JOURNAL OF MODERN SCIENCE

Том 4/53/2023

www.jomswsge.com

DOI: doi.org/10.13166/jms/175988

ANDRZEJ NIESPOREK

University of Silesia in Katowice, Poland

ORCID iD: 0000-0001-7514-8163

DISPUTES OVER THE CONCEPT OF SOCIAL SYSTEM AND THE CRITIQUE OF SOCIOLOGICAL REASON

Introduction

With the advent of sociological theory, society started to be perceived as a different kind of reality, existing by its own laws as an independently functioning whole. However, from the beginning, there was no consensus among sociologists as to the nature of this totality. Are social wholes merely theoretical constructs or do they exist in reality? The separation of the social and non-social elements of social wholes, as well as the social and non-social systems was also problematic. This problem particularly concerns the interrelationships of the social system, culture, politics, economics and other systems. The holistic, systemic description of social life in sociology has a long history. Sociology has dealt intensively with the question of *systems* and much has been written on the subject. We are confronted with many different systemic perspectives (Ball, 1978, p. 65). In sociological theory, the notion of *social system* has various meanings and, needless to say, a full presentation of its understanding in sociology remains beyond the scope of this manuscript (Niesporek, 2018). The aim of the article is to analyse the ways of interpreting the notion of the system in its classical sociological models: mechanistic and organic, and to indicate the contemporary changes resulting from the spread of the new theory of systems and the new understanding of the social system. The latter is related not only to the new understanding of the subject that sociology deals with, but also to the new understanding of sociology as a science.

Classical theories of social system

Although the concept of the social system plays an important role in many significant sociological theories, defining it precisely appears problematic. This is due both to the ambiguity of the concept of the *system* itself and the difficulty in distinguishing its social and non-social (cultural, economic) elements. In the general definition, a system is treated as *set of objects together with relationships between the objects and between their attributes* (Hall, Fagen, 1968, p. 81). From this point of view, a system is any collection of interrelated objects or elements, of a non-summative nature, which means that the system as a whole cannot be reduced to its constituent parts. It represents a new quality. Put differently, a system is more than the sum of its parts (Nagel, 1955). It is a boundary-maintaining whole that exists over time, moving towards a state of equilibrium.

Both the mechanistic and organicist models of the social whole present themselves as classic examples of self-equilibrating systems. The systems of this kind are mainly seen as maintaining the *status quo* and described through stabilising mechanisms. The structural stability of such systems in the cybernetic perspective is described through deviation-counteracting negative feedback mechanisms. However, new theoretical trends go beyond this classical view, opening up new perspectives for the description of evolving systems (characterised by deviation-amplifying positive feedback processes).

The origins of the mechanistic interpretation of social phenomena lie in the classical mechanics. The rapid development of classical mechanics and mathematics in the seventeenth century also defined trends in the interpretation of social life. Social philosophers of this period rejected anthropomorphism, as well as moralistic and teleological descriptions of social life. Instead, they created a new *social physics* in which society was analysed and described in the language of mechanistic principles. Society was seen as an *astronomical system*, the elements of which were individuals bound together by mutual attraction, or separated by repulsion. In turn, groups, communities or states were treated as systems at equilibrium. A human being, groups and their interrelationships were subject to natural causes and should be studied as systems of interrelated elements that could be measured and explained in terms of the laws of social mechanics (Buckley, 1967, p. 8). Thus, the mechanistic explanation in social sciences served to meet two requirements. It was meant to be based on the principle of causality and to be comprehensible. This entailed looking for a causal relationship between any two phenomena under study and seeking the laws that determine the regularity of this relationship. Thanks to the use of the concept of mechanism, it was possible to describe the fixed rules to which the relations between its elements were subjected (Rios, 2004, p. 76). Between the seventeenth century and the first half of the nineteenth century, the mechanistic model of social life shifted from *social physics* and *social mechanics* towards energetic models of social life (*Social Energetics*). What remained, however, was the metaphysical essence of all these models (Sorokin, 1964, p. 12-21).

