Niklas Luhmann’s system theory: A critical analysis*

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Abstract. This article considers the nature of the theoretical legacy — the system theory — of the German sociologist Niklas Luhmann. The author focuses on three topics: first, he briefly describes Luhmann’s ideas in the context of the contemporary sociological thought; second, he identifies how Luhmann’s works are perceived today; third, he presents a new reflection on Luhmann’s works. Paradigmatically, Luhmann’s ideas can be attributed to the system theory, neo-functionalism and radical constructivism due to his efforts to find inspiration in natural sciences. At the same time, Luhmann found himself in the close position to the traditions of the German philosophical idealism. Although the system theory is holistic in nature, Luhmann used for its elaboration elements of the individualist-oriented approach (based on Max Weber’s ideas). Thus, in Luhmann’s conception, systems become holistic entities that, like individual subjects, are capable of making decisions and managing themselves. One of the strengths of Luhmann’s conception is determined by his evolutionary theory consistent with random (in Luhmann’s terms — contingent) development connected with the idea of an open future. As with Parsons, in Luhmann’s conception we find emphasis on the consensus ensured by communication processes. However, what is missing, are the topics of work, production, conflict, struggle and violence. The current decline in the interest in Luhmann’s works has been reinforced by the fact that he was unable to translate his conceptions into instruments for the empirical sociological research. Nevertheless, Luhmann’s theory of a functionally differentiated society and its consequences still represents a significant stimulus for the contemporary sociological thought.

Key words: sociological theory; social system; system theory; radical constructivism; Niklas Luhmann; social differentiation; complexity; autopoiesis; communication

Niklas Luhmann is undoubtedly among the greatest and most original representatives of the German sociological thought in the late 20th century. He was born on December 8, 1927, in Lüneburg and died on November 6, 1998, in Oerlinghausen near Bielefeld. By the end of his life, Luhmann was celebrated as one of the Germany’s greatest talents. More than two decades after his passing, his works still attract readers from the field of sociology and philosophy, generating a lively response not only in sociology but also in philosophy and other social sciences [7; 15; 18]. Luhmann was a prolific

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author, he published a tremendous number of works during his life while being a professor at the University of Bielefeld. It is hard to say what his works are the most significant ones, for instance, *Soziale Systeme* [23], four-part *Gesellschaftsstruktur und Semantik* [25], and six-volume collected works published under the title *Soziologische Aufklärung* [24]. In 1988, he was awarded the Hegel Prize of the City Stuttgart. The basic theme of Luhmann’s studies is modern society, he aimed at its understanding, especially through theoretical capturing of the complexity of its relations.

**Luhmann’s status in contemporary sociology**

Luhmann can be named a heretic opposing traditional approaches and trying to move sociology from its steady regular path. He was a critic worried by the current state of theoretical sociology, its traditional orientation, outdated terminology and inability to explain the processes that shaped modern society. According to Luhmann, sociology was bound by its past, did not keep pace with scientific thinking and was not able to offer an adequate theoretical model explaining the contemporary reality. Therefore, rather than looking into the history of sociology, Luhmann was interested in stimuli from other areas, which would allow sociology not to be excessively infatuated with itself. He was led by distrust to the traditional type of sociology, refused to overestimate traditional sociological thinking and declined to turn to the ‘classics’ of the discipline. He did not follow approaches of the classical authors such as Weber, Durkheim or Pareto, and developed his own model of sociological theory.

As a creator and representative of the system theory/paradigm, in his early scientific career Luhmann was influenced by Parsons, but this influence was soon overwhelmed by other stimuli. He found inspiration in such disciplines as thermodynamics, cybernetics, information theory, biology and neurophysiology. The key disciplines for him were not physics or astrophysics, but genetics and cognitive biology. He was influenced by the operational logic of George Spencer-Brown and biological theory of knowledge of Chilean neurophysiologist Humberto Maturana. However, his conception based on the paradigm of autopoietic systems was original and — according to its creator — had the potential to theoretically describe the links and actions of the highly structured, independent and differentiated areas of social life.

