

Systems theory and complexity: a potential tool for radical analysis or the emerging social paradigm for the internationalised market economy?

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Abstract: The aim of this paper is to critically assess the claims of systems theory and complexity in the analysis of social change and particularly to examine the view that —if certain conditions are met— both could potentially be useful tools for radical analysis. The conclusion drawn from this analysis is that, although systems theory and complexity are useful tools in the natural sciences in which they offer many useful insights, they are much less useful in social sciences and indeed are incompatible, both from the epistemological point of view and that of their content, with a radical analysis aiming to systemic change towards an inclusive democracy.

Introduction

It was almost inevitable that the present demise of Marxism would bring about a revised form of functionalism/evolutionism, which had almost eclipsed in the sixties and the seventies, particularly in areas like the sociology of development where it had been replaced by neo-Marxist and dependency theories. The new version of functionalism/evolutionism is much more sophisticated than the original Parsonian functionalist paradigm and incorporates recent developments in “hard” sciences to produce a new “general” theory of social systems. A primary example of such an attempt is Niklas Luhmann’s *Social Systems*^[1] which we shall consider in this paper. My aim will not be to assess the undoubted significance of systems theory within the “orthodox” social sciences paradigm but to examine, instead, whether systems theory and complexity (or parts of it) may constitute a useful tool of radical analysis, as some thinkers in the Left suggest.^[2] My contention is that the emerging systems theory and complexity paradigm, far from constituting a useful tool of radical analysis of the present society, may easily become the dominant social paradigm^[3] of the present internationalised market economy.

The overall aim of Luhmann’s work is to develop a new “general” theory of social systems that would fully utilise the conceptual resources of modern science and particularly the principles of self-organization, whose use in a great number of different disciplines signals a fundamental paradigm shift in the sciences —a “scientific revolution” in the Kuhnian sense.^[4] The rationale behind such an attempt is to transcend the postmodern predicament and show

that the end of metanarratives does not mean the end of theory. The intermediate target, which functions also as means to achieve this aim, is to link social theory to recent theoretical developments in scientific disciplines as diverse as modern physics, information theory, general systems theory, neurophysiology, and cognitive science. As Eva Knodt points out in her foreword:[\[5\]](#)

“*Social Systems* does not present a sociological analysis of modern society or a theory of society but elaborates the general conceptual framework for such a theory. It supplies the instruments for observing a variety of social systems —societies, organizations, and interactions— not primarily such observations themselves” (...) But unlike Kant —and here Luhmann parts company with transcendentalism and all forms of foundational philosophy— systems theory turns away from the knowing subject to a reality that consists solely of self-referential systems and their “empirically” observable operations. (It goes without saying that the self-referential operations of theory are part and parcel of that reality.) The observations of systems theory are both situated and interested observations. They focus on a specific *problem* —the problem of social complexity from within one of society’s particular subsystems, science. The Kantian question of how a subject can have objective knowledge of reality thus gives way to the question: How is organized complexity possible?

It is therefore obvious that the epistemological issue plays a crucial role in Luhman’s work and it is consequently a good starting point in assessing this work. We shall continue with a critical assessment of systems theory and complexity, as well as of their political implications and we shall conclude with our assessment of the usefulness of this theory as a radical tool of analysis, i.e. a tool of anti-systemic analysis aiming at an inclusive democracy.

1. Social systems and the epistemology of systems theory and complexity

The liberatory project and the traditional epistemologies

One way to assess the epistemology of Luhmann’s theory as a radical tool of analysis is to consider its applicability with respect to the inclusive democracy project. As I tried to show elsewhere,[\[6\]](#) the liberatory project for an inclusive democracy can not and should not be based on the “objectivism” of the main epistemological traditions, i.e. either empiricism/positivism and rationalism, or the alternative dialectical tradition. Such an objectivism I argued there is not feasible as regards social phenomena, nor is it desirable.

It is not feasible because a society based on a market economy and representative democracy is a divided society in which political, economic and social power is concentrated in a few hands: those of the various elites which control the economic or political process, the mass media and so on. This implies that the analysis of social systems can never achieve the degree of intersubjectivity that characterizes natural sciences, whose object of study — unlike the object of study of social sciences— is not characterised by “class”

divisions which inevitably affect the former. Equally non-feasible is the project of deriving a general theory of social “evolution”, on the basis of an “objective” interpretation of social or natural History, as dialectical materialism and dialectical naturalism have respectively attempted to do.

And it is not desirable because any claim to “objectivity” in justifying a liberatory project would almost inevitably lead to hierarchical divisions within the liberatory movement between those “who know” the “laws” of social movement and can therefore derive the necessary strategic and tactical conclusions and those at the other end who simply have to implement the policy prescriptions drawn by the “theory experts”. The Marxist case is an obvious example of such a hierarchical division created within the pre-revolutionary movements—a division that was later institutionalized when these movements took over power.

The conclusion I derived from this analysis was that the liberatory project for an inclusive democracy can only be based on a democratic rationalism, which transcends both the modernist “scientism”/“objectivism”, as well as the postmodernist subjectivism and relativism.

But, let us see the major differences between the main epistemological traditions so that we may meaningfully assess the epistemological claims of systems theory and complexity. The major difference between these traditions was the one referring to the criterion of truth. Thus, rationalism reflects a coherence theory of truth,^[7] according to which the criterion of truth is coherence with other propositions or judgments, something consistent with the deductive method of analysis. Empiricism, on the other hand, reflects a completely different theory of truth, a correspondence theory, according to which the criterion of truth is correspondence with fact, although, as modern versions of the theory have shown, it is certainly not always the case that every statement can be correlated with a fact.^[8] Logical Positivism, which claimed that it had created a synthesis between the two epistemological traditions, that is, between, on the one hand, the deductive and a priori rationalism and, on the other, the inductive and a posteriori empiricism, also failed to produce “objective” criteria of truth, as Popper, Lakatos^[9] and others have shown, ending up not as an objective methodology, but rather as an ideology “inhibiting the growth of knowledge and serving the interest of the status quo”.^[10] It was the arrival of the “Kuhnian revolution”^[11] which brought the power relation into orthodox epistemology through the adoption of the relativistic position of “truth by consensus”. What is “scientific” or “objectively true” becomes now a function of the degree of Intersubjectivity, that is, of the degree of consensus achieved among the theorists in a particular discipline. The Kuhnian “paradigm” concept implied the non-existence of objectivity, either in the sense of tradition—independent truths, or in the sense of tradition—independent *ways of finding* truths.^[12]

The dialectical analysis, usually used by radical social theorists to justify the needs for an alternative society, claimed to be able to see the contradiction between the parts and the whole in knowledge (the parts can only be seen through the whole which envelops them, whereas the whole can only be seen through factual knowledge of the parts) the contradiction between individuals and society (individuals can only be seen through society, whereas society can only be seen through knowledge of individuals), as well as the contradiction

between the real given and the possible, uniting, through the social *praxis*, Theory and Practice, the individual and the community. Therefore, the concept of objectivity in dialectics takes on a very different meaning from the traditional notion of objectivity in empiricism/positivism. What is “objectively true” is not what corresponds to facts/what can be verified or, alternatively, what cannot be falsified/rejected, on the basis of an appeal to sense–data, which, anyway, can only give information about “what is”. Instead, what is “objectively true” in dialectics is, as Bookchin put it, “the very process of becoming—including what a phenomenon has been, what is and what, given the logic of its potentialities, it will be, if its potentialities are actualised.”^[13]

However, as I tried to show in *Towards An Inclusive Democracy*^[14], both the Marxist dialectical materialism approach, as well as Bookchin’s^[15] dialectical naturalism approach—the two main examples of dialectical approaches used to justify the liberatory project—are also unable to solve the problem of “objectivity”. Mainly, this is because for reality to be assimilated by dialectical thought, the condition is that it should be dialectical in form and evolution and therefore rational. This means that a dialectic has to *postulate* the rationality of the world and of history at the very moment when this rationality is a theoretical, as well as a practical, problem. As Castoriadis puts it:

