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Ecology of ideas and ecology's ideas

Alessandro Bellafiore

Università di Urbino Carlo Bo, Urbino, Italy

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Abstract

Purpose – The assumption of ecological thinking as a main ideology for social systems implies many relevant changes concerning the relation between social and ecological systems. Changes meaning a deep redefinition of goals and strategies pursued for centuries by human communities, like the uncertainty reduction in relation to resources' availability and management, defence respect to variance in ecological system's as well as its constraint within social systems themselves. The paper aims to discuss these issues.

Design/methodology/approach – An analysis of literature and critic perspectives allows to highlight different aspects of the imagined transition toward an ecologically informed social organisation. Some considerations will be presented about obstacles to change in social systems as well as about the different levels of response to solicitations coming from ecological thinking and ecological issues.

Findings – Many of the considered theoretical proposals lead to assume that those solicitations and the subsequent responses would impact directly on fundamental sets of rights and freedoms, today considered as untouchable.

Research limitations/implications – The establishment of an ecological state – at least as described here – even if it appears as a desirable perspective, it would pass through a re-design of the concept of citizenship as well as of the relation between individuals and social institutions.

Originality/value – The paper tries a definition of the main theoretical topics to be assessed, hoping they may be a useful base for future search.

Keywords Social systems, Ecology, Ecological thinking, Engineered independence, Fiduciary bubbles, Uncertainty reduction, Ecological systems, Purposive consciousness, Cultural behaviour, Instinctive behaviour

Paper type Conceptual paper

Today it is quite common to hear about the importance of ecology and ecological issues, but only a few people, even among scholars, actually ask themselves questions such as “how might ecological thinking change society?” Or, in other words, how might ecological thinking change the way in which we narrate society, if we imagine adopting ecological thinking as the main ideology – that is a coherent set of values guiding behaviours and policies? I will explore what ecological thinking is and the ways in which it differs from our consolidated cultural tradition. Finally, some considerations on how this affects the Western idea of citizenship will be presented.

Toward a definition of ecological thinking

The term “ecology” has been, and is currently, used in a narrower sense than was intended by its creator Haeckel. Today the word solely refers to a natural science, a set of models and theories useful for describing and explaining phenomena, and for producing data about them. However, in his 1866 *Generelle Morphologie der Organismen*, Haeckel gave it the wider and richer sense of a science that studies relations and inter-dependencies within a system, implicitly adopting a relational, complex



approach (Haeckel, 1866). The original concept also includes some “political” fallout that is anything but neutral, and a consideration of these aspects is also an integral part of the purpose of this paper. The discrepancy between these two meanings of “ecology” is closely tied to the concept of ecological thinking. Ecological thinking may be considered to stand in a second order relation with ecological science, as it constitutes a set of ideological and moral assumptions derived from data provided by ecological science. These assumptions, when applied to reality, offer guidelines for action and behaviour. There is, however, one inescapable element that marks the difference between ecological thinking and ecological science: reflections on that data, i.e. the formation of some principles on the basis of them – requires an evaluative attitude, which has no part in the aims of ecological science. Because “ecological thinking” involves a moral and political position derived by means of the translation of data and subjected to individuals’ perspectives and sensibilities, the term does not indicate a unique and definite ideological corpus, but rather a stream of thought featuring a general attitude towards a more balanced and cautious approach to ecological systems.

Consideration of ecology in its wider sense has many consequences. It implies an enlargement of the observed object, eluding that atomistic tendency that is sometimes present in natural sciences, and, coherent with its systemic essence. It also implies a renewal of the forms of observation of the relation between social systems (human communities) and ecological systems (the context to which they belong) – as described by Holling *et al.* (2002) and Westley *et al.* (2002) – as well as of the cultural representation of this relation, i.e. what is commonly called nature. The concepts of social and ecological systems enable us to avoid the most traditional concepts of “environment” and “society”, and also to avoid a perspective on their relationship which is based on an idea of separation, to which mere distinction is preferred here. This approach to ecology also inevitably carries a reduction of possible normativity, introducing to the analysis an element of randomness directly linked to the cultural and moral nature of ecological thinking and to the adoption of these principles as a foundation for an ecologically informed social structure.

Uncertainty reduction

As the aim of this paper is the analysis of the effects which the elements described above have on social systems and their behaviour, it seems necessary to develop a category to describe the features of this behaviour. Coherently with the ecological (relational) perspective adopted, the category proposed here is the concept of uncertainty reduction. The reduction of uncertainty may be considered a goal historically pursued by human communities through actions oriented towards an exclusion of the unforeseen. Uncertainty reduction can be framed within the wider concept of engineered independence, at term which indicates that set of knowledge and techniques which aims to reduce the subjection of social systems to the variance of ecological systems, characterising a given human community and shaping its general attitude towards the management of this relation.