If Luhmann’s legacy is to be categorized in terms of existing schools or directions of social thought, then three terms are relevant: system theory (*Systemtheorie*), neo-functionalism and radical constructivism. System theory provides sociology with a professionally specific versatility as well as interdisciplinary and multidisciplinary universality (linking sociology to other sciences). However, Luhmann as a theorist of social systems seems to be a ‘realist. His typical claim — *es gibt Systeme* (there are systems) [23. P. 31] — expresses his idea that systems are not just thought-based constructions or scientific models but real things. In the 1960s, Luhmann was influenced by Parsons’ attempt to establish a universal sociological theory (“a theory for all cases”) on the new system basis. However, later he changed his views: while in Parsons’ theory the fundamental question was the preservation of structures and integration of the system, for Luhmann the key aspect was functional differentiation. Luhmann rejected Parsons’ AGIL scheme and left aside Weber-Parsons’ problem of individual action for he believed...
in the existence of a larger number of partial social systems than in Parsons’ theory (but
did not provide a comprehensive list of these partial systems). The fundamental way
in which Parsons influenced Luhmann was showing him how to apply the system
approach in sociology, and Luhmann was also influenced by Parsons’ later concept of
the generalized media that he developed into a universal explanatory model.

However, in his theoretical works, Luhmann used other sources of inspiration
as well. The general framework of his reflections is the concept of self-organization
based on the study of thermodynamic processes and dissipative structures of Ilya
Prigogine. Luhmann also studied the general theory of systems founded by Ludwig
von Bertalanffy [8], in which system is a complex of interacting elements; cybernetics
(control of self-regulating systems) founded by Norbert Wiener [44]; and the “discourse
of radical constructivism” [26] as an interdisciplinary study of cognitive processes,
self-reference, organizational closeness and self-organization, which brought together
researchers from the fields of cybernetics, biology, neurophysiology, psychology,
psychiatry, philosophy, sociology and others. Among the leaders of radical con-
structivism were Heinz von Foerster [10; 11] focusing on the cybernetic concept
of the system spontaneous self-organization from random, previously unstructured
elements, and two Chilean biologists — Humberto Maturana [31] and Francisco
Varela [43], who introduced the concept of autopoiesis in the system theory in the 1970s.
The assumption that social systems are created and functionally internally differentiate
themselves on the basis of self-organization places Luhmann among these authors.

Despite the as if rejection of the sociological tradition, Luhmann did not completely
isolate himself from it: he returned to the study of social differentiation introduced
by Herbert Spencer, which was associated with the evolutionary theory, according
to which social progress is manifested in more complex and more differentiated forms
of social life (meaning that advanced societies are more differentiated than less developed
ones). Luhmann used these ideas in his works on system differentiation that he defined
as an evolutionary process of social system division into partial systems. As the complexity
of social system increases, there is more pressure on selection, which leads to separation
into subsystems with high level of autonomy. Sub-system formation takes place auto-
catalytically, and the only necessary premise is communication. Thus, systems create
mechanisms to stabilize communication processes. Luhmann (inspired by Parsons) uses
the concept of symbolically generalized communication media, which cannot be
narrowed to everyday means of mass communication for here ‘media’ stand for power,
money, law, faith or knowledge. Luhmann considers the differentiation of individual
communication areas, such as politics, economy, law, religion, science, education, art or
intimate relationships, as one of the main features of social evolution togethere with
the relevant communication media.

Subsystems are surrounding worlds for each other, which means that society
becomes a differentiated unity — a whole consisting of functionally dependent and
at the same time autonomous social systems. Modern societies — unlike previous ones,
 hierarchically structured — are characterized by functional differentiation, i.e. a number
of subsystems. Luhmann never provided a comprehensive list of these subsystems, but
their number certainly exceeds a dozen for they include economy, politics, law, army,
science, art, religion, media, education, health, sports, and family.
Today’s reception of Luhmann’s legacy

Today Luhmann’s works do not make many researchers consider the questions he raised. It should be noted that while in Luhmann’s native Germany in last decades his works were rather ignored, at the same time there is a growing interest in Pierre Bourdieu’s works, a representative of French sociology whose influence on German (nationally-oriented) sociology has never been as strong as now. There are at least two reasons for this: first, the sociological perspective of Bourdieu is much closer to everyday experience than Luhmann’s abstract interpretative models; second, it is not clear how Luhmann’s concepts can be used in empirical research. On the contrary, Bourdieu’s conceptions are implicitly linked to empirical research (Bourdieu even claims that he developed them on the basis of the empirical analysis). Although Luhmann was celebrated as one of the greatest German scholars, today many who celebrated him speak of his work with greater or lesser embarrassment.