Today, we can no longer maintain this way of seeing things for a number of reasons. We cannot supply ourselves in advance with a dialectic of history that is complete or on the verge of being completed, even if this is termed a dialectic of “pre-history”. We cannot give ourselves the solution before the problem. We cannot give ourselves as a starting point a dialectic of any kind, for a dialectic postulates the rationality of the world and of history, and this rationality is a problem.^[16]

This is mainly because History is creation (and destruction) of institutions and significations—a view which is perfectly compatible with the Inclusive Democracy project—and not an evolutionary process. This implies, as Castoriadis, again, points out that:

The operative postulate that there is a total and “rational” (and therefore “meaningful”) order in the world, along with the necessary implication that there is an order of human affairs linked to the order of the world—what one could call unitary ontology—has plagued political philosophy from, through liberalism and Marxism. The postulate conceals the fundamental fact that human history is creation—without which there would be no genuine question of judging and choosing, either “objectively” or “subjectively”.^[17]

Therefore, the dialectical approach suffers no less than the orthodox approach from what Hindess and Hirst^[18] call the “epistemological fallacy,” that is, the construction of an a priori core of concepts, *assuming* their own conditions of validity—a stand, which easily brings to mind the Kuhnian position that a paradigm contains its own criteria of validity. The failure of the dialectical approach to solve the problem of “objectivity” can be shown with reference to either dialectical materialism^[19] or dialectical naturalism, but I will concentrate here on the latter, given its connection—through the concept of directionality—to complexity theory.

Complexity, directionality and the liberatory project

As I tried to show elsewhere,[\[20\]](#) the attempt to establish a directionality toward an ecological society depends on two crucial hypotheses:

- a. that there is a directionality in natural change, which yields a clearly discernible evolutionary development toward more complex forms of life, greater subjectivity and self-awareness and growing mutuality;
- b. that there is a graded evolutionary continuum between our first nature and our second (social and cultural) nature, so that “every social evolution is virtually an extension of natural evolution into a distinctly human realm”[\[21\]](#).

Although, Bookchin explicitly acknowledges that social evolution is profoundly different from organic evolution, still, the social change he envisages is characterized by an evolutionary process of Progress, defined as “the self-directive activity of History and Civilisation towards increasing rationality, freedom”[\[22\]](#). Thus, the evolution of “second nature”, namely, the evolution of society, “develops both in continuity with first nature and as its antithesis, until the two are sublated into «free nature», or «Nature» rendered self-conscious, in a rational and ecological society”.[\[23\]](#)

As regards, first, the hypothesis about the existence of a rational process of natural evolution, there is now a significant measure of support for it. Thus, modern developments in biophysics, in terms of the self-organisation theory, introduce into biology a type of “law of increasing complexity” which is consistent with dialectical naturalism.[\[24\]](#) Also, as Glenn Albrecht[\[25\]](#) points out, in the last few decades we have seen the emergence of new ways of understanding complex systems, with complexity theorists providing novel insights into the way complex systems evolve and produce increasing states of complexity and diversity. For Bookchin, as the same author points out, *directionality* is the *freedom* manifest in life to evolve toward ever-increasing interrelated diversity and complexity; furthermore, the social values on which a free society should be based, (i.e. unity in diversity, spontaneity and non-hierarchical relations) are the values that arise out of a naturalistic ethic and, as such, are objectively grounded in this understanding.

However, as I attempted to show in *Towards An Inclusive Democracy*, although the hypothesis about a rational process of natural evolution may be supported by biophysics and complexity theory, there is no corresponding support for the second hypothesis about the existence of a rational process of social evolution. Such a hypothesis is both undesirable and untenable. It is undesirable, not only because it creates unintentional links with heteronomy, but also because it may easily lead to inadvertent affinities with intrinsically anti-democratic eco-philosophies.[\[26\]](#) And, it is untenable because History does not justify the existence of an evolutionary process of Progress towards a free society, in the sense of a process leading to a form of social organisation which secures the highest degree of individual and social autonomy at the political, the economic and the social levels. Therefore, unless we underplay the significance of the imaginary element in human History, we have to conclude that it is impossible to establish any sort of social evolution towards a particular form of society. This is mainly because, even if one accepts the

hypothesis that self-consciousness and self-reflection are part of a dialectical unfolding in Nature and do not just represent a rupture with the past, this does not imply that there is a similar dialectical unfolding toward a free society. Such a view would be incompatible with historical evidence which clearly shows that the historical attempts for a free society have always been the result of a rupture with the instituted heteronomy, which has always been dominant, rather than a sort of processual “product”. As I put it elsewhere^[27]:

The fact that societies, almost always and everywhere, have lived in a state of ***instituted heteronomy*** (namely a state of non-questioning of existing laws, traditions and beliefs that guarantee the concentration of political and economic power in the hands of elites), with no trace of an “evolution” towards democratic forms of organisation securing individual and social autonomy, clearly vitiates any hypothesis of a directionality towards a free society. In fact, if there is any continuity in history, it is a continuity in heteronomy interrupted by usually sudden and temporary leaps into “autonomous” forms of organisation.

This does not deny the fact that the break with the heteronomy tradition always takes place in a specific time and place and that therefore History, tradition, and culture certainly ***condition*** the form that society takes. However, institutional and historical factors never determine when and where this break will take place, or even the specific form the autonomous organisation of society will take. An autonomous form of social organisation has always been a ***creation*** expressing a break with past development. The rare historical cases of relatively free forms of social organisation came about as a result of the fact that at certain historical moments, for reasons that only partly refer to the concrete historical circumstances, “social imaginary significations” expressing the autonomy project had become hegemonic and led to a rupture of the dominant social paradigm of heteronomy. That such ruptures do not fit in any unfolding dialectical pattern of History, and cannot even be considered as “reactions” to heteronomous forms of organisation, becomes obvious by the fact that repeatedly in History similar, if not identical, institutional and historical circumstances led to very different forms of social organisation —as a rule, to heteronomous forms of social organisation and only very exceptionally to attempts for autonomy.

So, it is not possible to derive any sort of evolutionary process towards a free society, what we called an inclusive democracy. Although the historical attempts to establish autonomous forms of political, social and economic democracy, did not, of course, appear *ab novo*, still, they cannot be fitted in any grand evolutionary process. This is clearly indicated by the fact that such attempts took place in specific times and places and as a break with past development, rather than in several societies at the same stage of development and as a continuation of it. Therefore, although the ideals of freedom may have expanded over time, the last 25 years or so notwithstanding, this expansion has not been matched by a corresponding evolution towards an autonomous society, in the sense of greater real participation of citizens in decision taking.

Therefore, the real issue concerning dialectical naturalism is not whether we shall use Bookchin’s notion of complexity, or alternatively Albrecht’s notion of dialectical complexity, i.e. a conception in which complexity and complex

systems can be understood as events that can emerge at the edge of chaos.[\[28\]](#) The real issue is whether we can assume a view of History as an evolutionary process of Progress towards autonomous, or democratic, forms of political, economic and social organisation—a view not justified by History—or whether instead History has to be seen as a creation and the free society as a rupture, a break in the historical continuity that the heteronomous society has historically established.

In this problematique, one would have to disagree with Albrecht's conclusion that:

The earth and its inhabitants are currently under the dominant influence of an elite group of manipulators and regulators who artificially maintain the global system in a state that suits their vested and sectional interests. This artificial equilibrium is achieved only with the exercise of considerable force and engineering at local levels. The lesson from complexity theory is that the stresses inherent within such a system will ultimately cause a radical spontaneous reorganisation of the system as a whole. Such radical reorganisation may well put social development on an unsustainable path. A safer route is to allow greater freedom for the system to self-regulate at local levels and permit local adaptation and reorganisation in the face of the pressure to change.

