ABSTRACTS

Society and Knowledge – order, chaos, and complexity

Maíra Baumgarten

The paradigm of modern science, founded on reason, on the division/analysis and on the motto "knowing for controlling" has reduced problems and their answers to models for a transforming action over nature, thus producing highly specialized and disciplinary knowledges. Separating and reducing have been mottos of the modern paradigm. However, nature and society have never ceased to be complex and today's world is the expression of such complexity – the problems we face are multidimensional and contradictions increase. Humans, alienated from nature by their owns hand (but then integrating anyway), started threatening it in a dangerous way to their own species as well as to all the others. We live in a process of hybridization of the natural, the human, and the artificial. The bonds of human solidarity are undone ,and irreducible contradictions emerge in natural and social everyday life. How is it possible to know and to act on such reality? How can we perceive the several bifurcations contained in the becoming and their range of possibilities? How to choose the direction to be taken? The perspective of complexity, with its interdisciplinary dialogues, its bridges between perspectives and fields of knowledge and its strategic thinking, seems to be a good way to deal with the uncertainties of contemporary world.

Key words: society and knowledge, complexity.

The epistemological impact of investigations on "complexity"

Maria Manuel Araújo Jorge

Complexity posed as a philosophical idea (even trough it is from the sciences that approach it) was seen by some as the expression of a new "epistemological spirit" that would be changing not only our mechanist image of nature but also our relationship to it and the way we do science, in a more qualitative, less aggressive, and more human approximation. By overcoming traditional reductionism, by acknowledging the autonomy and interrelations of the distinct levels of reality and

the symbiosis between order and disorder, regularities and randomness, sciences, assimilating the spirit of complexity, would be open to an awareness of their fundamental limits. By considering the approach of "complex systems" in some disciplines, I argue that, because of demands for effectiveness and objectivity, the search for simplification, compression, and the effort towards "calculation" of all its objects, the typical face of sciences remains, including those of "complexity.

Key words: complexity, simplification, reductionism, mechanism.

Complexity in dialectical totality

Carlos Massé Narváez

This works starts by showing the limitations of disciplinary substantive discourses. Then it presents the complexity of the concepts of *reality, present, and utopia*, in order to discuss how production of scientific knowledge takes place, but warning the reader about its limits in face of the complexity of the real. Given the unpredictable contingencies that always emerge in that process, the categories of Hope and utopia are presented in order to finally put forward appropriation of knowledge as scientific knowledge through disciplinary articulation that guarantees the appropriation of the real as a totality.

Key words: epistemology, totality, dialectics, scientific knowledge, contradiction, utopia, hope, articulation, present, reality, and transdisciplinar.

Knowledge and society: impertinent dialogues

Alexandre Virgínio

This text is aimed at outlining the meaning that the relationship between society and scientific knowledge has taken under the context of capitalism. Capitalist development and modern science advanced from a relationship of interdependence between mercantile logic of the former and the linear assumptions of the latter. Therefore, several unwanted consequences produced by the system in the last centuries can be credited to Cartesian rationalism. In the meanwhile, in face of

unfulfilled promises of capitalism in its cognitive version, modern science starts to be challenged in its most basic fundament: man's domination over nature. Nonlinear perspectives emerge or re-emerge from its criticism, which seek to consider new connections and/or knowledges between consciousness and existence, between subject and object, between man and nature, between society and knowledge. Our expectation is that such debate, marked by antagonism and tensions, more transparent as it is more impertinent, can contribute to a dialogue that ends in knowledge that is less obtuse for attending to reality's complexity. A new knowledge able to humbly reconcile with the necessary and urgent wisdom that will allow man to make other and new choices – to be born again.

Key words: capitalist society, scientific knowledge, complexity, ecology of knowledges.

Sociology in complexity

Gilson Lima

The article is a simultaneously didactic and informative deep introduction on the emergence of the paradigm of complexity for sociology. Along the narrative, we make comparisons, which allows the reader who is not familiar with the themes of science to identify the macro-paradigmatic pre-modern differences from simple modernity and the emergence of the paradigm of complexity.

Whenever it is possible, we define and exemplify the terms, assertions, and principles that are significant for an understanding of the theme. We have also made numerous indications of authors and works within the narrative, thus those willing might take a deeper dive in the pathways of sociology of complexity.