Uncertainty reduction manifests itself in two different forms. The first can be described as the development of technological capabilities – based on the ability to foresee and on explanatory models – and of narratives having an instrumental complementary function in describing the world and overcoming the limits of technological capabilities. The model of access to resources deriving from this utilitarian approach has often led to the

accumulation of a huge ecological deficits (i.e. an exploitation of resources superior to regeneration rate, eroding still unused capital) through various forms of resources use (harvesting, grazing, cutting tree, use of water, etc.). This is coupled with the projection of human categories on ecological systems – in terms of “ultimate scope of existence” and distinctions such as useful/not useful, etc. A further element lies in those strategies which are aimed at postponing the variance deriving from adopted behaviours, variance that can manifest itself in the form of changing resources availability, alteration of ecosystem equilibrium, soil desertification, climate change, etc. An effort to radically eliminate this variance is most unlikely to succeed; variance can only be postponed. However, this repeated attempt – with its limited successes – feeds a general cultural conviction about the existence of a possible and real separation from ecological systems. This can result in a loss of comprehension of systems and in a lack of the ability to recognise change, even when it occurs in the forms mentioned above, being hidden by technological sleight of hand or assumed as a “normal” fluctuation.

Forms of description and representation have a key role in shaping the way in which the relationship between systems is conceptualised. They structure the modes of access and use of ecological systems, and at this level the first type of uncertainty reduction is developed. But it has to be stressed that despite partly consisting of abstraction and generalisation, this process is still focused on the practical management of a material relation, pivoting on the rapport between what is needed and what is available.

The second type of uncertainty reduction may be described as an increase in the internal complexity of social systems, in which the management of the relation with ecological systems is taken for granted and the whole process occurs at a cultural level. It occurs within a framework in which the decreasing space for the unforeseen and uncertain is constrained through a complex system of laws and contracts. This type of uncertainty reduction aims, ideally, to cover and regulate any possible matter in hand – which will be, by definition, an issue internal to social systems, as they are the only target of this process. The results of this over-regulation are rigidity of social structures and the creation of “fiduciary bubbles” (i.e. all those cases in which there is an exaggerated degree of trust in the linear functioning of the system with no consideration of unforeseen). This creates systems that are structurally unprepared to deal with variance. A cultural superstructure is therefore created, grounded in an abstract and static representation of ecological systems instead of constantly evolving knowledge. This process is somewhat like a second order uncertainty reduction, as it does not operate on ecological systems but rather on their representation, featuring a separation from social and ecological systems that, while not real, is at least supposed. Largely, if not solely, due to the presence of these processes, the behaviour of social systems is characterised by what Bateson (1972) defined as purposive consciousness, a behaviour resulting from a simplification of the surrounding world oriented towards the achievement of a goal. This simplification is necessary for the existence of the cognitive process, but it is always arbitrary and enormously reduces systemic complexity, hiding links between things and easily becoming a shortcut to mistakes and maladaptive behaviours.

The effects of the two types of uncertainty reduction, the representations developed in the first type of uncertainty reduction and the impositions of cultural only-human categories and other cultural consequences of the second type, can be summed up in a significant degradation of ecological systems and in what is usually enclosed in the

term anthropocentrism. As is well known, this approach, pursued by many human communities, has generated a huge number of ecological and, in turn, social problems. Many of these problems, even when recognised, were often not assessed due to a lack of systemic awareness, a lack of explanatory models, and social rigidity, as Diamond (2011) points out very well.

The birth of ecological science meant the birth of a different approach, based on the observation of relations and the search for complex webs of causal connections. This places under scrutiny the way of looking at the surrounding world and attacks the very legitimacy of the strategies examined above. One of the most important contributions of ecology has been to offer new opportunities to observe present and past phenomena, which were formerly not comprehensible in their full complexity. In this way it produces a true epistemological revolution. The recognition of new problems and inter-relations has been a stimulus for research that, in many cases, produced a comprehension of phenomena, and ultimately an evolution in ecological science. An evolution that, in turn, allowed more detailed retrospective and present analysis, and an increase in awareness, making it possible to recognise new problems. The evident consequences of human behaviours and reflection on the role of human communities within ecological systems suggests a need to question our models of relationship, stressing the limits and inadequacies of social structures which are based on an instrumental view of ecological systems and on the exasperated denial of the systems' inner variance. When this process of renewal is translated into cultural terms, as elements of a new, distinct, way of thinking, then the depth and relevance of the change triggered by ecological thinking becomes manifest, as does its impact on established structures. The cultural form of ecology, in a sense, "amplifies" this phenomenon, adding to what was mere systemic knowledge the weight and the force of a moral assumption; here lies a key element of our considerations.