In fact, the current form of heteronomous society, which is based on the present internationalised market economy, is just one form of heteronomy and History is full of other forms of heteronomous societies in which elites of various sorts achieved an “artificial equilibrium”, again, with the exercise of considerable force and engineering at local levels. The fact that today there is an ecological crisis, on top of the chronic political and economic crisis which marked the present form of “democracy” and economy since it was introduced in the last few centuries, does not mean that “the stresses inherent within such a system will ultimately cause a radical spontaneous reorganisation of the system as a whole” that “may well put social development on an unsustainable path”. The real issue is *how* to achieve sustainability, given that sustainability may be achieved through an inclusive democracy, but it may also be achieved through another kind of heteronomous society that may develop in the future—if the ecological crisis worsens—which this time may be of the “eco-fascist” variety. The question therefore is how to create a new society in which the problem of sustainability will not arise in the first place and this will lead us to the need for a new world order based on an inclusive democracy.

The inevitable conclusion is that the notion of complexity, simple or dialectical, is not useful in either explaining the past or in predicting the future, as far as radical social change is concerned. Even if we accept that change in dynamic physical systems is subject to power laws which are in principle discoverable, as Albrecht argues, radical social change in a dynamic social system, like the one represented by society, can never be the subject of such “discoverable” laws. Therefore, if a new world order based on inclusive democracy ever replaces the present heteronomous forms of political and economic organisation, this will represent neither the actualisation of unfolding potentialities for freedom, nor some kind of creative “self-organisation” into a new form of order. It will simply be the conscious choice of the majority of the

population for a new type of social organisation based on the equal distribution of power. However, the fact that a democratic society represents a conscious choice does not mean that this is just an arbitrary choice. This is clearly implied by the very fact that the autonomy project turns up in history again and again, particularly in periods of crisis of the heteronomous society. Furthermore, the fact that heteronomous society has been the dominant form of social organisation in the past is not indicative of its intrinsic superiority over an autonomous society. Heteronomous societies have always been created and maintained by privileged elites, which aimed at the institutionalisation of inequality in the distribution of power, through violence (military, economic) and/or indirect forms of control (religion, ideology, mass media).

The epistemology of systems theory and the liberatory project

Coming back to the traditional epistemologies versus that of Niklas Luhmann, let us consider now his main epistemological claims. As it was mentioned in the Introduction, Luhmann claims that his theory transcends the traditional epistemological problem of the “criterion of truth” by replacing the Kantian question of how a subject can have objective knowledge with the question: “how is organized complexity possible?” In the process, he also claims that his systems theory transcends the division between subject and object, (which has bothered both rationalists and positivists), the divisions between whole and parts, (replaced by the distinction between system and environment), as well as the divisions between individuals and societies and those between the given and the possible (replaced by the category of meaning, as the difference between the possible and the actual) —divisions which, as we have seen, were the main considerations of dialectical thinkers.

All this is achieved through the development of a general theory that exploits the conceptual resources of modern science for a study of modern society, seen as a complex system of communications that has differentiated itself horizontally into a network of interconnected social subsystems. But, despite the fact that each of these systems observes itself and its environment from their own unique perspective, this does not affect the “universal” nature of Luhmann’s theory. This is because his general theory of social systems deals with *everything* social, including itself as a contingent part of the reality it describes, or, as he puts it, because “a universal theory implies research into itself, so that research cannot separate itself from its object”.^[29] In fact, this is intrinsically possible in his theory of social systems, which sees such systems as “autopoietic” ones (i.e. based on self-organisation), something implying that all regulation in such closed systems is itself regulated and all controls are themselves controlled.

It is therefore obvious that the concept of self-reference occupies a central position in Luhmann’s theory. As he points out,

Questions of final justification can only be answered within the self-referential theories of self-referential systems. The answer may lie in the logic of universalistic theories that forces them to test on themselves everything they determine about their object^[30] (...) it is much easier for a theory that interprets its objects as self-referential

systems to present its own self-reference; this is to be expected when the theory recognizes itself in the field of its objects as one among many others; theoretically guided research (including that guided by a theory of self-referential systems) can be nothing other than a self-referential social system, what's more, one among many, a subsystem of a subsystem of a subsystem of society, thus, one of very limited societal scope.[31]

However, Luhman seems not to be satisfied with the claim that his general theory has solved all these epistemological problems which have tormented several generations of philosophers of science and takes a step further and declares that even the distinction between natural and social sciences (like sociology) is redundant, as far as their epistemological content is concerned, since, as he points out, “the cutting line does not run between natural sciences and *Geisteswissenschaften* but between theories with a claim to universality (which involve themselves in self-referential processes as a result) and more limited research theories, which concern thematically bounded sections of the world”. [32] Although he admits that current sociology has not yet reached this level he stresses that “one can expect a change in sociology only if one cultivates general, universalistic theoretical accounts”. [33]

Still, a closer look at Luhmann's epistemological claims reveals that the systems theory's epistemology is also plagued by what Castoriadis called “unitary ontology”, which has in fact plagued political philosophy since Plato, through liberalism and Marxism, i.e. the view that there is a total and “rational” (and therefore “meaningful”) order in the world, along with the necessary implication that there is an order of human affairs linked to the order of the world. This is obvious by statements like the following ones:

if functional analysis succeeds in demonstrating connections (...) then this can be a valid indicator of truth... this does not mean the results “correspond” to reality, merely that it grasps reality, that is, proves itself to be a form of ordering vis-a-vis reality that is also ordered.[34]

And, it becomes even more clear in the following statement which starts with a quote from Levi-Straus's work:

“The basic principle is that the notion of social structure does not relate to empirical reality but to models constructed on its basis.” This takes into account what, after Hegel and Marx, one can hardly deny, namely, that reality itself produces such structural models, “home-made models, models already constructed by a culture that is viewed as interpretations.” The key question therefore is what degree of freedom scientific analysis possesses when it concerns a reality that has already modeled itself, that has already produced a self-description.[35]

And, finally:

The theory of evolution is itself a product of evolution, action theory could not develop without action and so on.[36]

As the last statement in particular makes abundantly clear Luhmann's attempt

to use the concepts and tools of systems theory and complexity in order to explain social change does not in fact solve any of the main epistemological problems mentioned above, i.e. the problem of the division between natural and social sciences, or of that between subject and object and of course the crucial problem of the criterion of truth. Although, of course, few could deny the validity of the last statement, many would disagree with any attempt to jump from natural evolution to some kind of social “evolution” and the corresponding theories to justify it. In other words, the high degree of intersubjectivity among natural scientists concerning natural systems does not exist also among social scientists with respect to social systems —something one could expect given that the latter are, also, members of a divided society and therefore, explicitly or implicitly, consciously or sometimes unconsciously, express various “class”^[37] interests. In this light, Luhmann’s attempt to use the tools of natural sciences in order to “scientifically” social analysis is also a failure — unless it is taken as an attempt to create a new epistemology for the “classless” society that the internationalised market economy supposedly creates. But, in this case, systems theory becomes another ideological weapon in the hands of the ruling elites to perpetuate their privileged position.

2. The limitations of social systems theory

The concept of the social system and its implications

As it is well known, there are various versions of systems theory but Luhmann’s version is particularly useful, given its claims that it constitutes a new “general theory” of social systems. The common characteristic of the various versions of systems theory is the central position they give to the conception of the “system”, which is usually the conception of the system used in physics and biology. In this problematic, the main unit of social analysis is the “system” rather than the individual in solitude or the group. Politics is considered to be a process and linkages connect the system with its environment, whereas inputs (demands) flow into the system and are converted into the outputs (decisions and actions) that determine the distribution of rewards (in terms of wealth, power, and status) that the system may provide. As a result of the introduction of systems theory into social sciences new terms entered their vocabulary. Thus, instead of such traditional terms as the state and sovereignty, supporters of systems theory speak of systems, inputs and outputs, feedbacks, circular loops, networks, legitimacy symbols, information storage and retrieval, political socialization, interest articulation and aggregation, cluster blocs, zero-sum games, macropolitics and micropolitics. It is obvious that the use of concepts like system and environment and terms like the above, which are drawn from the concepts and languages of other sciences and from statistics, aim at making the language of social disciplines compatible with the language of “hard” sciences as well as with computer language, so that the ultimate objective of “scientificizing” or “objectifying” social analysis could be achieved.