The article starts with an introduction that defines, after Thomas Kuhn, the concept of paradigm. Then we comparatively develop the most important principles of the paradigm of complexity. And finally, we draw attention for some challenges of sociology in complexity, warning against the risks of paralysis of complexity in the hard task of re-linking knowledges in face of the hyper-specialization present in the crisis of the paradigm of simple modernity.

Key words: paradigm of complexity, sociology and complexity, knowledge of knowledge, modulation of complexity.

What is complex in the complex world? Niklas Luhmann and the theory of Social systems

Clarissa Eckert Baeta Neves, Fabrício Monteiro Neves

This article discusses Niklas Luhmann's understanding of complexity, its role in theory, and the different ways for its use. It starts from a paradigmatic change that took place in the field of Science in general after the rupture of the Newtonian model. In the 20th century, the paradigm of order, symmetry, regularity, and regulation of the intellect over things enters a crisis. After new formulation in Physics, Chemistry, etc, a new universe emerges over the bases radically opposed to those of modern Science. There is rehabilitation of chaos, process irreversibility, indeterminism, the observer, and complexity. That new conceptual environment served as the substrate for Niklas Luhmann's theoretical reflection. Through the Theory of the Social systems, the author proposes the reduction of the world's complexity. The role of social systems is to reduce complexity by its difference regarding the surroundings. By reducing complexity, on the other hand, he also builds his own complexity. Luhmann sees complexity when it is no longer possible that each element relates in any moment to all others. Complexity forces selection, which means contingency and risk. Luhmann further discusses the concept of complexity by introducing the figure of the observer and the distinction of complexity as the unity of a multiplicity. He also deals with the limit of relationship connections, the time factor, self-reference of the operations, and representation of complexity as meaning. Finally, the article deals with complexity in the system of science, the way it reduced internal and external complexity according to its own operative basis.

Key words: complexity, social systems, science, complex world, system and surroundings, autopoiesis, second-order observation, interdisciplinarity, trans-disciplinarity,multidisciplinarity.

Interdisciplinary practices

Olga Pombo

This text is aimed at describing and characterizing interdisciplinary practices that are currently under use in scientific inquiry. Therefore, a categorization of new

interdisciplinary arrangements is presented (border sciences, interdisciplines, and intersciences) as well as a typology of the several practices of interdisciplinary inquiry mobilized by today's science (import practices, crisscrossing, convergence, descentering, and compromising). As an example, the disciplinary statute of cognitive sciences is studied in some detail.

Key words: interdisciplinarity, epistemology, Border Sciences, interdisciplines,Intersciences, cognitive Sciences, interdisciplinary practices, Importation, Crossing,Convergence, Decentering, Commitment.

The reinvention of bodies – for a pedagogy of complexity

Adroaldo Gaya

This essay is aimed at claiming the presence of the human body in epistemological and pedagogical reflections. It stars from the following hypothesis: in pre-modern times, the philosophical and sociological discourses point to an overcoming of enlightening rationality. The pedagogical proposals seek interdisciplinary perspectives, new forms of curricula configuration and organization of school space. References are often heard about a pedagogy of complexity. However, it is in that same school and within that same pedagogy that paradoxically the paradigm of Enlightenment's rationalism inspiring an intellectualist education remains, taking over the Cartesian heritage that conceives the body as a mere extension of mind. Three themes make up the arguments for the guiding hypothesis: (1) in the schools of our times, the body seen as *res extensa* remains passive. That is to say, the body does not go to school. (2) the main epistemological views on the origin of knowledge also limit themselves to the expression of predominantly rational knowledge. The body remains absent from epistemological interest. (3) A pedagogy limited to what is exclusively rational is shortsighted and therefore cannot demand to be configured as a pedagogy of complexity. It is necessary to place bodies within epistemology, pedagogy, and schools. It is the reinvention of bodies.

Key words: Pedagogy, corporality, epistemology, education.

ARTIGOS

ARTICLES

Exclusion and social knowledge

Raquel Sosa Elízaga

Social sciences have undergone in recent years the confusion promoted from power about who social subjects are and how they behave. The proliferation of poverty, changes in social life, forms of struggle for survival have remained away from most investigators and politicians that apply programs oriented to distinct groups.

Social statistics have become along the years a sophisticated tool for the so-called social policies, whose aims have ranged from the claim to include the poor into the market to the contention of their movements through assistance schemes focused on potentially critical areas. Asking – and investigating – how many the poor are and where they are seems to be the newest and profitable way for politicians, officials, and experts.

