human knowledge, amongst which are written communication, the invention of the printing technology and the modern means of the replication of knowledge have played an important role in the increase of such knowledge. . There is also a problem of an increasingly weak compatibility of the human-generated flows of the material and energy flows with nature, which significantly limits possible future civilization effects of economic evolution (Witt, 2004, 141).

The proponents of the continuity thesis claim that the proposition of the homology between the biological and the economic processes, which according to the interpretation of this theoretical concept can logically be deduced from Generalized Darwinism, is not realistic. Also, it is emphasized that the Generalization of Darwinism in economics has shown little interest in the empirical confirmation of its own understanding of evolutionary dynamics (Levit *et al,* 2011).

As can be inferred from the presented views, the evolutionist stream of economic thought is actually a conglomeration of different views on the possible form of the process of evolution. It is certainly worth noting that the Darwinian version of economic evolutionism itself contains alternative conceptualizations of economic evolution (Pelikan, 2011).

GROUP SELECTION, INSTITUTIONS AND ECONOMIC COORDINATION

It should be noted at this point that, even when not viewed from a strictly Darwinian standpoint, economic evolution represents a multilevel process. All the entities that form the ontology of social processes are exposed to evolution. Consequently, one must take into account the evolutionary dynamics of those phenomena that reflect the collective dimension of the human activity. This leads to the problem of group selection, which still represents a major challenge for evolutionary theory. The central question is, in fact, the question of a possibility of the survival of a group, given the fact that, in evolutionary terms, groups are normally made of „selfish" individuals, whose survival combat will lead to the disintegration of the group. More specifically, a critical level of cooperation is required to suppress the selfishness of individuals to the level that would ensure the survival of the group. Looking through the current Darwinian schemata, if a group is the interactor, then there must be some kind of the replication structure providing an appropriate balance between the innate selfishness of the group members and the cooperation necessary for its survival, which is referred to as the problem of identifying the so-called „social replicators" (Campbell, 1965).

With no intention of elaborating further on the problem of group selection, it can be concluded that institutional structures can represent quite a convenient conceptual design in terms of finding a solution to a social replicator. Namely, the significant presence of regulatory mechanisms is needed to maintain the level of the cooperation of individuals necessary for the survival of the group, among which particularly important are those affecting the level of trust. Only in the behavioral regime characterized by a certainty regarding the behavior of partners in a social interaction, primarily in the field of obeying the rules, will actors be encouraged to make cooperative

arrangements. Trust is a sort of the „invisible web" of the cooperative behavior of individuals within a group and as such is part of the informal institutional regulation. The importance of this feature of an institutional design is strongly confirmed in the sphere of economic transactions, which may significantly be hampered due to opportunistic behavior, a loosely set principal-agent relationship, asymmetric information etc. (Lekovic, 2012, 65). The level of trust necessary to maintain the cohesion of economic relations, however, itself depends on the support of other social institutions (Lekovic, 2012, 66). Therefore, even from these rather modest insights, one can gain some sense of the cardinal influence of the joint effect of institutional structures on economic evolution, and, linked to that, the differential survival of the economic „units" of different levels, which speaks in favor of electing institutions as a possible conceptual solution to replicators of economic process.

Although the founder of economic evolutionism, Veblen, considered institutions as the central theme of the evolutionary theory of economic change, in later Darwinian conceptualizations, they are partially displaced from the center of interest. It remains an open question whether the current intensity and diversification of the research grouped within the theoretical corpus of evolutionary economics will lead to progress in articulating the role of institutional structures in evolutionary dynamics or not. In this regard, the two other representative approaches tending to revitalize the role of institutions in the conceptualization of economic evolution will additionally be outlined here.

In a more recent version of his theory of economic evolution, Pelikan conceptualizes the economy as a set of agents at different ontological levels of the hierarchy. The agents of the higher order arise as emergent entities through the self-organization of the lower-order agents in networks (Pelikan, 2011). All agents have „built-in" behavior instructions in the form of rules. In the economy, the relevant agents are individuals, organizations and economies (Pelikan, 2011). Individuals have instructions in the form of their cognitive capacities obtained by genetic evolution and cultural experience, while the rules of organizations and those of the economy are represented by formal and informal institutions. Changes in institutional rules through trial and error represent evolution, while the internal dynamics of the network of agents at lower levels, within the framework of the existing institutions, is a process of economic development (Pelikan, 2011).

The protagonists of evolutionary macroeconomics consider the economy as a dissipative structure, which transforms an energy input into an output. The system is characterized by permanent imbalances as well as by a homeostasis, and continuous efforts are made to attract more energy in order to maintain the dynamics of the system (Foster, 2011). The disintegration of the system is prevented by meso rules, which provide short-term stable macroeconomic trends. These rules are hierarchically structured and can be identified with the institutions of the society (Foster, 2011). These rules are divided into physical, which provide knowledge of the transformation of energy inputs, on the one hand, and social, which dictate relations to other agents, on the other. Economic growth is only possible through an expansion of investments aimed at innovation, which is only possible by making a change in meso rules (Foster, 2011). In other words, the evolution of meso rules and institutions is closely associated with the path of the economic growth of different societies.