Nevertheless, a significant number of researchers devoted their careers to explaining and developing Luhmann’s ideas, but if during Luhmann’s life their reception was rather confirmatory and celebratory today we see a greater criticism. Thus, Gunther Teubner strongly criticized Luhmann’s definition of law as an autopoetic system [40; 41]. In sociology, Luhmann’s system theory has been developed, among others, by Helmut Wilke [45—48]. In German speaking countries, the development of Luhman’s approach is associated mainly with Peter Fuchs [12], Rudolf Stichweh [38; 39] and Dirk Baecker [2]. The best known editors of Luhmann’s work are Dirk Baecker [22; 29] and André Kieserling [28]. A special place in contemporary discussions is held by Armin Nassehi [19; 34; 35] — as one of the best translators of Luhmann’s texts. In Italian sociology Elena Esposito [3] is the author of an original work on social memory based on Luhmann’s theory [9], but this work was revised by the WCSA — World Complexity Science Academy [36]. The reception of Luhmann’s works today is associated with different collective publications [14; 17], some of which are rather critical, and with Luhmann’s philosophy of media.

Critical discussion of Luhmann’s legacy

When Luhmann received the Hegel prize in Stuttgart in 1988, it was in many respects an indicator of the estimations of his thought. Hegel was a great German philosopher, active at the turn of the 18th and 19th centuries and often considered as a part of objective idealism conducting a multidimensional analysis of a supraindividual holistic entity of an idealistic type — absolute idea (absolute Idee), absolute spirit (absolute Geist) or world spirit (Weltgeist). Hegel’s large-scale, many-layered works can simplistically defined as a multifaceted effort of the objective analysis of this entity development in the spiritual sphere, nature and society, and at the same time as questioning the bases of human knowledge, philosophy and politics.

In Luhmann’s works we see ways in which he approximates Hegel’s way of thinking (though over a century separates two thinkers). In Luhmann’s case the main theme is also a supraindividual entity, whose working principles are explained through examples, which is closer to idealism than to materialism. First, this theory is based on observation, information, sense, communication, irritation, codes and semantics;
second, phenomena of material nature are not usually understood as parts of systems but as parts of systemic environment. Thus, even human individuality is a part of the systemic environment (termed ‘psychic systems’) representing social system as something unique, autonomous and self-existent, i.e. close to the key supraindividual actor of philosophical idealism. Luhmann, who as if banished the human individual (methodologically speaking, ‘bracketed’ it), had to replace the missing human subject with something, which was the social system as a peculiar type of collective personality (including its philosophical feature of being self-directing).

Compared to Hegel, there are certainly some substantial differences. The main principle of Hegel’s thinking is dialectics, i.e. historical development is considered as driven by contradictions that are the essence of historical phenomena. From this perspective Hegel’s theory is one of the inspirations of Marx’s theory of class warfare. By contrast, Luhmann’s conception is a consensus theory, even though far from its radical Parsons’s type. Nevertheless, Luhmann, like Parsons, is not interested in such phenomena as armed violence, conflict, battles, destruction, war and revolution. If the system in its evolution faces a conflict, it is above all a range of options (variation) from which certain ones must be chosen (selected) and welcomed (stabilised).

The second fundamental difference between Luhmann and Hegel lies in their understanding of time. Hegel believed in development with a defined end, Luhmann — in an open future. In Hegel’s philosophy of history there are definite principles according to which history develops as predestined or directed to a certain culmination. For Luhmann evolution and its phenomena are guided by certain common principles, but historical development has no single unilinear path. Every historical step can be influenced by chance of a contingent character, and one cannot speak of a single possible legitimate course. Even if Luhmann did not consider deep reflection on the sociological tradition to be worthwhile and sought inspiration in the findings of other specialised fields, he did not reject the whole German or European thought, which is proved by the continuity of Luhmann’s evolutionary concept with Spencer’s evolutionary theory, and his theory of differentiation that follows Parson’s approach to historical development [27].