It was presumably this “ostracism” of traditional political concepts, in favor of the concepts introduced by systems theory, as well as the political implications of this action, which justifiably prompted Murray Bookchin to declare:^[38]

Systems theory enters into the reductionist tableau in a

sinister way: by dissolving the subjective element in biological phenomena so that they can be treated as mathematical symbols, systems theory permits evolutionary interaction, subjective development, and even process itself, to be taken over by “the system,” just as the individual, the family, and the community are deconstructed into “the System” embodied by the economic corporation and the state. Life ceases to have subjectivity and becomes a mechanism in which the tendency of life-forms toward ever-greater elaboration is replaced with “feedback loops,” and their evolutionary antecedents with programmed “information.” A “systems view of life” literally conceives of life as a system, not only as “fluctuations” and “cycles” — mechanistic as these concepts are in themselves.

The limitations of using such concepts are obvious when we move to a lower level of abstraction. Thus, as Armason^[39] points out, Luhmann faces serious problems when he tries to identify the binary codes of other subsystems. For instance, in his most detailed analysis of the economic system Luhmann refers to money as a code, the binary distinction identified as one between payment and non-payment —a very unfruitful and simplistic way to analyze such a complex phenomenon as the role of money in a market economy. Furthermore, the analysis was hardly improved when in a later work the institution of money was linked to reference rather than coding, with transactions —the most basic operations of the economic system— assumed to have a monetary side, which contributes to the ongoing autopoiesis of the system, and a natural side, which relates to the needs of the social environment, whereas the code was defined in terms of a distinction between possession and non-possession (in terms of property rights.)

But, the limitations of systems concepts become equally apparent even at the abstract level of Luhmann’s analysis, if one compares these concepts to the concepts used by Castoriadis, as Arnason did. Thus, as the same author stresses, Luhmann’s “concept of system remains dependent on biological paradigms and capable of drawing on their internal development, but it is also characterized by a growing emphasis on the logical properties and performances of self-referential systems in general and social systems in particular (...) Luhmann thematizes meaning only as a medium of systemic logic”.^[40] So, Luhmann effectively drains the concept of meaning of the fundamental imaginary or creative element which characterizes History — something perfectly compatible with his evolutionary conception of both meaning and History. On the contrary, Castoriadis stresses that “It is impossible to understand what human history has been or what it is now outside of the category of the imaginary” and he then goes on to define meaning as follows:^[41]

A *meaning* appears here from the very start, one that is not a meaning of the *real* referring to what is perceived, one that is neither strictly rational nor positively irrational, neither true nor false and yet that does belong to the order of *signification* and that is the imaginary creation proper to history, that in and through which history constitutes itself to begin with.

Finally, the implications of using the limited concepts of systems theory, as applied in the analysis of social systems and social change, become all too evident when one moves to the significance of power structures/relations, as well as of class divisions in today's society. The fact that power relations are peripheral in Luhmann's theory becomes obvious by statements like the following one:[\[42\]](#)

An important structural consequence that inevitably results from the construction of self-referential systems deserves particular mention. This is *abandoning the idea of unilateral control*. There may be hierarchies, asymmetries, or differences in influence, but no part of the system can control others without itself being subject to control. Under such circumstances it is possible —indeed, in meaning-oriented systems highly probable— that any control must be exercised in anticipation of counter-control. Securing an asymmetrical structure in spite of this (e.g., in power relationships internal to the system) therefore always requires special precautions.

The obvious question that arises here, on which system theorists are silent, is who controls the various systems and subsystems (or, I would prefer totalities and sub-totalities) and what is the role of the institutions which characterise these systems in securing an unequal distribution of power and therefore an unequal degree of control? Are these systems controlled by all members of the social groups that constitute their members, in which case we may talk about autonomous (i.e. self-determined) systems, or are they controlled instead by minorities, by elites, which dominate the other members? It is clear that no meaningful analysis of the character of the relations between the various systems and subsystems is possible unless the nature of them as autonomous or heteronomous is clarified first. It will be for instance almost tautological to talk about the interdependence between the political and the economic systems without referring to the issue of who controls these systems. The fact that the elites controlling these systems may be in relations of interdependence between them and also vis-à-vis other elites in control of alternative forms of social power (e.g. mass media) does not of course deny the crucial fact that the same elites are in a position to dominate the social groups that are not in a position to exercise a significant degree of power—even when they constitute the vast majority of the population. Therefore, it is only in cases of autonomous systems that we may assume genuine relations of interdependence[\[43\]](#) between the various systems and subsystems and not in every case, as Luhmann does.

It is this undifferentiated conception of society used by Luhmann and other systems analysts which make systems theory particularly useful as a new social paradigm for the present internationalised market economy. Thus, not only Luhmann does not distinguish between today's social "classes" but he does not even see that the present separation of society from polity and the economy is incompatible with a free society since this separation implies that society does not (and cannot) effectively control either the former or the latter.[\[44\]](#) In fact, the following conception of society offered by Luhmann[\[45\]](#) could perfectly form the basis of this new paradigm:

society is the all-encompassing social system that includes everything that is social and therefore does not admit a social environment (...) there is finally only one society: the world society

which includes all communication and thereby acquires completely unambiguous boundaries.

System theory's functionalism and its implications

As David Roberts, the editor of a special issue on Luhmann's systems theory of society has recently pointed out,^[46] "Niklas Luhmann's systems theory of society represents the most sophisticated and significant contemporary reworking of the functionalist tradition in sociology through *its* incorporation of second order cybernetics and biological system models, based on the concept of autopoiesis". However, despite the obvious influence of Parsonian functionalism on Luhmann's functionalism, there are also some significant differences between the two types of functionalism, as Eva Knodt emphasised in her introduction to *Social Systems*:^[47]

What distinguishes the systems-theoretical approach to communication from semiological, hermeneutic, and action-theoretical accounts is a probabilistic framework that subordinates structure to function and allows the former to be seen as an emergent order that is dynamic and constantly changing. With his explicit subordination of structure to function, which cannot be emphasized enough, Luhmann breaks not only with the conservatism of Parsons's "structural functionalism," but with all versions of linguistic structuralism as well.

So, the question is: does Luhmann's functionalism really break with the conservative evolutionism/functionalism of "orthodox" sociology, or does it simply constitute a sophisticated restatement of the same? In other words, is it just the Parsonian functionalism which is conservative, or is it perhaps that any kind of functionalism, Marxist or systems-oriented, is inherently conservative and therefore incompatible with a radical analysis of society? The thesis I would like to support in this section is that, even if it is granted that a functionalist theory like that of Luhmann could improve our knowledge of how social systems function, still, the same cannot be assumed with respect to the most important question of radical social analysis: how "systemic" change takes place. To my mind, at least, it is obvious that the evolutionist and functionalist character of systems theory makes it singularly inappropriate to interpret "systemic" social change—a necessary requirement for a theory to qualify as a tool for radical analysis. In fact, as Arnason points out, Luhmann's systems paradigm is not only a *priori* dismissive of anti-systemic perspectives on fragmentation and conflict but it also ends up with "a markedly more conservative version of the mainstream sociological image of modernity":^[48]

A comprehensive change of core institutions can only be envisaged as a catastrophe, i.e. as an abrupt transition to unprecedented and unforeseeable forms of systemic stability. Luhmann's detour through the alternatives represented by Marx and Novalis—the revolutionary vision of social change and the romantic release of creative imagination—thus leads to a paradoxical result: a markedly more conservative version of the mainstream sociological image of modernity. The ideas which originally served to open up horizons beyond the historical present and the established framework are translated into guarantees of closure and stability.

But, why functionalism and evolutionism are incompatible with a liberatory project, like that of Inclusive Democracy? Briefly, for three reasons: First, because an evolutionist perspective of History is incompatible with History itself, particularly as far as systemic change is concerned. Second, because functionalism, of any kind, is incompatible with the imaginary or creative element in History. And third, because functionalism replaces the subject with structures, or values. So, let us examine in more detail these points.