Independently of these considerations, if they may not exactly be identified as the bearers of economic evolution, social institutions may certainly be taken into consideration for their relatively usable approximation. Understood as the rules of the game in a society, structure the socio-economic interaction (North, 1994), institutions are a sort of an intersection of a multitude of functions essential for the economy - determining the behavior of its actors, providing communication channels between them, shaping the technological capacities of the society etc.

The central problem of the functioning of the economy is ensuring economic coordination. In his anthological elaboration of the mentioned issue, Hayek pointed to the impossibility of any individual or central authority to have the entirety of the economically relevant knowledge at their disposal. There is, however, a mechanism that enables the overcoming of the problem of economic actors' insufficient knowledge in this way or that, and enables putting somehow their

action in order in the final outcome. It is the system of the market prices whose pulsing gives an insight into the relative scarcity of resources and is therefore indicative of economic actors' preferred direction of allocation (Hayek, 1948). By directing the allocation of resources towards various effective uses determined by the price system, in conditions of uncertainty and the actors' incomplete knowledge, the market provides an irreplaceable contribution to economic coordination and keeping the economy on stable, equilibrium trajectories. Hayek also points to other institutional structures which have spontaneously emerged and have been shaped in a long-lasting practice, which, in conjunction with the market, perform socio-economic coordination: the language, money, morality, law (Hayek, 1960). Hayek's more than effective analysis threw light on coordination as the essential function of institutional structures. The crucial mechanism of economic coordination is definitely the market mechanism, supported by other social institutions. Similarly to the market, they somehow „decipher" the environment, creating actors' perceptions of how the environment is structured and which preferred forms of action are. By providing some sort of information shelter for actors in conditions of uncertainty, institutions compensate for their cognitive limits and, in a way, make a meaningful economic action possible (North, 1981).

Accordingly, each economy can be regarded as a distinctive combination of markets and other institutions in the service of socio-economic coordination. The contemporary economy is inhabited by numerous and richly differentiated non-market institutions, heterogeneous by origin and different in coordination effects, which reflects the different paths of the cultural and historical evolution of individual societies. Despite being an omnipresent and undoubtedly dominant coordination structure, the market itself does not represent a „natural" category, but is only part of a collection of institutions emerged in the process of socio-economic evolution. Moreover, the market mechanism is the subject of continuous societal interventions, aimed at shaping its multilateral impacts in accordance with social interests. Various institutional capacities are included in collective efforts to limit, to a certain extent, the influence of the market on the socially acceptable distribution of power between relevant economic actors. For example, non-market institutions (especially judicial ones) can be employed in the process of finding fair rules for resolving permanent conflicts generated by the market exchange (Commons, 1968/1924, in: Vanberg, 1997). Non-market institutional structures themselves represent some sort of a society's defense from social destruction that, in certain stages of civilization, is naturally caused by the generalization of the market mechanism (Polanyi, 1944). The comprehension of the market as a natural, super-institutional entity mystifies the actual manner of its functioning, which, in a real economy, is to a certain extent stamped by cultural and historical circumstances (Dugger, 2005).

CONCLUSION

In terms of the material presented, the starting point of the paper is shown to be sustainable. Even independently of the arguments presented in the paper, the various branches of the economic analysis have detected the existence of various institutional structures, which, in conjunction with the market, enable economic coordination at various levels of the economy. Induced by selection pressure, their dynamics is to a lesser or greater extent a trajectory dependent phenomenon, which is labeled as „path dependency" by the conventional economic analysis. A wave of neoliberal reforms, aimed at the absolutization of the market mechanism, bears a considerable destructive potential, given the fact that the frontal attack on the existing diverse non-market institutions in the world economy threatens to seriously reduce its future adaptive capacity.

The valuation of institutional structures within the evolutionary stream of economic thought may still not fully reflect their versatile and capital influence on the evolution of the economy. A more intense sensitization to the institutional component of economic evolution may be helpful in expanding the effectiveness of evolutionary thinking of the economy. Some of the research orientations, significantly conscious in the aforementioned sense, are the evolutionary theory of economic growth, the comparative political economy, the theory of the national innovation system etc. Economic policies must also understand possible

implications of this element of the economic process in order to channel their perceived dynamics within the limits of the possible, in accordance with the needs of economic development.

One should not, however, expect a serious penetration of the evolutionary approach into the mainstream of economic thought. First, beside quite a general epistemological framework, the convergence of the alternative versions of economic evolutionism into a uniform and consistent paradigmatic framework is not on the horizon. Irrespective of this, the problem is also the reception of the approach by economic orthodoxy, responsible for the dissemination of topics and ideas through the majority of the economic theory community, which is showing little interest in the concepts that have not gone through a rigorous mathematical formalization. The evolutionary approach, however, remains very convenient in circumstances where it is necessary that the conventional economic analysis should be gone beyond, to the study of real economic systems, whose dynamics is context-specific and subject to cultural-historical regularities. In line with this, the reflection of the economy within the evolutionist frameworks can be a suitable point of orientation of the economic policy.

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