

# Niklas Luhmann neosystemic theory and the notion of communicative autopoiesis in organizational studies

JOSEP PONT VIDAL

UNIVERSIDADE FEDERAL DO PARÁ, BELÉM / NÚCLEO ALTOS ESTUDOS AMAZÔNICOS, BELÉM – PA, BRAZIL

## *Abstract*

In recent years, scholars from post-structuralist social philosophy have debated aspects related to self-referential possibilities of communication and language. Nowadays, there are several theoretical viewpoints converging at a constructivist, systemic and ecological self-definition. The idea of communicative autopoiesis is proposed in this article as a possible alternative to the autopoietic limitations in observing organizations.

**Keywords:** Self-referential systems theory. Post-structuralism. Organizational studies. Communicative autopoiesis.

## *A teoria neosistêmica de Niklas Luhmann e a noção de autopoiese comunicativa nos estudos organizacionais*

### *Resumo*

Na teoria dos sistemas autorreferenciais de Niklas Luhmann, a análise das organizações ocupa lugar de destaque, mas tem sido objeto de inúmeras controvérsias. Nos últimos anos, vêm sendo produzidos um diálogo e um cruzamento com os representantes da filosofia social pós-estruturalista, em particular, com aspectos referentes às possibilidades autorreferenciais das comunicações e da linguagem. Na atualidade, são diversos os pontos de vista teóricos que convergem para uma autodefinição construtivista, ecológica e sistêmica. Como possibilidade alternativa às limitações autopoieticas na observação das organizações, propõe-se a ideia de autopoiese comunicativa.

**Palavras-chave:** Teoria de sistemas autorreferenciais. Pós-estruturalismo. Teoria organizacional. Autopoiese comunicativa.

## *La teoría neosistémica de Niklas Luhmann y la noción de autopoiesis comunicativa en estudios organizacionales*

### *Resumen*

En la teoría de sistemas autorreferenciales de Niklas Luhmann, el análisis de las organizaciones ocupa lugar destacado, aunque no ha estado libre de controversias. En los últimos años, se ha realizado un diálogo y cruzamientos con representantes de la filosofía social posestructuralista, en particular, con aspectos referentes a las posibilidades autorreferenciales de las comunicaciones y del lenguaje. Actualmente diversos puntos de vista teóricos convergen hacia una autodefinición constructivista, ecológica y sistémica. Como posibilidad alternativa a las limitaciones autopoieticas en la observación de las organizaciones proponemos la idea de autopoiesis comunicativa.

**Palabras clave:** Teoría de sistemas autorreferenciales. Posestructuralismo. Estudios organizacionales. Autopoiesis comunicativa.



## INTRODUCTION

---

### Organizational studies and society

The self-referential system theory of Niklas Luhmann, or the General Theory of Social Systems, is a significant contribution to sociology and other areas of knowledge, such as law, administration and organizational theory. Among the scholars who study Luhmann's work there is a line of thought that has focused on social studies, which is a line disseminated by scholars who form the Bielefeld School<sup>1</sup>. This school of thought has influenced the debate in sociological theory and in organizational studies in German speaking countries, and has been disseminated in different cultures, particularly in some Latin American countries.

The contributions for the dialogue between the systems theory and other theoretical points of view present in social and philosophical post-structuralism (DUTRA and BACHUR, 2013; BIRLE, DEWEY and MASCAREÑO, 2012), as well as communicative possibilities (RÄWEL, 2007), are manifested in a situation of continuity, limited to few academic circles. The current situation of research on conceptual-theoretical debate has been rather precarious and this is due to several potential causes related to groups of power who influence the decisions on recruitment of professors and on lines of research in academia.

---

\* Source: Author's Collection.

<sup>1</sup> There is no consensus on considering the Bielefeld School a "school of thought". However It is important to mention some of the scholars who study Luhmann's theory and stand out at the University of Bielefeld, such as Helmut Willke, Manfred Glagow, Klaus-Peter Japp, Hartman Tyrell, Rudolf Stichweh and Uwe Schimank.

In the 1970s a new post-structuralism philosophical line of thought emerged, and the changes in comparison to structuralism have been in constant analysis (WILLIAMS, 2005). However, some scholars argue that this line of thought, from a normative point of view, should be referred to as post-modernist. (ALVESSON e DEETZ, 2006). Scholars working on the systems theory have searched for answers to the controversies and to the “blind spots” of the autopoiesis theory. It is evident that there is a need for dialogue involving the social philosophers, who – based on a series of radical theoretical-constructivist assumptions – somehow agree with the post-structuralism postulates. Among these social philosophers are Bruno Latour, Michel Callon and John Law with their studies on network. It is important to note the analysis and debate around the central concepts of the theory of Pierre Bourdieu. The theory seeks to build bridges with the “structuralist constructivism”, and uses the concept of *habitus* (POKOL, 2002) understood as a network of objective relations among objectively defined positions (STICHWEH, 2005; NASSEHI and NOLLMAN, 2004; FISCHER, 2004). Entering in this theoretical debate means raising inherent questions to the controversies of Luhmann’s self-referential systems theory, and considering new ways and theoretical answers. The controversies and theoretical contact with other points of view have led some “orthodox” and “non-orthodox” thinkers of the self-referential system theory to dispute some systemic concepts, such as the possibility of practical use of *autopoiesis* self-referentiality, which also includes the *operational closure* (WILLKE, 1993).

During the second decade of the 21st century, the debate around the “action and structure” seems to have been overcome by the contributions of Anthony Giddens’s Structuration Theory or by concepts of *habitus* and *field* of Pierre Bourdieu. This fact appears in several publications in the areas of administration in the USA, Europe and in Brazil; despite the specific paths of each country, the *ethos* of investigation prevails, and continues as the “functionalist parameter” (CABRAL, 2014, p. 14).

In Brazil, several proposals tried to overcome the crisis ( “action and structure” debate) through the incorporation of a “third ethical matrix” with the two existing: rationality and empiricism (LEAL, 2002). Despite this apparent epistemological relativism, with contributions from the critical management studies, the functionalist approaches have shown preference (CABRAL, 2004, p. 14). This supremacy of functionalism does not present theoretical homogeneity. Instead, multiple theories emerge allowing new paths to be explored. In the post-structuralism theory, there are several studies and contributions focusing on ideas such as autonomy, self-management, psychological aspects, the role of women and “new pragmatism” in the organizations (CZARNISANSKA, 2011), as well as a radical humanist perspective (DE PAULA, MARANHÃO, BARRETO et al., 2010; ALCADIPANI, 2005) and the idea of organizational complexity (SERVA, DIAS and ALPERSTEDT, 2010). Standing out among the multiple theories in this debate, are the contributions of philosophy and Organizational theory on specific issues related to organizations (TSOUKAS and CHIA, 2011), together with theoretical contributions from phenomenology (HOLT and SANDBERG, 2011), from the triangulation of philosophies (BECHARA and DE VEN, 2011) and from hermeneutic (BARRETT, POWLEY and PERACE, 2011).

In this context, this article presents analysis and a research focused on the advancement of organizational social studies using the neo-system perspective, with the following objectives:

1. Show the theoretical advances of Luhmann’s theory (and introduce its connection with the social philosophy of post-structuralism), which have influenced and been used in organizational studies.
2. Use the ontological inclusion of the human being – through the idea and notion of reflexive autopoiesis and its practicalities in terms of organizational studies – in an attempt to overcome the limitations in Luhmann’s theory here described.

In order to carry out comparative analysis between the different perspectives and theoretical and conceptual lines of thought, it is necessary to describe the rules to be adopted. According to Popper (1993) a theory is valid as it can be compared with other theories. Niklas Luhmann argues that a theory is valid depending on its dynamism and on the possibility to be instrument of self-observation (allowing self-referentiality). Against this backdrop this article emphasizes some of the central concepts of Luhmann’s systems theory, recognizing its limitations or paradoxes for the organizational theories (OT), as well as for the ideas regarding the theoretical differences between *self-reference* and *autopoiesis* and the notion of operational closure portrayed here.