Vilfredo Pareto (Buckley, 1967, p. 9) was the first to apply the principles of mechanistic explanation to social phenomena both at a methodological and

heuristic level, in a general way, avoiding very detailed analogies. He adopted the originally methodological principles of mechanics in economics. In this field, the equivalent of the mechanistic understanding of the material point was the concept of 'homo economicus' (Pareto, 1966, p. 106-107). In his viewpoint, economics dealt only with the logical aspects of human action, i.e. with the rational choice of means leading to the achievement of desired ends. In contrast, sociology, as understood by Pareto, was concerned with non-logical actions. These actions are an expression of 'sentiments' and constitute the major element of actual social behaviour. As a science, sociology is the study of actual social behaviours. It explores real existing systems of interrelated human actions. For Pareto, social systems are real, concrete phenomena (Henderson, 1967, p. 19).

At the theoretical level, however, the actual systems of action are already represented by the relevant type of variables. At this level, society as a social system is, in the classical mechanistic sense, *a system of interrelated multiple variables* (Samuels, 1974, p. 9). In the description of the social system, Pareto considers five basic variables: residues, derivations, economic interests, social differentiation and the circulation of elites. As a result, Pareto methodologically simplifies the actual social system by assuming that it consists of only five elements and, thus, strives to construct a theory that gives an approximate idea of the real and much more complex social system (Sorokin, 1964, p. 48). The interrelationship of these five elements determines the dynamic equilibrium of the social system. In doing so, in Pareto's terms, the social system oscillates between two contrasting states, passing through three fundamental development cycles: the political, economic and ideological one (Pareto, 1994).

The use of an organic model of social life also has a long history. The origins of organic concepts of social life date back to the nineteenth century. Just as the development of the mechanical model of social life was linked to the success of classical mechanics, the development of the organic model was intertwined with the rapid development of the biological sciences. Direct loanwords from the biological sciences can be found in the output of social theorists such as Spencer, Worms, Lilienfeld, Schaffle, and others. Society, or the social group – by analogy – was treated as a special kind of living organism. As such, society had a specific structure and functions and was subject to the laws of nature. In

this respect, sociology appeared as a quasi-biological science (Sorokin, 1964, p. 200-202). However, the theory of the social organism is not just a matter of the past, for its elements are still present in many currents of sociological thought. As J. Rex emphasised, *wherever we find the terms 'structure' and 'function' in sociology, we can be sure that the author assumes a certain understanding of society as an organism* (Rex, 1961, p. 61). This is most obviously evident in anthropological and sociological functionalism.

Functionalism is deeply rooted in the sociological theory of Emil Durkheim, who, as the 'founding father of sociology', became an intermediary link between the nineteenth-century organicist theories and classical functionalism. He was the first to use the concept of *function* systematically when explaining social reality (Alpert, 1939, p. 104). The concept of function is methodologically possible only by accepting the concept of system, and in this sense, it refers to a system (Davis, 1959, p. 772). As A. Gouldner has pointed out, functionalism loses its meaning if it ceases to be an analysis of social patterns as part of broader systems of behaviour and belief. That is why, understanding functionalism in sociology requires adopting the concept of a system (Gouldner, 1959). Also, the concept of the social system, or – in other words – the social whole, found its important place in Emil Durkheim's theory. Society as a whole – in his view – is a reality 'sui generis'. The basis for the claim that the organisation of elements has properties that cannot be directly derived from the nature of the elements can already be found in Durkheim's early reviews (Giddens, 1970, p. 190). The organistic conception of society with a distinctly 'realist' tinge is the reference point here. In his review of A. Schaeffle's fundamental work *Bau und Leben des Sozialen Korpers* (Construction and Life of the Social Body), E. Durkheim took a positive stance on the idea of society as a kind of organism (Durkheim, 1978a), paying particular attention to the essential similarity between society and organism as *real things*, i.e. irreducible to their constituent elements. However, he cautioned against interpreting this similarity too literally. Society is an organism not in the literal sense of the word, but metaphorically. Such a perspective allowed Durkheim to define the specificity of social wholes more clearly. Thus, an important moment for Durkheim's delineation of the conditions for the formation of sociology as a science was marked by the fundamental question of defining the specificity of society and

its relation to the individuals that constitute it. Durkheim repeatedly expressed this in the form of the thesis that the whole, i.e. society, differs in its properties from its composing parts, i.e. individuals, or, in other words, that the whole is more than the sum of its parts (Durkheim, 1958, p. 311; 1960, p. 325; 1978b, p. 50; 1978c, p. 76; 1974 and 1982).