Starting with the first point, Luhmann's evolutionary perspective becomes obvious when he discusses the meaning of structural with respect to social change. As he observes, social change means structural change since, as he puts it, "one can speak of change only in relation to structures (...) systems are identified by structures which can change. To this extent one is justified in saying that the system changes when its structures change"^[49] (...) autopoietic reproduction presupposes structural change."^[50] But, none of the forms of structural change he describes (adaptation, self-adaptation and "morphogenesis" which is an evolutionary process) presupposes a break with the past.

Not surprisingly, his concept of systems differentiation links the theory of self-referential systems to a theory of evolution. Thus, as Eva Knodt observes, social systems, as autopoietic systems, evolve through time thanks to their capacity to transform unorganized into organized complexity —a necessary process so that they can cope with their hypercomplex environment. System differentiation is therefore a process of increasing complexity. Furthermore, as Luhmann stresses, "more demanding (improbable) forms of system differentiation are evolutionary achievements that, when achieved, stabilize systems on a higher level of complexity".^[51]

But, then the question arises how can we reconcile such sweeping generalizations with actual History? Was for instance the Macedonian and later the Byzantine and Othoman rule representing higher levels of complexity than the classical Athenian democracy? Were these empires expressing higher forms of political organization, or higher levels of achievement in the arts, the sciences, or philosophy than the Athenian "golden era"? If we assume —and most historians would agree with this assumption— that these empires represented in fact a regression to lower levels of complexity how can we explain it? Would it be logical to assume that the Athenian democracy represented in fact a break with the past which created what Castoriadis calls a new "eidos" (form) within the overall history of being i.e. a type of being that reflectively gives to itself the laws of its being which indeed represented a much higher level of complexity? And, further, would it be equally logical to assume that with the collapse of it collapsed also a whole world of meanings, of affects, and of intentions —of social imaginary significations— created by these societies and holding them together?

But, if we accept this hypothesis then we have to use a different conception of History than the one used by systems theorists and all functionalists, i.e. we need a conception which sees history as creation of significations and institutions embodying them. Within such a view of History, we can see that almost all societies have instituted themselves as heteronomous, and that democracy and philosophy were the twin expressions of a social-historical rupture, which created the autonomy (social and individual) project, whose

meaning is the refusal of closure and the establishment of another relationship between the instituting and the instituted at the collective level.^[52] In other words, we need a non-functionalist conception which sees History as impossible and inconceivable outside of the *productive* or *creative Imagination*, outside of what Castoriadis has called the *radical Imaginary*.^[53] This is because human beings are not just biological organisms with a given set of needs; therefore, the institutions they create, as well as their characteristics, cannot just be explained by the function they fulfill in society, as the various kinds of functionalism assume. As Castoriadis^[54] aptly put it:

We know the needs of a living being, of a biological organism, and the functions that correspond to it; but this is because the biological organism is nothing but the sum of the functions *it* performs, the functions that make it living. A dog eats to live, but one could just as well say that it lives to eat: for it (and for the species, dog) living is nothing but eating, breathing, reproducing and so on. But this is meaningless with respect to a human being or to a society. A society can exist only if a series of functions are constantly performed (production, child-bearing and education, administrating the collectivity, resolving disputes and so forth), but it is not reduced to this, nor are its ways of dealing with its problems dictated to it once and for all by its “nature”. It invents and defines for itself new ways of responding *to* its needs as well as it comes up with new needs.

Luhmann’s concept of autopoiesis however is drained off any imaginary dimension since it refers to a society as a system that is purely functional, as the ensemble of functions intended to satisfy human needs:^[55]

the social system of modern society is at once the political function system and its environment within society, the economic function system and its environment within society, the scientific function system and its environment within society, the religious function system and its environment within society, and so on.

However, there is no doubt that social institutions cannot just be reduced to their functions and that they draw their source also from the *social imaginary*, which is interwoven with the symbolic. In other words, social institutions have to be seen as consisting of both a functional component and an imaginary component, otherwise, it will be impossible to interpret types of society in which institutions are “functional” but only in relation to ends that stem neither from functionality, nor from its contrary, (like for instance, a theocratic society, or even modern capitalist society which creates a continuous flow of new “needs” and exhausts itself in satisfying them). One therefore would have to agree with Castoriadis^[56] that societies can be neither described nor understood in *their very functionality* —except in relation to intentions, orientations, chains of significations, which not merely escape functionality but to which functionality is in large part subservient— and that the social word in general has to be seen in relation to these imaginary significations:

The social world is in every instance, constituted and articulated as a function of such a system of significations, and these significations *exist*, once they have been constituted, in the mode of what we called the *actual imaginary* (or the *imagined*). It is only relative to these

significations that we can understand the “choice” of symbolism made by every society, and in particular the choice of its institutional symbolism, as well as the ends to which it subordinates “functionality”.[\[57\]](#)

But, let us now examine the third reason why functionalism is incompatible with a liberatory project like that of inclusive democracy, i.e. the fact that functionalism (Parsonian or the systems theory variety of it) replaces the subject with structures, or values. For Luhmann, social systems are composed of actions (or “are broken down into actions”) which in turn are constituted in social systems by means of communication.[\[58\]](#) In this problematic, it is not the “subject” which is at the center of the analysis of a system but the relations between it and the “environment”. As Luhmann puts it :

[T]he concepts of function and functional analysis no longer refer to the “system” but to the relationship between system and environment[\[59\]](#) (...) the environment, not the “subject” “underlies” social systems and “underlies” means only that there are preconditions for the differentiation of social systems (e.g. persons as bearers of consciousness) that are not differentiated with the system[\[60\]](#)

No wonder therefore that in systems analysis there is no talk about social *praxis*[\[61\]](#) and its fundamental role with respect to social change, particularly systemic change. Thus, in contrast to the Inclusive Democracy project in which social change is analyzed in terms of the choices, policies, or strategies of interest groups, in interaction with the existing structures, in systems analysis the central stage is occupied by a set of systems, sub-systems and their environments, collective action (but not collective actors) and so on. Actors, “the subjects”, disappear, or are mentioned only peripherally. This, as I mentioned above, rules out any meaningful discussion of the role of power structures and relations, as well as that of various “classes”, in social change — something which is particularly convenient to the ruling elites!

But, it is not only “orthodox” social scientists which follow this path. For Althusserian Marxists, also, as I attempted to show elsewhere,[\[62\]](#) the true subjects and real protagonists of history are not biological humans but the relations of production. Humans, in this context are only the “supports” (Trager), or bearers of the functions assigned to them by the relations of production.[\[63\]](#) In fact, as a sympathetic to Marxism critic[\[64\]](#) pointed out, in a critique which is not completely irrelevant to systems theory,

Althusserian Marxism is not very different from Parsonian functionalism. In both these theoretical traditions, collective actors are portrayed as puppets and in consequence are constitutionally incapable of dealing with problems of social change and development. This basic weakness of both systems is hidden by an extremely complicated and obscure terminology which ultimately presents society as a reified structural entity made up of systems and sub-systems which, in an anthropomorphic way, pull all the strings behind the actors backs.

3. The policy implications of systems theory and complexity

The failure of systems theory to explain protest and social conflict

Giancarlo Corsi's[65] attempt to explain the present anti-globalisation movement using the tools of systems theory could be taken as a case study of the intrinsic utter inadequacy of this tool of analysis to interpret social phenomena involving conflict —something of course entirely predictable on the basis of the analysis above. I will not deal here with his arguments about the nature and significance of globalisation, with most of which I would disagree, and I will concentrate instead on the usefulness of systems theory as a tool of analysis of the anti-globalisation movement.

Corsi, following Luhmann, refers to an undifferentiated “society”, in which presumably there are no ruling elites, no “overclasses” and “underclasses” —to mention just some of the present class divisions. In this problematique, there are no power structures and power relations among social groups, while the huge and growing concentration of power (economic, political, social), within and between market economies, seems not to be particularly important. Instead, what seems to matter most is that decision-taking is mostly a myth, given the degree of uncertainty involved.