## DEFINITION OF TERMS

---

Before beginning an analytical reflection on the concepts, we have considered it is important to show briefly what is understood by: 1) *social and philosophical post-structuralism*; 2) *organizational studies*; and 3) *self-referential systemic contributions*.

### Post-structuralism

Post-structuralism involves words or terms to define a philosophical movement emerged in the 1960s and 70s, a period of disillusion and rejection of values and traditions of the bourgeois society and the rise of feminism, which includes areas as broad as philosophy, history and literature. This period should be carefully analyzed under theoretical and pragmatic aspects. A series of difficulties are created when attributing different meanings to these terms or when associating them to post-modernism, labelling philosophers and thinkers, even though they have rejected and always denied such denominations. This happened to the philosophy of Jacques Derrida, who questions the term *deconstruction* and states that he is not a “deconstructionist”. Other examples are Jean-François Lyotard, who seeks to define this period (1960s and 1970s) as post-modern, and Michel Foucault who, by rejecting structuralism, post-structuralism and post-modernism, states that his works are *non-structuralism* (DAVIS and MAQUIS, 2005). More difficulties surge when placing post-structuralism at the same time as post-modernism, a line of thought that has always addressed the organizational studies in a peripheral or even pejoratively way.

Its influence is controversial in post-structuralism is controversial to post-structuralism, being frequently seen as a “dissent positioning” concerning the sciences as a whole and the set of values (JAMES, 2006). Despite these observations, some authors restrict post-structuralism to an apparent overcoming or radicalization of structuralism, although the dividing line with post-structuralism is an attempt to establish an arbitrary, temporal line, therefore subject to semantic readings (TADAJEWSKI, MACLARAN and PARSONS, 2011; WILLIAMS, 2005). A possible attempt to give a meaning to “post-structuralism” consists of the possibility of connecting it to sociological postulates of symbolic interactionism (BERGER and LUCKMANN), as well as the possibility of establishing a philosophical dialogue with feminism (DONE and KNOWLER, 2011) or with the organizational perspective of *management* and the “critical management” theory (ALVESSON and DEETZ, 2006).

### Organizational studies

Organizational studies consist of a broad and heterogeneous set of studies, observations, and analysis that have in common all the phenomena that occur in organizations, known as ‘management and organization studies’. Some authors have expanded this definition to “organizational and institutional studies” and others to “organizational and complex organization studies” (OLABUÉNAGA, 2008), in order to differentiate it from human groups. These studies are different from research in the sociology of organizations – a scientific field that studies phenomena produced in relations between groups and human beings<sup>2</sup> – since sociology of organizations includes specific and complex perspectives such as philosophy and organization theory (TSOUKAS e CHIA 2011), theoretical contributions of phenomenology (HOLT and SANDBERG, 2011), the triangulation of hermeneutic philosophies (BARRETT, POWLEY and PERACE, 2011) and the link of Richard Rorty with women and the “new pragmatism” (CZARNISANSKA, 2011). Organizational theory and the management and organization studies have incorporated notions and ideas coming from the self-referential systems theory when dealing with organizational systems that aim to take problems and social studies as object of studies. Organizations have been observed and analyzed as self-organized systems in connection with systems that sustain them (GOLDSPINK e KAY, 2010), or as structured entities with the modeling process directed toward cooperation (HELBING, YU and RAUHUT, 2011). In an attempt to answer questions such as how to understand today's changing organizations; how can we live within these organizations; and how can we live with them (WALSH, MEYER and SCHOONHOVEN, 2006), scholars indicate the existence of new organizational forms. These organizational forms

---

<sup>2</sup> Known as Organizational Analysis in the Anglo-Saxon context.

are included in the description of “Dilemmas of New Organizational Forms”, based on the hypothesis of the existence of “fluid organizations” (SCHREYÖGG and SYDOW, 2010; SYDOW and SCHREYÖGG, 2013).

## Self-referential systemic contributions

This article refers to several theoretical works that take as central axioms of their theory – their central nucleus (LAKATOS, 1980) – the concepts of system, autopoiesis and self-referentiality, as well as other concepts of Luhmann’s theory. It is noteworthy these theoretical works present controversies or discrepancies with some aspect of Niklas Luhmann’s theory of autopoietic systems and of the *tensions and theoretical breaks* (PIGNOLI e ZITELLO, 2011). It is difficult to set or refer, nowadays, to the existence of a theory of social systems of Luhmann, but to several points of view envisaged by thinkers considered orthodox or heterodox, whose roots originate from Luhmann’s work, which has attempted to establish a dialogue especially with thinkers of social post-structuralism. It is difficult to establish or speak of continuity in the social systems theory of Luhmann, as well as to relate to a program of systemic investigation that we define as *theoretical project of self-referential systems*.

## CONVERGENCES BETWEEN THE THEORY OF SELF-REFERENTIAL SYSTEMS AND POST-STRUCTURALISM

---

The attempts to transfer or use the concepts of the self-referential system theory with recent post-structuralist contributions of the Actor -Network Theory (ANT) are still scarce. In social reading, since post-structuralism, ANT represented by social philosophers such as Bruno Latour and Michael Callon, provides a series of conceptual and analytical instruments for the study of society and organizations. Despite difficulties to define ANT as a theory, rather than a constructionist and technical perspective, the theoretical assumptions of Luhmann’s self-referential systems theory and ANT present similarities when they define themselves as structural-functionalism, as well as when they are considered “alternatives” to functionalism and positivism, even though both theories have been accused of dehumanizing humans when they equal the non-human actors to things. Although these problems have not yet been solved, during recent years numerous publications established a theoretical and operational bond between Luhmann’s theory and ANT. (WHITE and GODART, 2008; WHITE, 2007), especially in the German language (HOLZER, 2011; REISER-KAPPELLER, 2011; KNEER and NASSEHI, 2000).

Despite certain coincidences in some concepts and notions in theoretical points of view of Niklas Luhmann and Harrison White, the initial assumption between both authors originates from opposite epistemological points of view. While Luhmann considers people as “communicational constructions”, who only appear in the process of communication around the system, for White – in the attempt to overcome the traditional dualisms of sociology – the basic assumption is called “self-categorical imperative” that rejects attempts to explain human conduct based on the actors’ attributes (individual or collective), although they do not exclude their own identities. In his concept of “relational sociology”, White attributes to the networks some phenomenological characteristics, that is, a relational perspective to be created and formed by people capable of giving them a meaning. Although not directly connected to the concept of Luhmann’s self-referentiality, the ideas and notions of rationality and systemic communication, have also contributed and been used in decision theory (for Luhmann “sciences of decision”), the “self-organization theory”. Even though these ideas and notions originate from mathematics and physics, their application in the field of social sciences has been significant, especially among French and British anthropologists and sociologists.

## Limitations in the self-referential systems

It is well-known the fact that Luhmann offers answers for ambiguities of the classic sociology from the description and definition of a center where humans and their actions are the point of reference, independent of their environment. This has increased the rhythm of the factorial theories in comparison to the systemic ones and placed the theory as an unsolved

problem. This achievement raised suspicion regarding humanist, dialectic or phenomenological traditions of traditional sociology. The consequence is that Luhmann's theoretical project has few conceptual and analytical possibilities of dialogue converging with other theories that emerged at the same time (1980s and 90s), such as the theory of structuration, of Anthony Giddens, or the dichotomic proposal of representation of society between autonomy and *heteronomy* (CASTORIADIS, 1975), self-presented as self-excluded.

This lack of dialogue and collective debate during those decades are not just a problem of the complexity, lack of tradition and rupture between the systems theory and the classic sociology theory, but the context itself of theoretical debate has not offered greater possibilities. The sociologists that initially formed their debates around post-functionalism and post-structuralism in the construction of meta-theories stand out, according to some specialists, for: "the absence of collective theoretical projects and even debate" (FARÍAS and OSSANDÓN, 2010).

This situation is not only conditioned by external factors, but inherent to existing controversies<sup>3</sup> between orthodox and heterodox scholars of the self-referential systems theory. It is formed by a complex and abstract framework of concepts and notions, being qualified by some sociologists as "hermetic" in its connections of reference, and 'radical constructivism' or even solipsistic, in such a way that the structure of thought and the internal references of this theory have created some disorientation.