The interconnectedness of the notion of function and system became particularly discernible in the twentieth-century functional anthropology. Most obviously, functionalism relates to the explanatory role of the concept of function, the use of which assumes a certain model of explainable reality. Functional analyses seek to explain a behavioural pattern or a socio-cultural institution by determining the role they play in maintaining the proper functioning of a given system (Hempel, 1968, p. 186). The use of the concept of function, therefore, inevitably draws attention to the reciprocal relationship of part and whole and to the need to look for the 'necessary conditions of existence' of the whole. These, in turn, occur when a given element contributing to their emergence comes into play (Davis, 1959, p. 758).

The best-known representative of this approach, A. R. Radcliffe-Brown, uses the concept of function explicitly in the context of the organicist analogy. In his view, function can only be defined in terms of the relationship of a single social action, e.g. a custom or belief, with the social system as a whole (Radcliffe-Brown, 1977, p. 43). In Radcliffe-Brown's functionalism, any (biological or social) activity can only be explained through the role it plays in the process of maintaining an organic, or social, structure. Hence, the latter notion is crucial here: *As the word function is here being used the life of an organism is conceived as the functioning of its structure. It is through and by the continuity of the functioning that the continuity of the structure is preserved. If we consider any recurrent part of the life-process, such as respiration, digestion, etc., its function is the part it plays in, the contribution it makes to, the life of the organism as a whole* (Radcliffe-Brown, 1952, p. 179). By analogy, social life refers to the functioning of a social structure, which consists in ordering individuals in mutual relationships defined and controlled by institutions, i.e. socially established norms or patterns of behaviour (Radcliffe-Brown, 1958, p. 177). In broad terms, the function of any form of social activity is the role it plays in social life while contributing to maintaining its structural sustainability.

The structural-functionalist model of the social whole was formulated by Talcott Parsons, who argued that the primary interest of sociology lies in the analytically distinct social system. In Parsons' theory of social action, *social system is a system of processes of interaction between actors, it is the structure of the relations between the actors as involved in the interactive process which is essentially the structure of the social system. The system is a network of such relationships* (Parsons, 1966, p. 25). In this perspective, the problem of social order consists in achieving the integration of the social system (or structure), i.e. the ordering of social interactions. These are judgements and orientations of the actors towards shared values and norms that influence the stability of the interaction system. What connects the social action and the social system (by stabilising the interactive system of actions) is the concept of *pattern variables*. Originally used in analyses of occupations in *Toward a General Theory of Action*, the pattern variables are referred to the general scheme of action theory, and in *The Social System* became an essential element of Parsons' theoretical structure of the social system analysis (Parsons, 1970, p. 843-844). They articulate the fundamental dilemmas that must be resolved by the actor in any social situation. The *pattern variables* structure the interaction system by offering solutions to the dilemmas of social action (Parsons, 1966, p. 59-66).

The social system, however, is not an empirically given, concrete reality, but only a theoretical model of it. *A social system is a way of defining certain relations between the components of 'action' that specifically relate to this reality* (Parsons, 1970, p. 839). In the concept of social system, the mutual interactions of individuals are comprised, but perceived from the side of the structure of this interdependence, i.e. certain 'emergent' properties to which the system as a whole is entitled, with the interrelated interactions as a foundation. From the point of view of the properties of the social system as a whole, the orientations and actions of individuals are expressed in terms of position and role, i.e. their place in the structure of social relations and normatively regulated behaviour. In this respect, Parsons states clearly that the position and role are not attributes of empirically given subjects of action, but primarily parts of the social system that should be theoretically expressed in this form. Hence, the social system does not include the individual subject of action, understood as a concrete system of action, but only a part of the latter, expressed in the concept of role. Yet, the role has the function

of an element connecting the action system of the individual subject with the social system (Parsons, Shils, 1959, p. 190; Parsons, 1965, p. 42). However, *from the point of view of the social system, a role is an element in the general pattern that determines the action of the individuals that make up the system.* In other words, *an essential aspect of the social structure is a system framed in patterns of expectations that determine the appropriate behaviour of individuals performing certain roles* (Parsons, 1972, p. 307).

The social interaction system as a whole has, according to Parsons, its own functional needs. He lists four basic needs: adaptation, goal-attainment, integration, latency or pattern maintenance (the so-called AGIL model). At the most general level of a social system, each function is fulfilled by a distinct sub-system, each of which also has a similar structure of functional needs. The primary task of sociological theory, according to Parsons, is to systematically analyse the structural interrelationships of the components of large and complex societies, but also to explore the role they play in maintaining the equilibrium of the social action system (Parsons, 1959, p. 4).