It is no surprise that within this framework the anti-globalisation movement is characterised as protest against “society” in the society. In a sense, it is of course true that both “protest and the object of protest” i.e. both the anti-globalisation movement and those this movement protests against (multinationals, WTO, IMF etc), are parts of the same “society”. But this is a tautological sense which does not reveal anything about the nature of the conflict, the dynamics of change, or even the motives of the various social groups involved. In other words, unless we develop a “class” analysis of today’s society —which as I have shown elsewhere[66] has to transcend the Marxist analysis based on economic categories alone— one cannot understand that it is exactly the **permanent** exclusion of many social groups (which happen to be the vast majority of the population!) from effective decision-making (which happens to be carried out by small minorities: the political and economic elites) that motivates them to protest against decisions that significantly affect their lives and on which they have little, if any, say.

However, such a permanent exclusion from decision-making is a fundamental feature of any society characterised by an unequal distribution of power in its various forms, and this is very much the case in the so-called “democracy” we live today, which is based on the twin pillars of representative democracy and the market economy. All this is dismissed by Corsi with the assertion that he does not agree with the “idea of society as a site of domination”. But, as few will disagree with the intimate relation between domination and concentration of power, this is merely an assertion against, for instance, the mounting evidence on the present explosive concentration of economic power, which even the UN[67] (not exactly a centre of revolutionary research) characterises as tantamount to serious violation of human rights.[68] And it is of course Corsi’s privilege to assert that the fact that the income of 582m people in the

world is only 10 percent of the wealth of 200 billionaires is not an indication of economic (and indirectly political) domination, but very few would agree with him.

For Corsi, to understand the significance of the anti-globalisation movement we have to refer to two aspects of modern society: the centrality of risk and the impossibility of general consensus. The former aspect is based on abstract generalities of the following form:[\[69\]](#)

there is no longer any space for certainty: no matter how one attempts to create conditions assuring a particular future, the possibility of one's decisions having a negative outcome (losses, catastrophes) cannot be excluded (...) the future is open and unpredictable.

But again, such statements are almost tautological, unless one relates them (as Corsi does) to the well-known vagaries of planning and the big distance which separates planning targets from actual results, either at the micro-economic level of the enterprise, or at the macro-economic level of the economy as a whole. However, it is obvious that the protesters (or at least some of them) have different things in their minds. Their anger is not aroused by the fact that the reforms introduced by the political and economic elites usually do not achieve their targets but by the fact that, as I mentioned above, they are permanently excluded from the process of decision-taking —a process which has led in the first instance to the various serious problems or crises that necessitated the reforms. When for instance people protest against the inequality which has grown explosively since the emergence of the present internationalised market economy, they protest against a system whose dynamic inevitably led to the present huge concentration of economic power, as well as against the institutions which legitimised and/or facilitated this concentration (WTO, IMF, World Bank etc). It is not difficult to predict, using radical or even “orthodox” economic theory, that once open markets for capital and commodities are established (a necessary requirement for the effective functioning of an internationalised market economy) the competition which would develop between those with stronger economic power (in terms of productivity competitiveness and so on) and those with weaker power would lead to the victory of the former. Nor is it difficult to predict (despite the generalities about risk etc) that a decision to deregulate and make labour markets flexible would lead to massive part-time and occasional work, job uncertainty, higher pressures at work and so on.

It is therefore a fact that in a market economy it is:

- the economic elites which take the important decisions in the boardrooms of multinational corporations and similar places;
 - the political elites which institutionalise the necessary institutional arrangements for the implementation of such decisions; and, finally,
 - the elites controlling the mass media which legitimise such decisions
- and it is this fact alone that angers the protesters and not the “tension between the social dimension and the temporal dimension, between those who decide to take risks and those who are affected”, as Corsi claims.

As regards the second aspect mentioned by Corsi —the impossibility of general

consensus— here the blame is on “the uncertainty that manifests itself as risk or danger (which) leads to disagreement and the assumption of opposing positions that are unlikely to find reconciliation” and on the fact that “protestors only rarely have practical alternative proposals regarding economic development or the use to which scientific research ought to be put; they are instead always quite certain that they do not want to accept the consequences of that which few are deciding for many.”

However, there is an alternative explanation which may fruitfully explain the impossibility of general consensus —an explanation which is ruled out within the functionalist framework of systems theory whose point of reference is undifferentiated systems and societies: that general consensus (which of course does not mean unanimity) is by definition impossible in a divided society in which power and consequently the ability to take part in decision-taking is unequally distributed. There is no reason for instance why the higher income groups and those with secure and well paid jobs should protest against globalisation —a phenomenon that mostly benefits them. But there is every reason in the world for the victims of it (those who lost their jobs or have now to do with insecure or badly paid jobs, the victims of the demise of the welfare state and so on) to protest against it.

Next, Corsi attempts to explain why protesters turn against big organisations despite the fact that, as he puts it, “present-day society, in all of its subsystems, finds itself unable to do without formal organizations and the related fact that “the theory of organizations and sociology long ago demonstrated the illusory nature of this faith in the possibility of controlling social reality and directing the course of time”. This leads him to the conclusion that “the mythologization of the multinational is a further sign of the extent to which even today it is still easy to believe in the possibility of controlling reality”. Here, the abstract generalities about the impossibility of directing the course of time are mixed with the impossibility of controlling social reality. But, of course, social reality is being controlled by the various elites and the protesters (as well as perhaps everybody else apart from system theorists) are well aware of this fact. This is said, of course, not in the sense that phenomena like the rise of neoliberalism or the emergence of the present internationalised market economy are the result of some kind of “conspiracy” of the elites, as some in the Left maintain,^[70] but in the sense that the very establishment of the market economy, two centuries ago, was impossible without the critical help of the state, (i.e. the decisions of political elites),^[71] and that the reproduction of this system, as well as the enhancement of its dynamic crucially depends on the decisions of social groups which particularly benefit from it. Thus, it is the decisions of the political elites, usually on the initiative of corresponding decisions by the economic elites, which —to mention just a few examples— led to:

- the effective undermining of the welfare state and, correspondingly, to the drastic change of the “social reality” of millions of people;
- the privatisation of public sectors, including public utilities, which contributed significantly to the massive rise of unemployment, part-time employment and so on,
- the drastic tax cuts for the rich, which created further inequality in the distribution of income.

It is of course true that politicians *had* to introduce policies like the ones

mentioned above, which were necessitated by the logic and the dynamic of the present internationalised form of the market economy. But, given that the benefits of such policies were distributed very unequally, one cannot talk about an undifferentiated “society” or “economy” but about social groups that take decisions which mostly benefit themselves. Furthermore, despite all the literature about the difficulties in controlling the future, the uncertainty and the risk involved, a very significant part of social reality can be, and has been in the past, effectively controlled by the elites that take the relevant decisions.

But, it may also be interesting to consider how the tools of systems analysis could mystify rather than explain social phenomena like the protest movement. Corsi’s statements about the nature of the demands of the protest movement are indicative:

Protest is characterized precisely by proposing impractical alternatives, in the simple sense that these alternatives cannot be taken as objects for decision-making. (...) Protest has no decision-making alternative to propose: it limits itself to indicating that which remains beyond the goals and aims of the decision-makers, and that is the *indeterminate nature of the future*. From this point of view the protest against globalisation is clearly a product of globalisation, that is, of a society that is reacting to itself: it reacts against the presumption of deciding and the limitation of that which can be the object of decision-making.

I would have no difficulty to agree with him on one point. It is indeed true that the protest against globalisation is “a product of globalisation” —but not for the reason used by Corsi. To my mind, the inability of decision-makers to take effective control against globalisation is also a product of the same phenomenon, but only in the sense that the present neoliberal/social-liberal policies are the only policies possible —a sense, which presupposes that we take for granted the present system of the market economy. In the same sense, it is indeed true that the demands of the reformist currents within the anti-globalisation movement are “impractical”, or I would say utopian. But, this is precisely the rationale behind the thesis I supported elsewhere^[72] that an effective struggle against globalisation has to aim at an alternative system of social organisation, which would be the basis for a new world order based on inclusive democracy. In contrast therefore to Corsi’s conclusion that “there is no alternative to globalisation”, for those that do not take the present form of social organisation as granted, **there is** an alternative to globalisation and this can indeed be achieved by collective decision-making —provided the collective political will has been created for such a systemic change.