When it comes to the theory and concepts proposed by Luhmann, it is impossible to talk about homogeneity or acritical continuity. This has been maintained during the second decade of this century, when questioning the use of Luhmann's work for the social sciences as a whole and the sociology of the organizations, in particular regarding any thought or reference in terms of *operational closure* (in Luhmann's words "*Operative Geschlossenheit*") Despite some acceptance of fundamental assumptions of Luhmann's theory, there are some important discrepancies and controversies that, apparently, "were not satisfied with the introduction of the observer" by Luhmann and "almost nobody" joins the discussion on the use of Spencer Brown's calculus of indications (BAECKER, 2013; PÉREZ-SOLARI and LABRAÑA, 2013).

Standing out among the controversies is the continuity of the debate started in the last decades on the possibility of using the concept of autopoiesis (BÜHL, 2003; MARTENS, 1991). Controversies are also expressed among the different paths developed by the "orthodox scholars", while the "heterodox scholars" have opted to critically question some of Luhmann's ideas and notions. As a more controversial term, is the use of autopoiesis concept of neurobiologists Humberto Maturana and Francisco Valera when they expand the idea of "functional differentiation" (*soziale Differenzierung*) as a guiding principle of society differentiation. In the case of the autopoiesis concept, attempts surge to overcome its original semantic biology to analyze the possibilities that the concept may expand itself to its self-referential operations based in communications, whether linguistic or contextual, emanated from a conscience.

In the problem originated from the radical anti-humanism of Luhmann's theory and the theoretical attempts to operationally reestablish the inter-systemic frontiers and communications, is the proposal to make an empirical link of the self-referential theory with the "social" (in elementary or second degree studies) such as the contrast with the lack of works based on data from Luhmann during his lifetime. Last but not least, it is important to question if Luhmann himself, in his last works, could foresee the enormous development of new technologies of communication, their impact on society, and thus, the possibility of being distant from the guiding principle of functional differentiation of current and future society. The "blind spots" have been analyzed, appearing as a complex task with several difficulties, when it is impossible to introduce another concept "without first referring to or having used other concepts" (TRÖNDLE, 2012). Another difficulty of Luhmann's socio poetic theory is the impossibility of making any observation without a previous self-reference, or the possibility of making any self-reference without previously establishing the frontier/medium dichotomy.

<sup>3</sup> The controversies started in the School of Sociology of the University of Bielefeld, as a consequence of the process of recruiting a professor to the position vacated by Niklas Luhmann at the Systemic Program at the Sociology Chair.



## Non-orthodox neosystemic and post- structuralism contributions

A new generation of scholars (DUTRA and BACHUR, 2013) seeks answers and ways not only from Niklas Luhmann's thoughts, but also in the advances of the theoretical post-structuralism debate and in the sociological theory, developing their studies from the writings of social philosophers – Gilles Deleuze and Michel Callon – and sociologists – Scott Lash and Bruno Latour, among others – in the area of philosophy of science, with the possibilities of *performativity* with economic and cultural sociology (FARIAS and OSSANDÓN, 2006).

The attempts to attribute the observer an ontological *status* by placing them outside the systemic logic or assigning an indexical logic to the system (understood here, as a method to use the indexical logic in a different order that we consider right), based on ethnomethodology, has not provided a very clear response of integration between *ego* and *alter ego*. In other words, the subjectivity and the conscience, in communication with other self-referential subjectivity, has not been successful to make the theory of systems adopt it in its operations. Due to the relative limitations to subjectivity or human action before the system non-ontological logic, in the last few years are recurrent the observations that propose the inclusion of subjectivity through the idea of resilience. However, the option of placing an observer outside the self-referential logic systems is a simplistic attempt to manifest a subjectivity before a systemic description, expressing two logics of thought without a theoretical base to sustain them.

Based on the communicative argumentation, the attempt to attribute the idea of a Luhmann's autopoiesis to a logic of self-indexicality, "indexal autopoiesis" (capable of organizing the many meanings), aims to explore the possibility of inclusion of the concept of "indexicality", originating from the ethnomethodology and the conversational studies of Harold Garfinkel. The logic of the operation is done through the identification of the closing of its operations and relational processes in the contextuality of the operations that occur in the interaction, considering the existence of a *sui generis* autopoiesis, property of two systems on interaction such as "complex networks".

Several studies have been attempting to establish a theoretical line directed and focused around researches seeking answers for functional structuralism. Works from the last few years cover a range of studies starting with philosophy of the autopoiesis paradigm and contradictions that have surged (ELDER-VASS, 2007) to the theoretical and ontological problem, and the consequences from Luhmann's anti-humanism (GRESHOFF, 2008) in problems arising from systemic communication (OCAMPO and ZITELLO, 1995) or to existing theoretical tensions as a consequence of relegating the social action to the systems theory. The search for converging points of view has been produced with the coincidences of the "double observation" with the notions of *system and fields of action* and with the understanding of structures in the concepts of *habitus and field of Pierre Bourdieu* (NASSEHI e NOLLMANN, 2004).

The proposal for establishing a dialogue between the theory of self-referential systems and analytical philosophy or logical positivism, through observation of the language structure, as proposed by Wittgenstein, is an attempt to give answers to the philosophy of language, and more specifically, to the linguistics, what has been initiated by Richard Rorty. The rupture of the unit from the "social" and its components of order, that include the language, appears in Niklas Luhmann's work and in the writings of Ludwig Wittgenstein. Both scholars question the phenomenological transcendental subject and start from the idea that the description of the experience through interpretation is not merely an indirect description. With common and correlated points, both of them take as an assumed starting point the complexity of society in their respective areas of knowledge and the importance of the "language games" when dealing with a dynamic structure whose stability can only be reached by a recurrent instability whose individuals perform a secondary role.

Nonetheless, one of Luhmann's readings on language assumes that language has no specific form of operation. However, in its functional aspects, it permits the "structural coupling" (*Strukturelle Koplung*). Despite some coinciding aspects between Luhmann and Wittgenstein, the attempt is reduced to the establishment of a dialogue, with the "language game" as the common point, or ways to the use the signs, without getting into deeper ontological issues. Even though Wittgenstein dissolves the "self", the author does not eliminate the notion of the subject. Wittgenstein offers a different conception when presents the subject implicated with the language and synthetizes the transcendental solipsism with the empirical realism and the assumptions of the existence of other minds.

As an alternative to the problem of concrete definition of the conscience in Luhmann's theory, answers are sought in the idea of conscience formed by the human being's social conditions, trying to establish a nexus between conscience and self-referential systems. This option is sustained in an ingenuous realism that reflects the subjacent reality as an aggregate of ideological representations created by the mind through purely economic relations and existing structures in a society inspired in some neo-Marxist currents (FISCHER-LESCANO, 2011).

Chart 1

**Fundamental differences between the self-referential systems theory and post-structuralism**

	Self-referential systems theory (N. Luhmann, Willke)	Post-structuralism theories (Bourdieu, Deleuze, Callon)
Functional differentiation	“polycentric society”	“Network society”
How is society possible?	Double contingency <i>alter ego</i> dynamics	Duality, causality, successivity Fluidity in the processes of subjectivization
Structure	Society without vertex or center	Rhizome. Expresses multiplicity without being a unit
Organization of society	Main systems : Political- administrative, economic, judicial	Social space: Social Capital, economic capital and cultural capital (Bourdieu)
Differentiation of society	Circular tri- differentiation: Politics, administration, public	Hierarchical bi-differentiation: Owners and non-owners (Bourdieu)
Individual	Located in the periphery of society Psychic system and system of conscience	Center of society. <i>Habitus</i> : Socialized subjectivity. Convergence individual- society
Basic structure	Dynamic systems	Dynamic systems Networks (Deleuze)
Methods of knowledge acquisition	Heuristic	Deductive
Differentiation in time	Temporal dynamic system	Field: synchronic – diachronic

Source: Elaborated by the author.

**CONTRIBUTIONS FOR THE ORGANIZATIONAL THEORY**

Given the theoretical and conceptual amplitude and the multiple publications based on empirical observations inspired on organizational studies in several countries and areas of knowledge, this analysis is restricted to aspects that link Luhmann’s concepts and contributions to the organizational study.