New systems theory

The classification of systemic models of society can take different forms (Buckley, 1967; Lilienfeld, 1978; Bahm, 1983; Niesporek, 2018). What is important from the point of view of the formation of a new understanding of the social system is the emergence of the post-functional social systems analysis (Bailey, 1982). The fundamental difference between functional and post-functional analysis – among other features – lies in the reference to the concept of system equilibrium with a long tradition in sociology. However, it is most prominently present in functional thinking, particularly in the thought of T. Parsons, referring in this respect to the work of L. J. Henderson (Bailey, 1994, chapter 3; Id. 1990, p. 51-71), even though Parsons' conception has been doubly criticised. Firstly, within sociology, because of the theoretical and political implications; secondly, because of the inadequacy of the use of the concept of equilibrium itself (Bailey, 1990, p. 67 and ff.). Parsons gives the concept a meaning different from the one adopted in thermodynamics,

where it was formulated. For Parsons, the equilibrium of a system means the persistence of order, i.e. a definite interconnection of the elements and variables of the system, both a static one – stable equilibrium – and within an orderly process of change – moving equilibrium. (Parsons, Shils, 1959, p. 107). In thermodynamics, however, equilibrium has an entirely opposite meaning. A state of equilibrium is a state of maximum entropy, i.e. a state of maximum disorder. Consequently, the term is used with reference to closed systems (Bertalanffy, 1984, p. 196). *Equilibrium is classically defined for a closed system, it does not represent maximum integration or maximum consensus, but rather the complete lack of integration, consensus, order or organisation. Equilibrium in a closed system is complete disorder* (Bailey, 1982a, p. 10). The only non-arbitrarily defined state of equilibrium in such a system is the state of maximum entropy. All other states of equilibrium are purely arbitrary in nature and cannot be used to measure the system. The problem lies in the fact that a social system – regardless of the subtleties of its definition – is not a closed system. Therefore, the concept of equilibrium does not apply to its analysis.

In contrast to closed thermodynamic systems, with no exchange of matter and energy with the environment and in which entropy increases, in open systems, organisation persists or develops due to such exchange (von Foerster, 2003; Lilienfeld, 1978, p. 18-22). The examples of such systems are living organisms and social systems (Bailey, 1994, p. 48-49; Hall, Fagen, 1968). What is important in such a case is not equilibrium, but homeostasis, defined by Cannon as the ability of an open system [a living organism] to maintain the constancy of its internal environment based on feedback information, causing modifications in the factors of the internal environment and its relationship with the external environment (Berrien, 1968, p. 37-38; Bailey, 1994, p. 106-108). Feedback can be negative or positive. As Bertalanffy points out, the negative feedback in cybernetics preserves *the Cartesian model of the organism as machine, unidirectional causality and closed systems*. In turn, the positive feedback found in open systems is essentially non-mechanistic and *goes not only beyond conventional thermodynamics, but also beyond unidirectional causality* (Bertalanffy, 1984, p. 200). Positive feedback analysis has developed together with the so-called *second cybernetics*, allowing to explain not only the processes of maintenance but

also the development of the internal environment, the structure of the system, its self-organisation, and its morphogenesis (Maruyama, 1963). It also helped to grasp the processes of the formation of increasingly complex structural forms and the emergence of more developed levels of reality (Jantsch, 1980).

The developing new system-evolutionary paradigm has fundamentally changed the face of the natural sciences. What is more, its significance as a new way of seeing the world has gone far beyond the field of these sciences. It has gradually become the universal basis for the formation of ontological and methodological conditions of scientific cognition in general. It overcomes the barrier separating the natural and human sciences, associated with the classical understanding of science. Thus, all science, including both the human sciences and the natural ones, becomes a historical science, as the fundamental dimension of its existence is no longer formed by universal laws, independent of time. Science attempts to describe the concrete and the unique, and to theorise the processes of self-organisation of reality. Essentially, the historicisation of the natural sciences also brings them closer to the inherently historical human sciences (Niesporek, 2007; 2021).

Autopoietic systems and cognition

Autopoietic systems can be characterised by the ability to maintain their distinctiveness from the environment through the reproduction of the internal structure. They are homeostatic systems that preserve their identity over time, i.e. their distinctiveness from the environment. In this process, the basic task involves maintaining the internal structure, which leads to the reproduction of the structure and of its elements. Autopoiesis is based on three basic assumptions. Firstly, it is a process of production of the components that make up the system. Secondly, it entails the creation of boundaries that define the whole of the system. Thirdly, it is a process of self-creation of this system as a whole (Niesporek, 2021, p. 167). Autopoietic systems are operationally closed and open to energy exchange at the same time. The maintenance and reproduction of the structural distinctiveness of these systems is linked to their

self-referentiality, which means that their relations with the environment are a function of maintaining their internal organisation (Maturana, Varela, 1980; Zeleny, 1981).