An examination of the rich literature on the consequences of an ecologically aware analysis of present conditions, and on the changes that should be implemented to make them more suitable, reveals many different premises and opinions. Of these at least two elements may be taken as general features of almost any ecological reflection:

- (1) urging of self-limitation in consumption and access to resources, requiring a corresponding change in everyday behaviours related to consumption habits and freedom of choice, and in the whole system of individual rights; and
- (2) the cultural acceptance of a greater degree of variance, requiring a deep re-design of the economical and legal systems, from simple elements such as where to live, to a reduction in the use of financial tools and their consequences for everyday life.

The acceptance of such proposals for change as valid and proper implies a recognition that anthropocentrism and other older narratives are obsolete and unsuitable. However, the attempt to realise the implications of those proposals is probably one of the most demanding efforts ever undertaken to consciously change culture, and this is the real challenge of ecological thinking. So, if we were to accept that such a change has to occur, on what basis might it take place?

Paths to change

According to Bateson's (1972) well-known evolutionary model of ideas, we may suppose a situation exists in which – following a Lamarckian model – "adaptive"

ideas can diffuse and flourish, being eliminated or replaced by others if they became “maladaptive”. This idea may also apply to the transition toward an ecological state – a social organisation guided and inspired by ecological considerations. However, not all ideas are equally prone to change. This is because ideas, when repeatedly confirmed, tend to change their status becoming principles. They cease to be subject to continuous revision and are treated as true, being repeated over and over with virtually no variation.

In expressing the delicate distinction between cultural and instinctive behaviour, Bateson observed how the former is adopted following a rational comprehension of reasons why it is advantageous and, being built within a communicative process, it is conceptually easier to correct if maladaptive. Instinctive behaviour, in contrast, is adopted without any rational consideration and, being inherited, is more rigid and difficult to change. In this context the distinction between cultural and instinctive behaviour is not used literally, but as a metaphor to describe different attitudes to change. It is also useful to stress how rational considerations may not be sufficient to trigger change or, conversely, that change produced through them may not be sustainable in the long term solely on this basis. Furthermore, as Bookchin (2005) observes, when tied to social structures, some cultural behaviours are often protected from change for reasons not linked to the purpose of a given behaviour, but rather due to the presence or social status of specific social groups. This aspect is particularly relevant to all those expressions of the second type of uncertainty reduction, whose nature is purely cultural and tied to social and legal institutions.

Changing society

Up to this point we have been concerned with the definition of the nature and origins of ecological thinking and the consideration of what a coherent application of this thinking to social structures might entail. We have, however, left one on side the feasibility of this change, an aspect that has now to be considered. Our original interest therefore evolves into a new and more pragmatic question: are the institutions of Western social systems, in the form they take today, capable of acting manifesting “cultural behaviour”? The existing literature offers many different proposals and theorisations, which seek to explain how to satisfy the two main categories of change described above. Leaving aside those scholars who contend that no action needs to be undertaken in this regard – a position that would take too long to discuss here – there are many proposals oriented towards change that should be recalled: the “adaptive management paradigm” and the “panarchy” paradigm (Gunderson and Holling, 2002) in which it is grounded; Latouche’s (2006) concept of “degrowth”; proposals such as “bioregionalism” (McGinnis, 1998), and movements such as “permaculture” (Mollison, 1988) and “transition towns” (Hopkins, 2008), among others. These approaches are just a fraction of those in existence, but for the most part even if effectively presented and discussed, they share two principal problematic features: they have limited or no practical implementation, and often remain at a highly theoretical level. These limitations are anything but irrelevant for our discussion.

Ecologically informed and pragmatic proposals also exist, and suggest a well-defined series of measures to be adopted. One example is the proposal popularised by Goldsmith and Allen (1972), which is still as stimulating as it is radical, despite its age. Imagining the application of similar plans raises relevant concerns about democratic and

ethical issues. In fact, the content of these theories, despite being deeply grounded in factual considerations, impacts on the persistence of elements culturally considered as inalienable (e.g. the right to reproduction), making implementation very complex and difficult indeed. The realization of principles based on ecological consciousness is a challenge which is far from being solved. At least three orders of problems have to be addressed, and these difficulties are tightly intertwined and affect each other in a recursive dynamic.

The first order of problems stems from the question of whether institutions have the strength and/or the capability to impose a change such as the one described above. Most institutions have to deal with some of the well known problems of democratic systems, like the consensus trap, on account of which decisions perceived as unpopular are difficult or impossible to take, often being indefinitely postponed or left to the following executive. Institutions also seem to be restrained to a significant degree by the activity of the economic system. Lobbies and the subjects of the financial economy both act to limit and steer the work of governmental apparatus, with the result that crucial policies are often strongly attenuated or distorted. An excellent example is provided by the process of (non)-production of effective environmental laws, even at intergovernmental level.