Complexity and the internationalised market economy

As the insightful article by Steve Best and Douglas Kellner^[73] in this volume shows, it is not only systems theory which, as we have seen in connection to Corsi’s paper, promotes the thesis “no one is in control”. Complexity theory has also been used by Kevin Kelly for exactly the same purpose. And the similarities do not end there. Supporters of systems theory and complexity claim that this theory is capable of transcending the division between the human and the natural sciences, ignoring the importance of social divisions that characterise the object of study of social sciences, as well as the role of the

imaginary. The inevitable consequence of this “monistic” world-view is that supporters of this theory believe that we may explain social reality on the basis of the insights of natural sciences, collapsing in the process the economy and society into nature. One may therefore argue that it is not accidental that adherents to this theory implicitly (if not explicitly) assume that we live in undifferentiated “societies” in which there are no power structures and relations, or “class divisions”. Such an assumption is in fact necessary in any attempt to unify natural and social sciences in a “grand” scientific theory, given that a monistic view of science is only possible when the object of study^[74] can be assumed to be similarly undifferentiated.

It is not therefore surprising that for Kelly, as Best and Kellner point out, capitalism is “a complex system that will steer itself into order, providing a replay of Adam Smith’s *laissez-faire*”, or that “the economy is a self-organizing totality that is self-regulated by feedback mechanisms and the magic of the market”. Neither is surprising that, as the same authors stress, (who are not altogether hostile to complexity theory, supporting what they call a ‘critical’ version of it), today, “complexity theorists celebrate the free market system, championing the market as a chaotic system” and turning complexity theory into “a bizarre blend of Adam Smith and chaos theory, with the market as a homeostatic «feedback loop».”

To my mind, the important issue raised, particularly by contributions like that of Best and Kellner or that of Arran Gare,^[75] with respect to the question that the title of this article asked, is whether systems theory and complexity are potential tools of radical analysis (assuming that it is possible to select the elements of both which are compatible with a new liberatory society, like the one proposed by the Inclusive Democracy project). Gare is particularly emphatic on this when he states that despite the fact that both systems theory and complexity have been used to justify the dismantling of the welfare state and the revival of *laissez-faire* capitalism, still,

radical ideas should not be rejected because they have been appropriated and utilized by those with power within existing oppressive societies. It is almost inevitable that the most powerful ideas of radicals will be exploited by the existing ruling class, albeit in distorted form. If those calling for a radical transformation of society reject any ideas which have been appropriated and utilized in any way whatsoever within the existing social order they will be left with very little to effect a social transformation. What is more important is to understand how radical ideas have been deformed and what aspects of them need to be upheld if their revolutionary potential is to be realized.

However, the crucial question which arises here is the following one: is it accidental that both systems theory and complexity, not only have been used effectively to justify the existing form of social organisation, but —even more important— are perfectly amenable for such a use? To put it differently, is it accidental that no one to my knowledge has ever used the tools of neoclassical economics to justify the need for a non-capitalist society and, vice versa, nobody has ever used the tools of Marxist economics to justify the need for the continuous reproduction of the capitalist system?

I think that it would be a great mistake to neglect the intrinsic relationship that always exists between the tools of analysis used and the content of a radical theory. We simply cannot use tools of analysis which, by their design and nature, are much more compatible with an analysis aiming to justify the status quo rather than to replace it. The present internationalised market economy has many common elements with systems theory and complexity, as supporters of capitalism have shown. In particular, they share a fundamental characteristic of both: “self-organisation” of systems like the market, which implies the need for minimisation of social controls over it. In this sense, systems theory and complexity are offered as the basis for a new social paradigm that could perfectly become the dominant social paradigm for the internationalised market economy to replace, once and for all, both the liberal and the Keynesian paradigms. Furthermore, such a new paradigm, unlike the previous paradigms, would be based in a new ‘grand’ synthesis, which could also claim to be “scientific” (in the sense we use the term for natural sciences).

Conclusions

To my mind, as I attempted to show elsewhere,^[76] the liberatory project cannot and should not be justified on the basis of some kind of “science” or “objective” analysis. This is true even with respect to the attempt to justify the need for a self-organised society, i.e. an inclusive democracy, on the basis of some sort of “non-reductionist” complexity theory.^[77] It is not accidental that both the reductionist and the anti-reductionist interpretations of complexity theory with respect to society have as their centre of analysis the individual rather than social groups, the former assuming individuals as rational egoists maximising their utility (and apart from this not regarded as agents, the latter assuming them as “free agents”. It is indicative that even for anti-reductionists it is *individual* action which could make a difference to the future of the world.^[78] This is consistent with the view that systemic change could be brought about by the activities of individuals within small and self-sufficient communities, like those in India or Pakistan praised by the well known reformist Vandana Shiva.^[79]

Still, such activities in the South, as I tried to show elsewhere,^[80] which attempt to organise life on the basis of alternative principles of organisation, aim mostly at securing survival *within* the existing society, rather than at replacing it, and similar considerations apply to the various “life-style” activities developing in the North —as long as they are not an integral part of an anti-systemic movement. In other words, it could be argued that systemic social change could only be brought about by the subordinate social groups’ social *praxis* something that presupposes a self-reflective *choice* for democracy and autonomy and the building of an explicitly anti-systemic social movement.

However, this self-reflective choice for democracy and autonomy does not need a scientific “self-organisation” theory to justify it. Particularly so, if a basic element of such a theory is an undifferentiated “society”. Therefore, although systems theory and complexity may be useful tools in the natural sciences, in which they may offer many useful insights, they are much less useful in social sciences and indeed are utterly incompatible, both from the epistemological point of view and that of their content, with a radical analysis aiming to systemic change towards an inclusive democracy.

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- [1] Niklas Luhmann, *Social Systems*, (Stanford: Stanford University Press, 1995).
- [2] See for instance Arran Gare, “Aleksandr Bogdanov and systems theory” (in this issue). [abstract](#)
- [3] The dominant social paradigm is defined as the system of beliefs, ideas and the corresponding values, which is associated with the political, economic and social institutions (see for further analysis of the dominant social paradigm in relation to culture, T. Fotopoulos, “[Mass media, culture and democracy](#)”, *Democracy & Nature*, Vol. 5, No. 1 (March 1999), pp. 33-64.
- [4] Eva Knodt in her foreword to Luhmann’s, *Social Systems*, p. xii.
- [5] Ibid. p. xvii
- [6] Takis Fotopoulos, *Towards An Inclusive Democracy* (London: Cassell, 1997) ch. 8.
- [7] See D.W. Hamlyn, *The Theory of Knowledge* (London: Macmillan, 1970), and, also, Frederick Copleston, *A History of Philosophy* (London: Search Press, 1976).
- [8] D.W. Hamlyn, *The Theory of Knowledge*, pp.132-36.
- [9] See e.g Lakatos and Musgrave (eds) *Criticism and the Growth of Knowledge*, (Cambridge: Cambridge University Press, 1970).
- [10] H. Katouzian, *Ideology and Method in Economics* (London: Macmillan, 1980), p. 53.
- [11] Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970).
- [12] Paul Feyerabend, *Farewell to Reason* (London: Verso, 1987), p. 8.
- [13] Murray Bookchin, “Recovering Evolution: A Reply to Eckersley and Fox,” *Environmental Ethics*, Vol. 12 (1990), p. 2.
- [14] Takis Fotopoulos, *Towards An Inclusive Democracy*, pp. 319-320.
- [15] Murray Bookchin, *The Philosophy of Social Ecology, Essays on Dialectical Naturalism* (Montreal: Black Rose Books, 1995).
- [16] C. Castoriadis, *The Imaginary Institution of Society* (Cambridge: Polity Press, 1997), p. 35.
- [17] C. Castoriadis, *Philosophy, Politics, Autonomy* (Oxford: Oxford University Press, 1991), pp. 104-05.
- [18] Barry Hindess and Paul Q. Hirst, *Pre-Capitalist Modes of Production* (London: Routledge & Kegan Paul, 1975), pp. 313–23. See also Antony Cutler, Barry Hindess et al., *Marx’s Capital and Capitalism Today* (London: Routledge & Kegan Paul, 1977), Ch. 4.
- [19] See Takis Fotopoulos, *Towards An Inclusive Democracy*, pp. 320-28.
- [20] Ibid., pp. 328-40.