Luhmann’s thought can be seen in an interesting light of considered from two opposing positions formed at the turn of the 20th century. The first is represented by the French positivist, Emile Durkheim, the second — by the German anti-positivist Max Weber; Luhmann tried to combine these two perspectives in a specific way. Generally speaking, Luhmann’s sociology is holistic, like Durkheim’s, who understood sociology as a science of social facts of a supraindividual character. This, Durkeim’s conception corresponds to Luhmann’s methodology of anti-humanism, in which systems are formed by communication and individuals are just parts of the surroundings. The perspectives of holism and positivism also correspond to Luhmann’s functionalist method. As the same time, Luhmann implemented in his theory the key concept of Weberian anti-positivism: meaning (der Sinn). Furthermore, there is an obvious influence of Schutz’s phenomenological sociology and of Husserl’s phenomenology itself, which remains typical for the individualistic perspective. Even though Luhmann understands the concept of meaning as communicated by social systems rather than Weber’s way of operation, in the German
Luhmann devoted much time to phenomenology and respected it so much that declared it to be the framework for individual consciousness, meaning, and intersubjectivity, which contributed to the growing sympathy to Luhmann even from phenomenological sociologists. This was despite the fact that phenomenology did not interest him much, and he noted that Husserl’s description of the work of consciousness as an autopoietic process constituted meaning par excellence [37. P. 266]. Actually Luhmann was much closer to the French structuralism than to the Weberian theory of action. French structuralist Claude Levi-Strauss [21. P. 72] asserted (though accepting that the reality around us is multi-coloured, multi-dimensional and ever-changing) structuralist assumption that there are waiting-to-be-uncovered certain unchanging rules determining all phenomena. Something similar was assumed by Luhmann: he also supposed that in the phenomena of social life there are certain principles awaiting discovery, according to which history directs the running of events on the ground. The difference is that structuralism works with imagined rules of a static nature, while Luhmann speaks of a dynamically interconnected system of principles (constituting systems as real) awaiting theoretical observation and description in models (his own theoretical models Luhmann considered to be theoretical descriptions of really-existing systems).

Representatives of structuralism usually do not ask about the nature and origins of the structures they try to uncover, and if they do then they are usually satisfied with a general reference to the structures of human thought [33. P. 133]. Furthermore, such structures are presented as something unvarying, unchanging and static. Luhmann considered the formation of system principles from the evolutionary dynamic perspective using three key concepts: evolution, functional differentiation and autopoiesis. Based on them he created a theoretical model opposite to structuralism — its is not static but dynamic. With this model he wanted to capture and explain the essential principles of the system (system structures) not as something invariant but rather evolutionary, developing and dynamic.

Under the influence of cybernetics and biology, Luhmann understood systems as capable of not only monitoring and directing but also forming, shaping and changing themselves, i.e. of ‘autopoiesis’ — thus term he borrowed from two South-American representatives of cognitive biology — Maturana and Varela [32]. This implied capability allowed Luhmann to take the position of methodological anti-humanism as pushing the individual (in the system theory — psychic or personal systems) to the system environment. While Parsons tried to confirm the basis of human individuality — not only as system personalities but as players of social roles (capable of rewriting the system) — Luhmann did not consider this relevant. The missing human subject had to be replaced with something, and Luhmann assigned many capabilities ascribed in theories of action to individuals to a separate social system. In Luhmann’s works many examples come from the theory of action. In Luhmann’s approach, theory is constructed as a description of observing observation (the theorist observes how the system observes itself and what this observation is based on). Apparently, what the observer observes depends on the perspective taken, which also applies to the system that observes itself and also to the researcher undertaking observations of the second
degree. It is for this reason (though not only this reason) that sociology is a multiparadigmatic science, and that researchers observe social reality differently than Luhmann did (for this reason, Luhmann said little about his own observational position).

Another important topic of discussions is the level of specificity of individual subsystems in Luhmann’s theory. Perhaps, this is mainly the result of the ‘methodological antihumanism’ that, despite having written hundreds of articles on systems, Luhmann’s works do not provide a detailed analysis of how the internal processes of systems operate. His approach identifies certain dominant characteristics of individual systems but goes into little detail. Everything is explained on the principle of symbolically generalized communication media, while systems remain mythical cybernetic ‘black boxes’.

The system theory (since Bertalanffy) tried to uncover some kind of universal key, a supermethodology to explain individual processes in various types of systems. For Luhmann this universal key was the concept of generalized communication media introduced in sociology by Parsons. While Parsons, through the AGIL scheme, distinguished four types of such media — money, power, influence and value commitment — as corresponding to the bases of individual subsystems, Luhmann rejected this insisting that a much greater number of subsystems had their own ways of communication. The second feature of Luhmann’s thought is the belief that these communication media, despite operating in different ways, are always binary coded — with positive and negative variants (how these communication media and their code originated is not clear). Luhmann’s descriptions of communication media and codes often cause a feeling of arbitrariness. In general, Luhmann’s interpretation of the functioning of individual subsystems is derived in a deductive manner from one pattern: the functioning of money in the economic system. This interpretation is based on a kind of faith in the single mechanism for the operation of all systems.

Luhmann’s concept of communication mainly ignores the material world with its phenomena and structures. From the philosophical perspective, this is a kind of idealism with no room for the material. In Luhmann’s works we do not find the world of things, because (we are not speaking about artificial intelligence) they are not autopoetic systems. What interested him were the principles that arranged reality, which he understood as codes and semantics or even different languages with specific rules. The fact that material objects such as technical equipment could play a role in communication networks, as Bruno Latour says [20], is not accepted by Luhmann.