Few are those who, from the historical and social perspective, have recognized the existence of collective behavioral codes that determine, beyond material living conditions, the existence of one or another form of government, of the specific policy applying to a social group, the movement of societies in the process of transformation.

Re-dimensioning the forms acquired by the social presence of the excluded in their diversity, its contradictory expressions, their demands, the exercise of their rights, is one of the major tasks of contemporary social sciences. It is a task that accepts no strict models, parameters, or structures of thought and categorization. It can hardly be thought as an individual work, but in no case it can be developed if one starts from viewpoints that do not incorporate spatial and temporal relations, transversalness, the character and the quality of changes, the dignity of knowledge subjects.

Key words: social subjects; poverty, exclusion, diversity, dignity.

Social representations, institutions, and conflicts in water management in rural territories

Rodrigo Constante Martins

Issues related to the governance of social interests and environmental resources established in rural territories have been highlighted in recent sociological literature. Surrounded by the issues of *new ruralities*, the debate about the makeup of distinct social interests within *environmental management* and *territorial management* bodies keeps demanding reflection from social sciences. In order to contribute new subsidies to such debate, this article presents a new sociological research about the territorial and political-institutional conflicts in the management of regional bodies for water policy in the state of São Paulo (Brazil). Through a case study made with qualitative techniques for social research, the work discusses how distinct agricultural interests relate to modern tools for environmental pubic regulation – notably the Basin Committees. The study's general hypothesis is that formal democracy represented by those environmental public regulation bodies cannot stand the fundamentals of local structures of political and economic domination

Key words: rurality; society and water resources; social representations; local power

The Catholic Church, social assistance, and charity: approximations and disagreements

Claudia Neves da Silva

This article is the result of a research study concluded in 2003, which aimed at investigating how the conception of Law is expressed in the actions of the so-called social pastoral commissions of the Catholic Church in Londrina, Brazil. By observing that the conception of charity and that of social rights walk side-bi-side within the Catholic Church, a question emerged: how is the conception of social right expressed in the actions of social pastoral commissions? Charity is preached

as a Christian duty, as an action expressed in the experience of solidarity towards others who are in a situation that prevents them from having minimal living conditions. At least at discourse level, the actions developed are not limited to provide basic goods, clothes or medicine. We realized that those who act in social pastoral commissions, driven by values such as love to fellow human beings and solidarity, have not lost sight of the idea of social right – on the contrary, they have been reinforcing it.

Key words: Catholic Church, Social Pastoral Commissions; Charity; Social Rights; Social Problems

INTERFACE
INTERFACE

Machado de Assis, the established Outsider

Richard Miskolci

The article debates twenty distinct views on the role of intellectuals in Brazilian society in the late 19th century after the controversy between Machado de Assis and Silvio Romero. The emphasis falls on the conditions of our thinkers among the absence of an autonomous intellectual field and especially Machado de Assis' view on intellectuals. We conclude with an analysis of his condition as an established outsider – a position that marked his criticism to "men of science" and his resistance to the hegemonic ideas of hi times.

Key words: Machado de Assis, Silvio Romero, Intelectual, Society, Science

RESENHAS
BOOK REVIEW

Ganchos, tachos e biscates: the epistemological and methodological unfoldings of a young sociology of Youth

Fábio Dal Molin

This work is a critical commentary on the book "*Ganchos, Tachos e Bisca-tes: Jovens, Trabalho e Futuro*", by Portuguese Economist and Sociology Doctor José Machado Pais. Interesting aspects are approached regarding the methodology used, which includes individual and group in-depth interviews, ethnography, and heterogeneous and contemporary theoretical analysis. The relevance of the work for the study of today's youth is underscored, considering the complex and nonlinear trajectories of youths that use several distinct survival strategies in a precarious or even illegal labor context in Portugal.

Key words: youth, qualitative research, sociology, complexity, labor.

La complexité, vertiges et promesses. 18 histoires de sciences

Leandro Raizer

This review presents some of the reflections carried out by renowned researchers from several sciences on the subject of complexity and its increasing impact in distinct areas of knowledge. The book includes 18 interviews and presents debates about the most recent findings in the fields of information, biology, artifici-al intelligence, physics, sociology, philosophy, and history of sciences. Those are some of the fascinating and exciting issues presented in that book edited by renowned sociologist Redá Benkirane, aimed at showing the wealth and importance that the notion of complexity has been gaining in the last 20 years among researcher of distinct sciences.

Key words: complexity, history of sciences, informational revolution