Niklas Luhmann makes a transition from the theory of open systems to the autopoietic systems (or self-referential), trying to understand how a system could maintain its limits considering the dependency of communicative reproduction with the environment. Despite this theoretical advance, there is a new problem originated from self-reproduction of the systems in question, such as self referentiality and the sense (or possibility of existence of a conscience that transmits such sense)– considering that at the moment the central questions in organizational studies are focused on: how can we understand nowadays changing organizations? how can we live in these organizations? How can we live with them? (WALSH, MEYER and SCHOONHOVEN, 2006). At this point, it is necessary to explore in depth and answer these questions, but analyzing the transversal aspects that appears in them, concerning dehumanization (or, peripheralization of the human being) and risk possible ways or proposals to “re-humanize” the theory of self-referential systems.

In the systemic thought of the Bielefeld School and its relation with the organizational studies, it is worth highlighting the work of Helmut Willke on empirical observations of management of knowledge in financial and industrial organizations (Willke,1999; 1993), on observations in philanthropic associations, Hermsen and Gnewekow (1998); and in commercial cooperation, is



Krück (1998). Willke, continuing the work on the self-referential theory of Luhmann, challenges the possibility of applying and assuming in the organizations the concept of operational closure (*operativer Geschlossenheit*). In addition, the author proposes to replace it with the notion of “contextual systemic orientation” or “governance of systemic context” (*systemische Kontextsteuerung*), defining it as: “the reflexive and decentralized orientation of the contextual conditions of all systems and the self-referential self-orientation of each specific system” (WILLKE, 1993, p. 58).

A different step of the theory of social systems forms or includes the existence of an observer with a vision of the worlds formed by their experiences and interactions. This refers to the ideas of symbolic interactionism: “it means that a minimum measure of common orientation or “vision of the world” is inevitable” (WILLKE, 1993, p. 58). However, the common context, is not well defined by a central unit or by the hierarchical and centralist position of society, as it is customary in the social sciences, but by a “polycentric systemic” vision, that is, by the existence of autonomous units whose consensus of basal dissidence is possible but unlikely, and that is based on a single discourse.

The idea of consensus between units directs to the concept of *communicative action*, developed by Jürgen Habermas, who proposes research of communicative consensus among the various actors or subjects through the language. The *contextual systemic orientation* proposed by Helmut Willke is a benchmark that permits the coordination of society. The intervention operationalizes and coordinates it, being the result of various strategies that permit observation and relations between systems. The orientation makes reference to the benchmark of general conditions whereby the systems establish coordination, while intervention is supported by a strategic emphasis that tries to answer the questions in a tangible way of operating the systems.

Different assumptions substantiate the answers to the “blind points” of the systems theory offered by psychologists, whose result is the attempt to confer the psychic systems of conscience reproduction thereby, the objective of using the self-referential system theory to the knowledge of psychology. Psychic systems have been addressed as closed systems that reproduce their operations through the conscience (THUMALA, 2010). In the light of these arguments, the conscience is not understood as a substance, but as a specific operation of psychic systems. The idea of assuming the autopoietic operations of psychic systems with the inclusion of the conscience is attributed mainly to psychology (TEIXEIRA, 2004) and the proposal of semantic and self-referential operation of psychic systems.

The organizational perspective has also been enriched with the incorporation of notions and concepts of self-referentiality, self-maintenance, circulation, individuality, and maintenance of identity and the proposal to establish a conceptual comparison and extrapolate the theoretical similitudes between autopoiesis, the Theory Based on Data, and the concept of *self*. The results from this proposal are manifested in a series of arguments that support the parallel process of individual and organizational learning in the context of growth and change in the organizations (MAVRINAC, 2006). An important field has been the studies and observations in the area of administration (public and private), the management and theory of organizations, while in sociology, the Theory of Self-Organization (TSO) has achieved decisive influence.

Chart 2 shows a synthesis of relevance from systemic theoretical contributions and post-structuralism for the organizational theories and points of view that directly entail the role and function of organizations with the idea of formation of current society.

Chart 2

Relevant systemic self-referential and post- structuralism contributions for the organizational theories

	Premises on reformulation of society	Key Concepts	Use in organizational studies
N. Luhmann	Overcoming of the bourgeois society. Increase of differentiation of society. Acknowledgment of the complexity. The theory must be a tool to reduce the complexity.	System/ Environment	Organizations as problem-solving engines. Capacity to create specific structures for the system (self-organization) Decisions considered fundamental for the organizations.
P. Bourdieu	The organizations are in a field formed by a set of objective relations between positions historically defined, structured around the distribution of a specific capital (economic, cultural, social, symbolic, scientific etc.)	<i>Habitus</i> / Field	Field of power” and “field of space” exist in the relations of force between different types of capital. These fields are sufficiently predicted of different types of capital to be available to the agents to dominate the corresponding field
A. Nassehi	Formal organizations as participants of a modern society, as producers (not the only ones) of modernity Central Question: What is society is conditioning problem that is solved by establishing organizations?	Recursivity Reflexivity Reflexivity and Rationality Inclusion and Exclusion	Organizations as decision machines
D. Baecker	Society in network The shape of the structure of ‘the coming society’ is not the functional differentiation, but the network. The organization of the coming society is <i>kenogrammatical</i> . Define empty spaces that, at any moment, may be occupied otherwise. Post-theological theory of the observer.	Calculus of the form Network theory Post theoretical management	Post theoretical <i>management</i> The investigation of management may be treated by new theoretically and empirically based forms. The theories originated from the social sciences and philosophy are more appropriate, because they allow to provide their respective points of view in the area of management
M. Arnold	Simultaneous coexistence of multiple universes of significance even when contradictory in the social and human space, each one of them capable of constituting an institutionalized domain	Organizations as sociopoietic systems	The organization is articulated in programmatic structures (jobs, workplaces, networks, hierarchical positions) defined in their own communication of decisions, directed toward goals and not based on people. The organizations guide their structures according to a ‘coming noise’ that refers to the operative end that tries to answer the network of decisions.
H. Willke	“Polycentric” systemic vision. The existence of some autonomous units where consensus considering that a basal dissidence is possible	Structure of autocatalytic networks	Contextual systemic orientation

Source: Elaborated by the author.

## Autopoiesis, self-reference and organizations

The issue of the function of the organizations and problems related to their structure and their self-description, as well as the organizations internal operations are recurring themes in Luhmann's work (1981; 2010). The organizations do not appear as superstructures or "social systems" or in a functional perspective as "functionally rational systems". Niklas Luhmann assigns them the possibility of self-reference in the creation of their internal structures as "autopoietic systems" that self-produce and reproduce through their own operations" (LUHMANN, 1982, p. 25), where the decisions put together their essence: "organizations as a set of decisions".

In Luhmann's self-referential theory, the phenomenon of the organizations is marked by the description of the systemic differentiation. Following the arguments of Niklas Luhmann, it is possible to say that highly differentiated societies are formed by numerous types of organizations, in such a way that they form the social dominant form whereby the activities are developed. The social systems correspond to systems that operate in an autopoietic way, based on communication, and Luhmann distinguishes three levels of these systems: *functional systems*, *interaction systems* and *organizational systems (or organizations)*. The organizational and interaction systems, both originate from the social complexity of present-day societies and correspond to the set of systems of interaction, guiding communication for a specific end.

The notions of *autopoiesis* and *self-reference* are central to Luhmann's theory, applied in the study of processes that determine the causes of the existence or disappearance of organizations. Before describing these concepts, it is necessary to make a brief definition of the organizations as described by Niklas Luhmann. The notion of self-reference (Luhmann refers to *Selbsreferentielle Systeme*) is in the same operational plane as the descriptions of self-organization and autopoiesis<sup>4</sup>. The process and operations are independent of the external observation of the system. The concept of *self-referentiality* comes from the theory of communication and from semiotics, and it refers to how a system operates when it comes to the reproduction of a system unit, which enables contact with the environment (LUHMANN, 1975; 1982; 1984; 1995; 2016).