This leads us to a second order of problems: institutions have to deal with people, and they are also composed of and sustained by people. What happens among people? In what way does awareness of ecological issues and their direct consequences evolve in the public debate? If we identify the most convincing reasons for changing ideas and behaviours, we will find that they are all purely rational considerations, unless episodic fear produced by catastrophic events is considered. Episodic events, however, despite their possible role in producing change, cannot constitute the base of a general plan, and an intervention based on episodic factors may lead only to ephemeral changes.

In assuming that human behaviour is largely cultural – even if instinctive aspects should not be underestimated – we have to keep in mind that while cultural behaviour is certainly based on rational evaluation, it is not composed only of this. Cultural behaviour also includes languages, symbols, rituals, aesthetics and so on, all of which are elements that must be adequately taken into account when evaluating paths for change. Other aspects to be considered are people's feelings and judgements, which are sometimes ingenuously considered to be unambiguous and oriented toward maximal efficiency. One effect of the diffusion in everyday communication of some concepts related to ecological thinking is that it is usually assumed that people are willing to reorient their lives toward a scenario of sustainability. This perspective, however, is too simplistic to be assumed as a valid datum, and no final proofs of this are available on large-scale.

If we are open to the possibility of initiating the transition towards an “ecological state”, then at the same time we need to verify our ability to deal with its consequences. The set of rules and limitations tied to the life in an ecological state – on the basis of the most pragmatic theories – may result in a wide frustration of individual needs and wishes which may overpower the force of rational motivations for subjection to a social group organised as state. The features of an ecological state recall directly the problem of the difficult balance between individual's self-limitation and the advantages of belonging to a state. These radical limitations in individual freedoms are related to aspects such as access to resources, freedom of consumption, behaviours, freedom of reproduction and many other rights, viewed as untouchable and which constitute the Western lifestyle. Grounding our considerations in our present political culture,

an attempt to act on similar issues would result in deep changes in the relation between state and individuals and in the sense of belonging to a state.

A state having the right and the will to exert such an influence and control on the life of citizens, would run a clear risk of taking on some features usually considered as characteristic of an authoritarian state. But even imagining a better scenario in which social organizations would retain democratic elements, the constraints would be so significant that Russell's warning of the risk of a widened distance between the goals of the state and those of individuals may be fulfilled. This would result in a restrictive redefinition of the ties of solidarity which are essential for social consociation, producing unavoidable and unsustainable social instability.

The third and final order of problems is thus related to the nature and possible consequences of a scientific society of pure rationality (Russell, 1968). This presents the danger of drifting towards the excesses of a "physically uncompromised" state (Buckminster Fuller, 2008). In such a technocratic state – possibly a modern version of the "philosophers' state" – decisions are taken only by means of rational consideration and solely concentrating on the achievement of maximum average benefit. This is a general problem when dealing with ecological non-anthropocentric ideologies: they imply many counter-instinctive and counter-intuitive features, which can only be accepted through purely rational evaluation, but cannot be maintained solely on this basis. In this respect the importance of our previous discussion of the cultural translation of an ecologically informed approach, and of the fact that cultural behaviour is only partly rational, should become clear. A narrative based on rigorous ecological thinking is a narrative in which a species autonomously decides, through a rational process, to limit its own growth and freedom, because there is a reasonable expectation that, otherwise, an ecological crisis may occur. So, even if some expression the ecological state might risk resembling a pure scientific society, nevertheless, change appears to be necessary. This is a major challenge for sociological and social action theories that, on the one hand, need to maintain a stable and defined theoretical framework, and, on the other, have to offer support and viable answers to the need for social change and, through the difficult definition of environmental ethics, achieve the concrete adoption of policies. The question to be answered is, then: are Western social systems (and those inspired by the same principles) capable of implementing a "cultural" change, in the manner and time required, or are they imprisoned by their own rigidity and complexity, and unable to react? Answering this question is certainly a compelling task for scholars and political leaders, but there is also an aspect tied to the individual moral dimension, relating to the role of everyone in a community.

In conclusion, despite the great difficulties inherent to the idea of a transition toward an ecologically informed social organization, it is encouraging and stimulating to recall a sentence of the great Italian thinker Antonio Gramsci, who said: "I'm a pessimist because of intelligence, but an optimist because of will".

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Corresponding author

Alessandro Bellafiore can be contacted at: alessandro.bellafiore@uniurb.it

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