Autopoietic systems can be distinguished by a specific understanding of cognition, which is defined as the action of the system. Hence, the domain of its cognition is delineated by all the relations that an autopoietic system can enter into, without losing its identity (Maturana, Varela, 1980, p. 119). The domain of cognition of the system is thus relativised to its proper way of maintaining structural continuity (autopoiesis). Its knowledge does not reflect an external reality but, through the self-referral of the system, the image of the reality becomes a reflection of its process of autopoiesis. The biological description of the functioning and the cognitive processes (cognition) in living organisms involves assuming the ontological primacy of the observer and observation. Everything that takes place is distinguished by the observer from the perspective of his or her living practice. Such a viewpoint leads to the rejection of the problem of the objectivity of perceived reality and, consequently, raises a discussion on the adequacy of cognition.

Thus, Maturana draws a distinction between objectivity and the so-called *objectivity in parentheses*. The former entails the assumption that existence is independent of the observer, that there is an independent domain of existence which is the ultimate reference for the legitimacy of any explanation. Objectivity without *bracketing* things and entities relies on the existence of an independent discerning observer. At the same time, it also means the independent existence of things. Objectivity in parentheses, in turn, results in the acceptance that existence is determined by the distinctions of the observer, and that there are as many domains of existence as there are types of distinctions that the observer makes. This type of objectivity renders existence essentially dependent on the observer, which is also why there are as many domains of truths as there are domains of existence discerned by the observer through his or her distinctions (Maturana, 2010, p. 85).

Social system as an autopoietic system

Leaving the *era of equilibrium* means entering the *era of entropy*, also in the area of building new models and concepts of the social system (Bailey, 1994). The development of novel trends in science, emerging both in the area of disciplinary sciences and in those being their generalized versions, such as complexity theory, general systems theory, the concept of autopoietic systems, chaos theory and others, has also led to new theoretical trends in the social sciences, including sociology (Niesporek, 2007; 2021). Above all, it provoked a shift in perceiving the social system as an open and complex adaptive system. Among the most interesting works of this current are those by the proponents of the systemic theory of evolution, including the theories of self-organisation and autopoiesis.

An example of the use of the idea of an autopoietic system is the theory of social system by N. Luhmann (Luhmann, 1995, 2012, 2013), who treats social systems as self-referential autopoietic systems. Thus, he rejects a substantive understanding of the social system – the system is not a whole made up of parts, neither something more than the sum of its parts, it does not determine the behaviour of the parts, nor do the parts have a function in relation to it (Luhmann, 1995, p. 6 et seq.). A social system determines its existence in relation to its environment by reducing the complexity, i.e. by selection within the range of all its possible relations with the environment. A social system also has its internal environment in which, through self-reference, other social systems are distinguished in relation to it. The concept of the interrelationship of the system and the environment (surroundings) as differing in degree of complexity remains crucial here. A system separates itself from its environment only if it is able to limit its relations with it. For if it were to enter into all possible relations with its environment at any given time, it would cease to distinguish itself from it, melding into a single whole. By introducing a difference in complexity, the separation of the system from the environment also provides the conditions needed for the emergence of cognition and knowledge (Luhmann, 1990, p. 67).

For Luhmann, the social system is an autopoietic system whose basic operation is meaning-based communication (Luhmann, 1987, p. 113). Luhmann treats meaning as a difference in the degree of complexity. Its basis is the

separation of system and environment, resulting in the differentiation of the degree of complexity. This separation constitutes the meaning as it presupposes itself as its own self-reference. The selection within all possible relations of the system with the environment simultaneously allows for their separation, definition of the system and the emergence of meaning. The latter determines – from the point of view of the system – the horizon of all its possible relations with the environment. Only in this perspective, the interactions that the system selects become significant. A system interacting with representations of its own interactions creates a meta-discipline that behaves as an observer interpreting the meanings. In this way, the system becomes aware of its own relation with the environment.