The ideas of *self-reference* and *autopoiesis* mean assuming in the system a series of structures, components, processes and operations, that are interwoven in a logic of production and cyclical and recursive operation. An autopoietic organization may be defined as a network of productions of components that act simultaneously according to the following conditions: 1) they participate in a recursive way in the same network of reproductions of their components; 2) they form a network of production and operations as a unit in the space where the components exist. It is through organizations that the social systems work, operate and start mechanisms of inclusion and exclusion in society. According to Niklas Luhmann and scholars (orthodox and heterodox), decisions on communications happening in the organizations, form their constitutive operations, considering that these operations allow to define their objectives and targets, as well as the criteria of belonging for their eventual members and configurations of their environment.

Niklas Luhmann states that *autopoiesis* refers to all operations (and structures) that occur in the system, while the idea of *self-reference* refers to the formation of structures inside the system (NAFARRATE, 1991). The concept of self-reference comes directly from the theory of communication and mechanisms of reflexivity of meta-communication; it also forms the nucleus of the systems to be formed by communications, as well as referring to how a system operates in relation to its environment. Therefore, the autopoietic systemic hypothesis starts from the assumption that the actions of the organizations have not been previously determined by the environment, but, initially, by a precise internal logic (SCHIMANK, 1985). In the perspective of the social systems theory and the idea of self-reference, it is recognized that the organizations have a systemic intelligence, therefore, a management of organizational knowledge. Based on this line of argument, the organization is understood as a system formed by its history, system of rules, processes of management and forms of transaction (WILLKE, 1999).

*Self-referentiality* is in an operational plan similar to that of *autopoiesis*, which designates the particularity of the systems, and it is considered the permanent and continuous expansion of production of the system elements, using its own elements, "when the system forms the elements" that will shape itself (LUHMANN, 1984, p. 16). The self-referential systems operate

<sup>4</sup> According Luhmann (1984, p. 55): "Designates the constitutive unit of the system with itself: unit of elements, processes, system".

“necessarily” from self-contact and may be closed and opened at the same time. The closing is done through the reflexive circularity, in other words, by its capacity structurally assured of the elements for self-reproduction. The systemic operations of self-regulation, self-referentiality and self-organization are necessary requisites for the creation of autonomous systems, and also conditions for the survival of the organizations.

*Self-reference* refers to the operation where the system directs its activities towards itself (its structure), allowing observing the environment and, therefore, making distinctions to select what is not in its structural capacity. When operating the system in a self-referential way, the system may choose two possible alternatives. The first consists in assuming several functions with the respective structure and promoting policies regardless of the environment. The second alternative consists in observing the environment in spite of the structuring actions taken, because these structuring actions are manifested in actions and proposals whose affectivity may be analyzed empirically.

In the case of public organizations and in public administration, as a set of institutions and organizations, it represents a field or system that allows observing theoretical assumptions exposed, when forming their own structures regardless of the environment. At the same time, the system observes the environment in order to prove the effectivity of several measures, among them the bureaucracy as one of the classic operations of the administrative system.

## For a systemic constructionist: the notion of communicative autopoiesis as operation of the conscience

In order to describe the idea proposed here of autopoiesis in a “reflective” sense, the limitations of the article compel us first to expose briefly which meanings Niklas Luhmann attributes, to the concepts of *reflection* and *reflectivity*. In a second moment, we expose Luhmann’s ideas of *operational units* and *units of meaning*. The terms surge in a recurrent way based on the operation of systems, therefore, in a secondary way in the systemic operations (LUHMANN, 1984; 2016).

To Niklas Luhmann, *reflection* occurs the moment the system coincides with the reference and self-reference, while *reflectivity* appears as a set of operations that the systems promote to select their own resources. It is a matter of self-observation to achieve the systems guiding themselves, differing from the environment. The set of operations requires rationality and excludes the unforeseen.

A system is self-referent when the elements integrate as operational units, that is, when the relations of these elements reproduce in order to achieve their self-constitutions. The elements operate by “self-contact” as the only form of relation that, in the neuronal activity, deals exclusively with a neurobiological relation. The operation of the system determination has a number of expectations. Is it possible that there is an action and corresponding expectations without a previous meaning? Or without a meaning and expectations? Or without a person responsible for giving this action a meaning? This question has provoked controversies among Luhmann’s followers. Although to avoid doubts, one should point out that: “the social systems do not fear what makes reference to a conscience, not to personal systems, and have to use the change of frequency in the neuronal system” (LUHMANN, 1984, p. 56). It is evident that, in the observations of this article, the concept of *operational closure* has been a source of controversies.

This article raises the study of the organization based on a double differentiation that is operationalized at two levels simultaneously among the systems communications and the subjective communications, the latter, by the language. The subjective communications are not done among dehumanized subjects or things, but between human beings in the physical sense, with capacity to think and with conscience. The same self-referential concepts are applied to these subjects, although considered the autopoiesis of the conscience.

## Units of meaning and operational units as ways to access the conscience

To Niklas Luhmann, a system is self-referential when the elements that form it are integrated in *operational units* (LUHMANN, 1998), that is, in operations where the possibilities or points of view also permit comparison. These units perform several internal functions in the system, and functions concerning their operations. The *operational units*, as

well as offering possibilities to the system, as operational functional possibilities, have three other qualities. The first is the functional orientation as a form of “production of redundancy”, that is, the possibility of returning to the starting point and restarting the operation and providing safety. The second is that the operational units serve as expression of the system’s internal unit, besides establishing differences in the system-environment relations. Finally, the third is that in a supposed “horizon of questions” of the system, or partial areas always on a horizon, the units aim to provide regulation to scarcity, as economic and moral precautions of the system. However, the functions referred by Luhmann have objectives, because they also serve to: 1) the self-description of the complex system; 2) the introduction of identity and management and the possibility of the difference; and 3) the self-simplification and complexity of the system. This functional orientation provides operational orientation to act and serve to reduce the complexity in the case where the system is extremely complex.

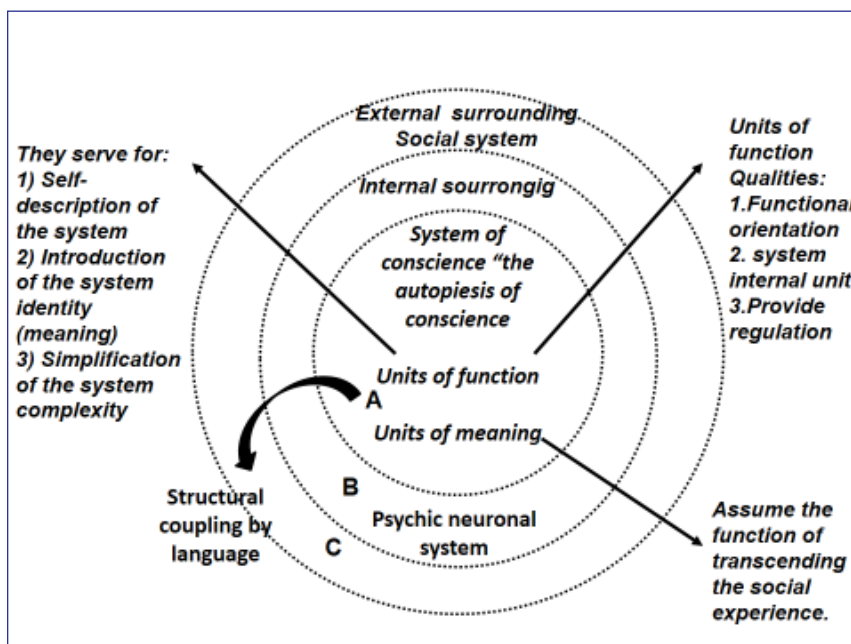
For the presentation of systemic constructionism based on Luhmann’s ideas, this article proposes a notion of *reflexive autopoiesis*. Thus, the focus is Luhmann’s conception of *units of meaning*. They are essential, because they allow us to access a “potential of conscience” that, to Niklas Luhmann, transcends the entire social experience (LUHMANN, 1998). This permits to glimpse the possibility that the conscience assumes a level and qualities that go beyond the simple experience, although without any transcendental reference, to assume internal structures, according to, an “autopoiesis of the conscience” or a humanistic-phenomenological meaning (LUHMANN, 1998, p. 146). Simultaneously to this operation, another one occurs directed toward a typology that “guarantees” the conscience of the operation of its own autopoiesis. This means the changes of internal structures of specific meaning, although Luhmann anticipates that there are no previous conditions for the formation of meaning or any “ontic substrate” of meaning, which serves to exclude any possibility that the conscience attributes meaning to individual actions. In relation to what we are proposing between the psychic systems, we assume the self-observation of the conscience as introduction of the difference between system and surroundings and other systems (system of conscience) are either psychics or social.