Theoretical sociology of Luhmann searched for the most general principles. In theoretical disciplines, it is common to work with idealized objects not existing on the ground. In Mathematics or Physics, for example, we consider shapes like lines, circles, cubes or spheres to identify rules or laws associated with them, and develop tools for practical use even though we rarely encounter such ideal forms. Many scientific concepts in astrophysics, biology and medicine are formulated in the way that the standard theoretical model does not correspond to the reality, but the use of these concepts in research and technology confirms their correctness. Parsons did not want to construct sociology as a purely theoretical discipline resembling philosophy, he accepted the need to interconnect theory with reality. The problem with Luhmann’s theory is how it can face the lived reality, i.e. how hypotheses can be deducted from it for the empirical
research. Luhmann himself did not conduct empirical research, and despite the fact that he sometimes used clear practical examples to illustrate his theories, unfortunately, he did not develop an empirically tested model, which is why today Luhmann’s works are considered as a part of philosophy (for example, philosophy of media) rather than sociology.

Finally, another fundamental context in which it is necessary to consider Luhmann’s thought is the contemporary intellectual debates on the nature of contemporary society, environmental problems, media communication, contemporary risks and trust. Post-modernists extended these discussions for they rejected earlier ideas about ‘automatic’ historical progress and, in opposition to monistic philosophical thinking, emphasized the priority of plural opinons. In the ongoing sociological debate after the Second World War, the ‘mature’ Western societies were described differently. For the critical theory of the Frankfurt school, there was ‘late capitalism’ (Spätkapitalismus) [16], for Raymond Aron [1] — ‘industrial society’; for Talcott Parsons — ‘modern society’, for Daniel Bell [6] — ‘post-industrial society’, for Zygmunt Bauman [4] — ‘post-modern society’, for Ulrich Beck [5] — ‘second modernity’, for Anthony Giddens [13] — ‘radicalized modernity’, while for Luhmann — ‘functionally differentiated society’. Though based on the theory of the development of functional differentiation, this term coincides with many ideas on the pluralistic nature of society of the representatives of post-modernism such as Jean-François Lyotard [30] and Baumann. Luhmann did not accept the common picture of society as a whole that integrated and would always integrate. In his sociology, there was no room for society as singular or monistic. Luhmann spoke of the plurality of systems and complex relations between them, which in no way could lead to any fundamentally connected whole. In the contemporary society, there is a range of different communications systems based on different media, and, according to Luhmann, no means of metacommunication, no position to connect, direct or manage all partial social systems.

References


Системная теория Никласа Лумана: критический анализ*

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В статье предпринят критический анализ теоретического наследия — системной теории — известного немецкого социолога Никласа Лумана. Автор делает три тематических акцента: во-первых, кратко характеризует идеи Лумана в контексте современной социологической мысли; во-вторых, показывает спектр оценок, которые сегодня определяют восприятие теоретического наследия Лумана; в-третьих, предлагает новый концептуальный взгляд на работы Лумана. С парадигматической точки зрения идеи Лумана можно отнести одновременно к системной теории, неофункционализму и радикальному конструктивизму, поскольку Луман находил вдохновение и идеи не только в социальных, но и естественных науках. В то же время, что признавал и сам Луман, его подход близок традициям немецкого философского идеализма. Хотя системная теория Лумана явна холистична, он использовал для ее разработки и элементы индивидуалистически-ориентированного подхода (в частности, опираясь на идеи Макса Вебера). Таким образом, в концепции Лумана системы превратились в холистические сущности, которые, подобно индивидуальным субъектам, способны принимать решения и управлять самими собой. Одна из сильных сторон концепции Лумана состоит в том, что его эволюционная теория основана на понятии случайного развития, в свою очередь связанного с идеей открытого будущего. Как и в теории Парсонса, в концепции Лумана очевиден акцент на консенсусе как гарантированом коммуникативными процессами, и в его работах отсутствуют такие темы, как работа, производство, конфликт, борьба и насилие. Сегодняшний спад интереса к творчеству Лумана подкрепляется тем фактом, что он не смог перевести свои концептуальные построения в инструменты эмпирического социологического исследования. Тем не менее, предложенная Луманом теория функционально дифференцированного общества и его последствий все еще является важным исследовательским стимулом для современной социологической мысли.

Ключевые слова: социологическая теория; социальная система; радикальный конструктивизм; Никлас Луман; социальная дифференциация; сложность; аутопойезис; коммуникация

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