Communication within a social system is meaningful because its communicative operations not only provide a reaction to the intra-systemic representation of the communicative environment, but they are also capable of creating the environment of the system. The system communicates with the communicative operations which constitute its states and creates a meta-domain of observations of its communication relations with the environment. It is only from the perspective of the horizon of all its possible relations with the environment that communication has a meaningful character, allowing for the principle of the separation of the social system from its environment to be understood. Thus, *the phenomenon of meaning appears as a surplus of references to other possibilities of experience and action* (Luhmann, 1995, p. 60). In other words, *meaning is a special strategy for selective behaviour in the face of high complexity* (Luhmann, 1987, p. 177). Social systems are therefore systems operating on the basis of knowledge about their environment and their own actions.

Non-classical understanding of the social system – a critique of sociological reason

The social systems theories discussed in the manuscript vary with respect to the way they define a system, as well as to the different theoretical approaches in which these definitions are rooted. However, they all refer to the understanding of system in the natural sciences. Classical social system theories,

which, following G. Ritzer, include sociological theories developed at the turn and in the first half of the twentieth century, dealing with a wide range of issues with far-reaching theoretical ambitions (Ritzer, 1996), refer to an understanding of the system based on classical equilibrium systems. Subsequent, non-classical social system theories go beyond this conception, opening up to new perspectives on evolving systems theory and the application of such systems in social theory (Buckley, 1967). A comparison of the two approaches allows us to see more profound differences, not only in the distinct ways of construing the social, the object of sociological reflection, but also sociology itself as a science. This is what we can, following Helena Kozakiewicz, call *the critique of sociological reason* (Kozakiewicz, 1989, 1991, 1992).

Reflection on sociology often takes the form of a discussion about the specificity of its subject matter (nominalism versus sociological realism) and method (positivism versus the understanding approach). The concept of the social system is often treated as an exemplification of sociological realism, regardless of the various theoretical descriptions of the social system itself. However, going beyond its classical understanding fundamentally changes the perspective. Social system theory, contrary to the *classical* understanding of the term in sociological thought, does not just relate to a form of description of the social reality, but to a revision of the question of the *conditions of possibility* for the existence of sociology as a social science. According to Luhmann, it results from the fact that sociology defines itself not by the object of its study, but by problematising its relation to what it studies (Luhmann, 1990). Sociology represents merely a part of the system of social communication – considered as a social system tout court – constituting a form of *self-description* of this system. *If we accept these recent developments of systems theory – write Luhmann – (and they are the most fascinating changes of a paradigm reconciling systems theory and the humanities) the self-description of the societal system becomes itself reflexive. It includes its own description as a prerequisite for the emergence of action systems. It includes a kind of self-confirming attitude. Self-description means selection of distinctions and indications, of differences and identities; it means self-simplification as prerequisite for complexity. Self-descriptions, then, have to be conceived as the necessity to produce contingent reductions. They can neither be avoided nor accomplished as a true picture of their object. Their in*

– *congruence is part of their function, their selectivity part of their performance* (Luhmann, 1984, p. 66). This in turn means that: *self-reference means that a unity refers to its own identity; that it copes with its own complexity; that it uses a simplified model of itself to orient its own operations* (Ibidem).

Self-reference is therefore intra-systemic in nature. It is not an observation of the system by an external subject, but a self-observation of the system, and importantly, its self-reflection constituting, at the same time, a condition for its functioning. The impossibility of transcending leads to the so-called *initial paradox*, for every intra-system description presupposes a prior description. Nothing can be described without an outlining description, but the operation of describing itself remains undifferentiated. It can only be distinguished by another description (Luhmann, 1995; Mitterer, 1996). The description itself, that is, the observation itself, is thus invisible to itself, as it exists – to use von Foerster's term – in a *blind spot* (von Foerster). The notion of *re-entry* as proposed by George Spencer-Brown (Spencer-Brown, 1969) provides a solution to the initial paradox. In the logic of forms, developed by Spencer-Brown and referred to enthusiastically by Niklas Luhmann, capturing the form of distinction is only possible through its application to form. As Brown wrote, *we take therefore the form of distinction for the form* (Spencer-Brown, 1969, p. 1; Kaufmann, 1987, p. 56). It is only possible to grasp and observe a distinction based on self-reference. Only thanks to self-reference the distinction can become visible, i.e. the distinction itself exists only in the process of self-observation. This also applies to the observation of the system, i.e. the *system reference*, understood as the operation of the system/environment distinction. The system as a system/environment distinction exists (is observed) solely as a self-referential system, and in self-reference, i.e. as Luhmann says, in the operation of reference already contained in what is signified by it. Self-referentiality not only provides the basis for system identification, but also for its duration in time. *Translated into system-theoretical terminology, the result of such a re-entry into the system of the distinction between system and environment is that such systems operate in the mode of self-produced indeterminacy. […] Self-produced indeterminacy should only mean that the system operates recursively, and in doing so has to fall back upon past states which it cannot fully remember, and has to anticipate future states*