- [21] Murray Bookchin, *Remaking Society* (Montreal: Black Rose Books, 1989), p. 25.
- [22] M. Bookchin, *The Philosophy of Social Ecology*, p. xii.
- [23] *Ibid.*, p. xi.
- [24] See, e.g., Stuart A. Kaufmann, *The Origins of Order: Self organisation and Selection in Evolution* (Oxford: Oxford University Press, 1993).
- [25] Glenn Albrecht, “Directionality Theory: Neo-Organicism and Dialectical Complexity” (in this issue). [abstract](#)
- [26] See Takis Fotopoulos, “[Social Ecology, Eco-Communitarianism and Inclusive Democracy](#)”, *Democracy & Nature*, Vol. 5, No. 3 (November 1999) pp. 561-576.
- [27] Takis Fotopoulos, *Towards An Inclusive Democracy*, p. 331.
- [28] Glenn Albrecht, “Directionality Theory: Neo-Organicism and Dialectical Complexity”.
- [29] Niklas Luhmann, *Social Systems*, p. 483.
- [30] *Ibid.*, p. 485.
- [31] *Ibid.*, p. 487.
- [32] *Ibid.*, p. 486.
- [33] *Ibid.*, p. 487.
- [34] *Ibid.*, p. 58.
- [35] *Ibid.*, p. 278.
- [36] *Ibid.*, p. 482.
- [37] See for an analysis of classes today Takis Fotopoulos, “[Class Divisions Today: The Inclusive Democracy approach](#)”, *Democracy & Nature*, Vol. 6, No. 2 (July 2000) pp. 211-251
- [38] Murray Bookchin, *The Philosophy of social ecology* (Montreal: Black Rose, 1995) p. 128.
- [39] See Johann P. Arnason, “Novalis, Marx and Parsons: Niklas Luhmann’s Search for Modernity”, *Thesis Eleven* (No. 51, Nov. 1997) pp. 75-90.
- [40] *Ibid.*, p. 79.
- [41] C. Castoriadis, *The Imaginary Institution of Society*, p. 160.
- [42] Niklas Luhmann, *Social Systems*, p. 36.
- [43] As I pointed out elsewhere (see T. Fotopoulos, “Class Divisions Today - The Inclusive Democracy approach”) “There is therefore a basic difference as regards the nature of interdependence relations of an autonomous totality versus those of a heteronomous one. In the former case, these relations exist among all members of the totality and are implied by the negation of power which is the fundamental characteristic of such a totality. In the latter case, interdependence relations exist only among the dominant members of the hierarchical totality and are implied by the unequal distribution of power. It is therefore only in the first case that we have genuine relations of interdependence in the totality because power is

shared equally between all its members (in effect there are no power relations) whereas in the second case we have a limited interdependence between the dominant units as a by-product of power relations and structures.

[44] See e.g. Niklas Luhmann, *Social Systems*, pp. 407-408; see also Foreword, p. xxxv.

[45] *Ibid.*, pp. 408-410.

[46] David Roberts, "Introduction", *Thesis Eleven* (no 51, Nov. 1997), p. iii.

[47] Eva Knodt, "Foreword" to N. Luhmann's *Social Systems*, p. xxviii.

[48] Johann P. Arnason, "Novalis, Marx and Parsons: Niklas Luhmann's Search for Modernity", p. 78.

[49] Niklas Luhmann, *Social Systems*, p. 345.

[50] *Ibid.*, p. 347.

[51] *Ibid.*, p. 19.

[52] See C. Castoriadis, *Philosophy, Politics, Autonomy*, p. 31.

[53] "The radical imaginary deploys itself as society and as history: as the social-historical. This it does, and it can only do, in and through the two dimensions of the *instituting* and the *instituted*. The *institution* is an originary creation of the social-historical field, transcending, as form (eidos) any possible «production» of individuals or of subjectivity", (C. Castoriadis, *Philosophy, Politics, Autonomy*, p. 143).

[54] C. Castoriadis, *The Imaginary Institution of Society*, pp. 116-17.

[55] Niklas Luhmann, *Social Systems*, p. 191.

[56] C. Castoriadis, *The Imaginary Institution of Society*, p. 136.

[57] *Ibid.*, p. 146.

[58] Niklas Luhmann, *Social Systems* p. 137.

[59] *Ibid.*, p. 176.

[60] *Ibid.*, p. 178.

[61] See Takis Fotopoulos, "Class Divisions Today," pp. 237-238.

[62] Takis Fotopoulos, *Towards An Inclusive Democracy*, pp. 325-26.

[63] Luis Althusser & Etienne Balibar, *Reading Capital* (London: NLB, 1970), p. 180.

[64] N.P. Mouzelis, *Modern Greece, Facets of underdevelopment*, (London: Macmillan, 1978), p. 49.

[65] Giancarlo Corsi, "Protest and decision-making in a society of blame" (in this issue). [abstract](#)

[66] See for an analysis of class divisions today, T. Fotopoulos, "Class divisions today-The Inclusive Democracy Approach".

[67] UN, *Human Development Report 2000* (UN, New York, 2000).

[68] As V. Brittain and L. Elliott point out, “for the first time since it was launched in 1990, the HDR argues that these are inequalities which the UN classes as human rights violations,” *The Guardian* (29/6/2000).

[69] Giancarlo Corsi, “Protest and decision-making in a society of blame”.

[70] See T. Fotopoulos, *Towards An Inclusive Democracy*, ch. 1 and “Mass Media, Culture and Democracy”, *Democracy & Nature*, Vol. 5, No. 1 (March 1999) pp. 33-64.

[71] T. Fotopoulos, *Towards An Inclusive Democracy*, ch. 1.

[72] See T. Fotopoulos, “[The Limitations of Life-style Strategies: the Ecovillage «Movemnet» is NOT the Way Towards a New Democratic Society](#)” *Democracy & Nature*, Vol. 6, No. 2 (July 2000) pp. 287-308.

[73] Steve Best and Douglas Kellner, “[Kevin Kelly’s Complexity Theory: The Politics and Ideology of Self-Organizing Systems](#)” (in this issue).

[74] It is obvious that this is true either we assume that humans are the object of study or subjects themselves. I would not therefore agree with the case put forward that “the appreciation of humans as subjects no longer involves an unbridgeable chasm with natural sciences” (see Arran Gare, “Introduction” –this issue). This is because the theoretical framework within which the activity of humans as subjects is appreciated is also part of a paradigm with built-in assumptions about the interaction between the existing institutional framework and human activity. Therefore, whether society is seen as consisting of people who are “the object of study” of social scientists, or as consisting of people who are subjects themselves, the question still remains as to how a similar degree of intersubjectivity to the one prevailing in natural sciences could be achieved in social sciences, given that the social divisions created by the present institutional framework affect much more the way social scientists see social reality than the way natural scientists see Nature.

[75] Arran Gare, “Aleksandr Bogdanov and systems theory” (in this issue).

[76] Takis Fotopoulos, *Towards An Inclusive Democracy*, ch. 8.

[77] See Arran Gare, “Introduction” (this issue). [abstract](#)

[78] See Arran Gare, “Introduction” for further references.

[79] See for example Vandana Shiva’s proposals for a capitalist “globalisation with human face” in “The round to the citizens”, *The Guardian* (8/12/1999).

[80] See Takis Fotopoulos, “The Limitations of Life-style Strategies: the Ecovillage Movemnet is NOT the Way Towards a New Democratic Society”, pp. 287-308.