Therefore, this work does not refer to Luhmann’s term of systemic “*interpenetration*” because it was replaced here by communication in a linguistic relation with the environment. The idea of “interpenetration” is not a simple relationship between system-environment of an intersystemic relation, but assumes there is capacity of connection and reproduction of “dependency relationship” between several autopoiesis, including the organic life. Niklas Luhmann refers to these types of relations when a system provided its own complexity to build another system, with what it assumes evident “life” in the relation between human beings and social systems, being “interpenetration” the concept for the analysis of this relation. At this point, the theories of socialization of symbolic interactionism (Berger and Luckmann) are referred to. Luhmann’s “interpenetration” also enables a relation between “autonomous autopoiesis” and the structural coupling.

Therefore, based on this system operation, the autopoiesis of the conscience is the real basis of individuality of the psychic systems. In our conception, the *operational units*, according to Niklas Luhmann, also receive a phenomenological meaning, since they have some specific possibilities that, in the idea proposed here, they acquire a humanist meaning. The first possibility is the capacity of thought through the conscience, that is, to offer a meaning for communication that differs from the static conception and is similar to the phenomenological meaning (transcendental of Edmund Husserl). The second possibility is the reflexivity or the form of self-observing where the concept of self appears. The third possibility is intersubjectivity, that is, the function of search for a consensus with other people through interaction and language. In this case we refer again to the amplitude and importance of the language offered by phenomenology (Figure 1). In all relations between these elements of a system there occurs, besides integration in the *operational units*, a concomitant “remission of self-constitution” (LUHMANN, 1998, p. 56).

Figure 1

Reflexive autopoiesis and communications with the systems



Source: Elaborated by the author.

### The conscience autopoiesis

Considering the exposed, a reference to the conscience is needed, as conscience has functions similar to those of a structure and considering that, according to Niklas Luhmann, only what leads to the conscience autopoiesis can be structured and reproduced in the conscience (LUHMANN, 1998). Therefore, the conscience autopoiesis is the “real base of individuality” of psychic systems (LUHMANN, 1998, p. 244). Therefore, the semantic attribution of individuality refers to a self-referential relation of psychic system. Consequently, the autopoietic systems can, as a self-referential characteristic, self-observe and then relate to a difference. The idea proposed here means that an “individual system” is not simply a system with an individual thought in their conditions and psychic relations, but has been previously formed by a system of conscience that can be self-observed and self-described. Individuals can describe themselves and belong to a concrete culture, even though the basic question to Luhmann continues to be “if an individual can describe themselves as an individual”. This assumption may lead to a solipsism so broad that it extracts any possibility of existence of a self, which also removes the possibility of existence of an observer.

The proposal here expresses that, when using individuality as a form of self-description, operating the individuality and the subjacent autopoietic structures requires, not only a meaning, but also a capacity to operate. When accepting Luhmann’s assumption that the “autopoietic individuality is a closed system, regardless of how this system is conditioned by the environment” (LUHMANN, 1998, p. 245), it is observed the contradiction of accepting autopoiesis, because by accepting it implicitly, one refers precisely to what happens in an operation that permits to be cognitively open to the environment.

### Use in the organizations

How can these concepts and notions be used in organizations studies? It is evident that this proposal of reflexive autopoiesis has a transcendence that can only be valued by solid *second degree* organizational studies. In the organizations, this is an intricate complex of levels and internal and external interactions. Based on the exposed self-referential concepts, an organization is an autopoietic system that can observe and create its own internal structures. The proposal of use of “reflexive autopoiesis” permits simultaneous observation at the micro and macro levels; or subjective (experiences and communications and



personal linguistic communication) and objective (structures, communications and norms) levels, in the organization, when considering the thinking and conscious human being and the possibility of self-observation and self referentiality of the system of conscience. This proposal does not favor any methodology or technique, but assumes the possibilities of *elementary* or *second degree* study, and the second degree study also opens the possibility of conducting exploratory qualitative studies of qualitative-heuristic approach or qualitative-hermeneutic, according to the form proposed by Glaser and Strauss (1967).

The idea of reflexive autopoiesis presented here is a proposal to set free the concept from its organicist and biologist origins, to assign a phenomenological meaning, therefore to assume the psychological fundamentals. Basic initial prerequisites in assuming it is the proposal for the “psychic systems” to change the level that Niklas Luhmann places at the same level of machines or organisms, to think of them at a higher level of the systems, where the systems of conscience are included.

## FINAL CONSIDERATIONS

---

The search for solutions in “blind points” of the self-referential systems theory through dialogue with post-structuralism social philosophy will be fruitful if it is capable of gathering systemic controversies of human dehumanizing (or peripheralization of the human being). This happens, to some extent, with the Actor -Network Theory, and repositioning *a person* with a conscience that configures the meaning of their decisions. The idea of “reflexive autopoiesis” that is proposed here, assumes the existence of a conscience previous to the psychic system, with self-referential capacity with the creation of its own structures and possibilities of intentionality.

Scholars believe that the science of the coming decades will be concerned with the study of complex systems defined as autocatalytic, self-organized, nonlinear and adaptive, whose mark of observation and understanding comes from the Theory of the Complexity. These systems will emerge, and coexist with chaos, because there is sufficient order to create standards and norms, however, insufficient order to stop its adaptation and learning. In this regard, Baecker, in his thesis of society, foresees and diagnoses: “The form of the structure of the coming societies is not the functional differentiation, but the network”. Therefore, he manifests certain dismissal from the systemic understanding of differentiation as basic for the functional reading of society, but, at the same time, his reflection enlarges with an understanding of the network and the knots that form an autopoietic or self-referential quality.

It is difficult to diagnose the emergence and operational use of a metatheory. In its place there is the emergence of a heterogeneity of theories and points that surpass the “antithetic nature” (dialectic between action and structure) (ASTLEY and DE VEN, 1983). In addition, to some extent, converge for a systemic constructionism that is manifested in the organizations by the human population ecology. This is shown by major publications in sociological and organizational journals, where systemic constructionism is being produced at an almost symbolic level, due, in part, to different roots in theoretical points of view, where only dialogues and theoretical crossings are produced.

There is consensus among authors and schools of thought described in this article that these complex systems will emerge and coexist with chaos; there will be order capable of creating patterns and norms, but on the other hand, will be insufficient to assure adaptation and learning. According to Pierre Bourdieu, the complexity of the world will make us think in meso-theories.