about which decisions may be taken only in future presents (Luhmann, 1997, p. 363). Thus, the system operates only through this constant, repetitive production of indeterminacy. It repeatedly creates anew the starting point for the uncertain predictions of its further operations. It exists in this process and is perceived in it. The system is operationally closed. It is continually, recursively constituted by its own operations and persistently produces the distinction between the system itself and the environment (Niesporek, 2021, chapter IV).

The recognition of the social system as a self-referential autopoietic one entails certain philosophical consequences, including, above all, the contestation of the Cartesian-Husserlian understanding of the subject. It thus problematises the very cognitive basis of the subject-object relationship, also in sociology. It happens regardless of whether the point of reference of the cognitive subject relates to Descartes' thing existing independently of the subject or Husserl's everyday life-world (Lebenswelt) given in a natural attitude (Husserl, 1999, p. 53 ff.). Whereas, within sociology, it happens independently of considering *social facts* as things, or understanding the social world of everyday life. The idea of an autopoietic social system transcends this perspective by deliberating on the conditions of the possibility of sociological cognition on a different level of reflection (Kozakiewicz, 1989, p. 357). It no longer concerns just a dispute over the subject of sociology, and over the question of whether social reality has a systemic character and how this can be theorised in sociology. It constitutes a critique of the cognitive impotence of perceiving society (the social system) as formed by the idea of objectivist science (Kozakiewicz, 1989, p. 361). It refers to the abolition of the division of reality into the subject and object of cognition. Perhaps, more precisely, it explores the philosophically grounded belief in the process of simultaneous creation of the subject and the object (for a detailed analysis of the philosophical aspects of this problem, see: Niesporek, 2021).

Sociology ceases to be an ahistorically conceived science on an independently existing social system. It itself becomes an element of this social system. As its component, it can only apprehend the system through a process of self-reference. In doing so, it functions as an observer of the second degree. While, in the descriptions of the first-level observer, the universal characteristic is unconscious dualistic thinking, the perception of dualism can only be possible at the level of the second-level observer (Fleischer, 2005; Mitterer, 1996;

Niesporek, 2021). For the first-level observer does not perceive the dualizing nature of observation. The observation itself is therefore invisible to itself, and, from this perspective, it can be regarded as an adjustment mechanism. The function of perception is thus not to objectively represent the social world, but to ensure survival. This is a feature of the common-sense colloquial consciousness that is a component of the world of everyday life. It relates to a social world constituted in pre-scientific (pre-sociological) experience and represents the primary layer of the social world. Paraphrasing Husserl, it can be regarded as the society grasped through one's own experience (Mandes, 2012; Berger, Luckman, 1991). The distinction between the object of description and the description itself thus becomes apparent only from the perspective of the second-level observer. In the conception of a non-dualizing way of speaking, Josif Mitterer indicates reducing the object of cognition to the already existing cognition of that object as a means to overcome dualism. In this sense, the object of description is always a description already made (Mitterer, 1996). The fact of remaining exclusively within the realm of descriptions leads to a regression, ultimately underpinned by a formally defined observation as the primary simultaneous differentiation and determination in the sense of Spencer Brown (Spencer Brown, 1969) and Niklas Luhmann, referring to Brown. Sociology – in the perspective of the new systems theory – as a second-level observer, as a component of the social system, cannot therefore cross this barrier. For sociological cognition always refers to already existing cognition. The idea of sociological cognition whose object is social reality within the framework of objectivist empiricism cannot therefore be realised (Kozakiewicz, 1989).

Conclusion

The adaptation of a new understanding of the system, including the autopoietic one, to the sociological analysis of social systems, leads not only to a new perception of the subject matter that sociology deals with, but also to the problematization of the understanding of sociology as a science. It raises significant questions about the nature of sociological cognition, resulting in new and original inquiries. Addressing them opens up a cognitively interesting perspective to the discussion of the place and future of sociology as a science.

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