## REFERENCES

- ALCADIPANI, R. Réplica: a singularização do plural. *Revista de Administração Contemporânea*, v. 9, n. 1, p. 211-220, 2005.
- ALVESSON, M; DEETZ, S. Critical Theory and Postmodernism: Approaches to Organizational Studies. In: CLEGG, S.; HARDY, C. **Organization Studies**. London: Sage, 2006, 255-283 p.
- ARNOLD, M. Las organizaciones desde la teoría de los sistemas sociopoiéticos. *Cinta de Moebio*, n. 32, 90-108, p. 2008. Available at: <<http://www.scielo.cl/pdf/cmoebio/n32/art02.pdf>>. Accessed on: 18 sept. 2012.
- ASTLEY, W.; DE VEN, V. Central Perspectives and Debates in Organization Theory, *Administrative Science Quarterly*, v. 28, n. 2, p. 245-273, 1983.
- BAECKER, D. **Zukunftsfähigkeit: 22 Thesen zur nächsten Gesellschaft**. Available at: <<http://sistemassociales.com/22-tesis-sobre-la-sociedad-venidera-por-dirk-baecker/>>. Accessed on: 6 out. 2014.
- BARRETT, F.; POWLEY, E.; PERACE, B. Hermeneutic philosophy and organizational theory. In: TSOUKAS, H.; CHIA, R. **Philosophie and Organization Theory**. U.K./North America: Emerald Group, 2011, 181-215 p.
- BECHARA, J. de VEN, A. Triangulating philosophies of science to understand complex organizational and managerial problems. In: TSOUKAS, H; CHIA, R. **Philosophie and Organization Theory**. U.K./North America: Emerald Group, 311-343 p. 2011.
- BERGER, P.; LUCKMANN, T. *A construção social da realidade*. Petrópolis: Vozes, 2004.
- BIRLE, P.; DEWEY, M.; MASCAREÑO, A. (Eds.). *Durch Luhmanns Brille. Herausforderungen an Politik und Recht in Lateinamerika und in der Weltgesellschaft*. Wiesbaden: Springer VS Verlag für Sozialwissenschaften, 2012.
- BÜHL, W. Grenzen der autopoiesis. **Vordenker**. 2003. Available at: <[http://www.vordenker.de/buehl/wlb\\_grenzen-autopoiesis.pdf](http://www.vordenker.de/buehl/wlb_grenzen-autopoiesis.pdf)>. Accessed on: 14 feb. 2013.
- CABRAL, A. A sociologia funcionalista nos estudos organizacionais: foco em Durkheim, *Cad. EBAPE.BR*, v. 2, n. 2, p. 1-15, 2014.
- CASTORIADIS, C. *La institución imaginaria de la sociedad*. Barcelona: Tusquets editors, 2007.
- CZARNISANSKA, B. Richard Rorty, Women, and the new pragmatism. In: TSOUKAS, H.; CHIA, R. **Philosophie and Organization Theory**. U.K./North America: Emerald Group, 2011, 343-365 p.
- DAVIS, G.; MAQUIS, C. Prospects for Organization Theory in the Early Twenty-First Century, *International Fields a Mechanismus. Organization Science*, v. 6, n.14, p. 332-343, 2005.
- DELEUZE, G. **¿En qué se reconoce el estructuralismo? En la isla desierta y otros textos. Textos y entrevistas (1953-1974)**. Valencia: Pre-textos, 2005.
- DE PAULA, A.P. et al. A tradição e a autonomia dos estudos organizacionais críticos no Brasil. **Revista Administração Empresa**, v.50, n.1, p. 10-23, 2010.
- DONE, E.; KNOWLER, H. (Re)writing reflective practice with Deleuze, Guattari and feminist poststructuralism. **Journal: Reflective Practice**, v. 12, n. 6, p. 841-852, 2011.
- DUTRA, R.; BACHUR, J.P. (Orgs.). **Dossiê Niklas Luhmann**. Belo Horizonte: Editora UFMG, 2013.
- ELDER-VASS, D. Luhmann and Emergentism: Competing Paradigms for Social Systems Theory? **Philosophy of the Social Sciences**, v. 37, n. 4, p. 408-432, 2007.
- FARÍAS, I.; OSSANDÓN, J. *Observando sistemas. Nuevas apropiaciones y usos de la teoría de Niklas Luhmann*. Santiago de Chile, RIL Editores, 2010.
- FISCHER, J. Bourdieu und Luhmann. Soziologische Doppelbeobachtung der 'bürgerlichen Gesellschaft' nach ihrer Kontingenzerfahrung. REHBERG, K.S. (Hrsg.). *Soziale Ungleichheit - Kulturelle Unterschiede. Verhandlungen des 32. Kongresses der Deutschen Gesellschaft für Soziologie in München 2004*. Frankfurt/New York, 2850-2858 p. 2004.
- FISCHER-LESCANO, A. Critical systems theory. *Philosophy & Social Criticism*, v. 38, p. 3-23, 2011.
- GLASER, B.; STRUSS, A. *The discovery of grounded theory: strategies for qualitative research*. Chicago: Aldine, 1967.
- GOLDSPIK, Ch.; KAY, R. *Autopoiesis and Organizations: A Biological View of Social System Change for Methods for Their Study*. MAGALHANES, R.; SANCHEZ, R. (Eds.). *Autopoiesis in Organization Theory and Practice*, Bingley: Emerald. 2009. 89-110 p.
- GRESHOFF, R. Ohne Akteure geht es nicht! Oder: Warum die Fundamente der Luhmannschen Sozialtheorie nicht tragen. **Zeitschrift für Soziologie**, v. 37, n. 6, p. 450-469, 2008.
- GRÉVE, J. Zur Reduzibilität und Irreduzibilität des Sozialen in der Handlungs- und der Systemtheorie. *Soziale Systeme*, v. 13, n. 1+2, p. 21-31.
- HABERMAS, J. **El discurso filosófico de la modernidad**. Madrid: Taurus, 1993.
- HASSAD, J.; PYM, D. **The theory and Philosophie of Organizations. Critical Issues and New perspectives**. London: Roudledge, 1990.
- HELBING, D.; YU, W.; RAUHUT, H. Self-Organization and Emergence in Social Systems: Modeling the Coevolution of Social Environments and Cooperative Behavior. **The Journal of Mathematical Sociology**, v. 35, n. 1-3, p. 177-208, 2011.
- HERMSEN, T.; GNEWEKOW, D. Soziale Hilfe im Wandel: Wohlfahrtsverbände im Reorganisationsprozess. In: WILLKE, H. **Systemisches Wissensmanagement**. Stuttgart: Lucius & Lucius, 1998, 261-305 p.
- HOLT, R.; SANDBERG, J. Phenomenology and organization Theory. In: TSOUKAS, H; CHIA, R. **Philosophie and Organization Theory**. U.K./North America: Emerald Group, 2011, 215-251 p.
- HOLZER, B. Die Differenzierung von Netzwerk, Interaktion und Gesellschaft. Erschienen. In: BOMMES, M.; TACKE, V. **Netzwerke in der funktional differenzierten Gesellschaft**. Wiesbaden: VS Verlag für Sozialwissenschaft, 2011, 51-66 p.
- JAMES, W. **Understanding Poststructuralism**. Chesham: Acumen, 2006.
- KNEER, G.; NASSEHI, A. **Niklas Luhmanns Theorie sozialer Systeme**. Paderborn, 2000.
- KRÜCK, C. Wissensarbeit in Unternehmenskooperationen: das Beispiel der Halbleiterindustrie. In: WILLKE, H. **Systemisches Wissensmanagement**. Stuttgart: Lucius & Lucius, 1998, 305-327 p.

- LAKATOS, I. *The Methodology of Scientific Research Programmes: Volume 1: Philosophical Papers*. Cambridge University Press, 1980.
- LATOUR, B. *A Dialog on Actor Network Theory*. 2002. Available at: <<http://www.ensmp.fr/~latour/articles/article/090.html>>. Accessed on: 15 março 2013.
- LEAL, R. 2002. O Dilema dos Estudos Organizacionais entre a Modernidade e a Pós-Modernidade: a Inclusão de uma Terceira Matriz. Encontro de estudos organizacionais, Recife. **Anais eletrônicos...** Recife: Observatório da Realidade Organizacional: PROPAD/UFPE: ANPAD, 2002. Available at: <<http://www.anpad.org.br/admin/pdf/eneo2002-72.pdf>>. Accessed on: 22 jun. 2013.
- LOYOLA, M. A. Pierre Bourdieu. Rio de Janeiro: Ed. UERJ, 2002. (Série Pensamento Contemporâneo).
- LUHMANN, N. *Die Autopoiesis des Bewusstsein. Soziologische Aufklärung*, Opladen: Westdeutsche, 1975.
- LUHMANN, N. *Organisation und Entscheidung*. In: LUHMANN, N. *Soziologische Aufklärung*. Opladen: Westdeutscher, 1981.
- LUHMANN, N. *Autopoiesis, Handlung und Kommunikative Verständigung*. Zeitschrift für Soziologie, v. 11, p. 336-379, 1982.
- LUHMANN, N. *Soziale Systeme. Grundrisse einer Allgemeinen Theorie*. Frankfurt: Suhrkamp, 1984.
- LUHMANN, N. *Organización y decisión. Autopoesis, acción y entendimiento comunicativo*. Barcelona: Anthropos/Universidad Iberoamericana, 1998.
- LUHMANN, N. *Interaktion, Organization, Gesellschaft: Anwendungen der Systemtheorie*. In: LUHMANN, N. *Soziologische Aufklärung*. Opladen: Westdeutscher Verlag, 1995. 9-21 p.
- LUHMANN, N. *Introdução à teoria dos sistemas*. Petrópolis, RJ: Vozes, 2010.
- LUHMANN, N. *Sistemas sociais. Esboço de uma teoria geral*. Petrópolis, RJ: Vozes, 2016.
- MARTENS, W. *Die autopoiesis sozialer Systeme*. **Kölner Zeitschrift für Soziologie und Sozialpsychologie**, v. 4, n. 43, p. 625-646, 1991.
- MAVRINAC, M.A. *Self as System: Comparing the Grounded Theory of Protecting Self and Autopoiesis*. **World Futures: The Journal of New Paradigm Research**, v.62, n. 7, p. 516-523, 2006.
- MEAD, H. *Mind, Self and Society*. Chicago: Chicago University Press, 1972.
- NAFARRATE, J.T. *Introducción a la teoría a de sistemas*. México: Alianza/Universidad Iberoamericana, 1991.
- NASSEHI, A. *Sozialer Sinn*. In: NASSEHI, A.; NOLLMANN, G. **Bourdieu und Luhmann. Ein Theorievergleich**. Frankfurt a.Main: Suhrkamp, p. 155-190, 2004.
- NÖTH, W. **Selbstreferenz in systemtheoretischer und in semiotischer Sicht**. Available at: <<http://www.schmidt.uni-halle.de/konzepte/texte/noeth.htm>>. Accessed on: 14 jan. 2014.
- OCAMPO, S.P. *El modelo sintético de comunicación de Niklas Luhmann*. **Cinta de Moebio**, v. 47, p. 59-73, 2013.
- OLABUÉNAGA, J.I. *Sociología de las organizaciones complejas*, Universidad de Deusto, 2008.
- ORLIKOWSKI, W.J. *Knowing in Practice: Enacting a Collective Capability in Distributed Organizing*. **Organization Science**. **Knowledge, Knowing, and Organizations**, v. 13, n. 3, p. 249-273, 2002
- PÉREZ-SOLARI, F.; LABRAÑA, J. *Hacia la observación de una sociedad verdadera: Una entrevista con Dirk Baecker*. **Revista Mad**. n. 29, 2013, 82-91 p. Available at: <[www.revistamad.uchile.cl](http://www.revistamad.uchile.cl)>. Accessed on: 22 oct. 2012.
- PÉREZ-SOLARI, F.; LABRAÑA, J. *Hacia la observación de una sociedad verdadera: Una entrevista con Dirk Baecker*. **Revista Mad**, n. 29, p. 83, 2013.
- PIGNOLLI, S.; ZITELLO, M. *Tensiones y quiebres teóricos del concepto de comunicación de Luhmann*. **Estudios Sociológicos**, v. 29, n. 87, p. 925-947, 2011.
- POKOL, B. *Contribution to the comparison of the theories of Bourdieu and Luhmann*. **Jogelméleti Szemle**, n. 3. 2002. Available at: <<http://jesz.ajk.elte.hu/pokol112.html>>. Accessed on: 21 march 2012.
- POPPER, K. **The Logic os Scientific Discovery**. London: Routledge, 1993.
- REED, M. *Teorização organizacional. Um campo historicamente contestado*. In CLEGG, S.; HARDY, C.; NORD, W. (Orgs.). **Handbook de Estudos Organizacionais**. São Paulo: Atlas, p. 61-98, 1999.
- RÄWEL, J. *Theoretische Empirie – empirische Theorie*. **Swiss Journal of Sociology**, v. 33, v. 3, p. 443-463, 2007.
- ROBLES, S. C. *A public health framework for chronic disease prevention and control*. **Food Nutr. Bull**, v. 25, p. 194-199, 2004.
- SCHREYÖGG, G.; SYDOW, J. *Organizing for Fluidity? Dilemmas of New Organizational Forms*. **Organization Science**, n. 21, p. 1251-1262. DOI 10.1287/orsc.1100.0561
- SERVA, M. et. al. *Paradigma da complexidade e teoria das organizações: uma reflexão epistemológica*. **Revista Administração Empresa**, v. 50. n. 3, p. 276-287, 2010.
- STICHWEH, R. 2005. **The Present State of Sociological Systems Theory**. Working Paper, Universitaet Luzern. p. 347-371. Available at: <[https://www.fiw.uni-bonn.de/demokratieforschung/personen/stichweh/pdfs/37\\_stw\\_the-present-state-of-sociological-systems-theory-2005-2.pdf](https://www.fiw.uni-bonn.de/demokratieforschung/personen/stichweh/pdfs/37_stw_the-present-state-of-sociological-systems-theory-2005-2.pdf)>. Accessed on: 3 april 2015.
- SYDOW, J.; SCHREYOGG, G. *Self-reinforcing Processes in and among organizations*. London: Palgrave Macmillan, 2003.
- TADAJEWSKI, M.; MACLARAN, P.; PARSONS, E. **Key Concepts in Critical Management Studies**. London: Sage, 2011.
- TEIXEIRA, F. **Autopoiesis e identidade pessoal do si mesmo biológico ao si mesmo humano-conduta e sistema nervoso**. Coimbra: Coimbra Editora, 2004.
- THUMALA, D. *Proyecciones del concepto de sistema psíquico de Luhmann y su vinculación con la Psicología*. **Cinta de Moebio**, n. 39, p. 186-191, 2010. Available at: <<http://www.scielo.cl/pdf/cmoebio/n39/art05.pdf>>. Accessed on: 15 march 2013.
- TRÖNDLE, M. *Systemtheorie, ein Versuch*. 2012. <<http://www.fachverband-kulturmanagement.org/wp-content/uploads/2012/10/SystemtheorieEinVersuch.pdf>>
- TSOUKAS, C. **Philosophie and Organization Theory**. U.K./North America: Emerald Group, 2011.
- VIDAL, J. *Autopoiesis, autoorganización y cierre operativo en las organizaciones desde la perspectiva postestructuralista*. **Revista Internacional Organizaciones, International Journal of Organizations**, n. 15, p. 31-55, 2015.
- VIDAL, J. *Organizaciones públicas en la Amazonia: ¿cambio autorreferencial o adaptación?*, **Revista Internacional Organizaciones, International Journal of Organizations**, n. 5, p. 127-150, 2010.

VIDAL, J. Sistemas y ser humano. Pensamiento autorreferencial en la Amazonia. Madrid: Ediciones La Catarata, 2015.

WALSH, J.; MEYER, A.; SCHOONHOVEN, C. A Future for Organization Theory: Living in and Living with Changing Organizations. **Organization Science**, v. 17, n. 5, p. 657-671, 2006.

WHITE, H.; GODART, F. Linking Networks and Domains: Cultural and Discursive Formations in Context. **Manuscript for Manchester talk**, 2008.

WHITE, H. C. Networks and Meaning: Styles and Switchings. Manuscript. A Plenary address for the Luzern Conference Commemorating Niklas Luhmann. Luzern, 2007.

WHITE, H. C. Identity and Control. Princeton: Princeton University Press, 2007.

WILLIAMS, J. **Understanding Post-structuralism**. Dundee: University Press, 2005.

WILLKE, H. **Systemtheorie II. Interventionstheorie**. Stuttgart/Jena: UTB-Fischer, 1999.

WILLKE, H. **Systemtheorie entwickelter Gesellschaften. Dynamik und Riskanz moderner gesellschaftlicher Selbstorganisation**. München: Juventa Verlag, 1993.

WINDELER, A.; SYDOW, J. (Orgs.). **Kompetenz: Sozialtheoretische Perspektiven**. Wiesbaden: Springer, 2014.

Josep Pont Vidal

Masters in Political Sociology from Bielefeld University (Germany) and PhD in Political Sociology from University of Barcelona (Spain). Professor Vidal teaches Theory of Organizations, Public Administration and Sociological Theory at the Federal University of Pará. E-mail: josevidal@ufpa.br