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Borderology: Cross-disciplinary Insights from the Border Zone

Along the Green Belt

 Springer

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Beyond the Green Shift—Ecological Economics

Ove Jakobsen and Vivi M. L. Storsletten

Abstract Sharp contrasts exist between ecological economics and green economy. Green economy represents a serious effort to “green” the existing economy by using different instruments from the toolbox of market economics. Ecological economics argue that it is necessary to make changes at the systemic level, if we are to understand and solve serious problems such as climate change, the increasing gap between rich and poor, financial scandals, war, and terrorism. From the perspective of Imre Lakatos’ (1922–1974) contributions to the philosophy of science, we argue that green economy, on the one hand, represents changes in the protective belt in order to defend mainstream economy’s hard core, growth, competition, and strategic planning. On the other hand, ecological economics question the hard core and suggests a deeper change towards, development, cooperation, and partnership approach. To enlighten the tension between these two different approaches, we look at the work of Karl Mannheim (1883–1947) who distinguished between ideology and utopia as driving forces in societal development. The tension between green economy and ecological economics generates both energy and direction in the change processes.

Keywords Green economy · Ecological economics · Ideology and utopia
Scientific research programs

Introduction

Sharp contrasts exist between ecological economics and green economy. Green economy represents a serious effort to “green” the existing economy by using different instruments from the toolbox of market economics. Ecological economics argue that it is necessary to make changes at the systemic level, if we are to

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understand and solve serious problems such as climate change, the increasing gap between rich and poor, financial scandals, war, and terrorism. Ecological economics maintains that by implementing green economy solutions, we remain trapped within the very same system that caused the problems. William Rees reasoned that green economy, rather than helping to solve the major environmental and social problems has, instead, contributed to hiding the real problems behind a veil of green words and concepts (Jakobsen 2017, p. 163). Ecological economics go far beyond the mere green shift to ask, and answer, critical systemic questions.

To delve deeper into the difference between green and ecological economics, we turn to Imre Lakatos' (1922–1974) contributions to the philosophy of science where he distinguished between a research program's hard core and the protective belt of flexible theories. From this perspective, we argue that green economy, on the one hand, represents changes in the protective belt in order to defend the mainstream economy's hard core. On the other hand, ecological economics question the hard core of mainstream economy. To enlighten the tension between these two very different approaches to socially and environmentally responsible economics, we look at the work of Karl Mannheim (1883–1947) who distinguished between ideology and utopia as driving forces in societal development. From this point of view, green economy makes changes in the protective belt of mainstream economy to save the hard core of the ideology, while ecological economics criticizes the hard core and puts forward utopian solutions.

To elaborate on these fundamental questions, we have structured the article as follows; first, we give a brief description of the main ideas in Imre Lakatos' theory of research programs as "hard core" and "protective belt". Second, we examine the tension between ideology and utopia based on Karl Mannheim's interpretation. Third, we connect green economy to the existing ideology and argue that green economy only represents an adaption of the protective belt, whereas ecological economics represent changes in the hard core of mainstream economy. Finally, we discuss some of the main principles in the hard core of ecological economics.

Research Programs

The Hungarian philosopher Imre Lakatos defined research program as a combination of hard-core theoretical assumptions that cannot be rejected or altered without falsifying the whole program, and a protective belt of theories that function as a safeguard to protect the hard-core assumptions. He attacked the idea that scientific knowledge can be regarded as a cumulatively growing system of statements and theories. The evolution of scientific knowledge is characterized by long periods where the hard-core ideas are protected by a belt of theories that are adapted to changes in the environmental conditions. When the challenges become too dramatic, critical questions are asked about the hard core and the evolutionary period is replaced by irregular revolutionary leaps where the fundamental presuppositions of scientific understanding are challenged and replaced.

Research programs provide a framework that is shared by those involved. When the hard core is threatened, then the theories in the protective belt are modified in order to save it. Changes in the protective belt are considered expendable and may be altered or abandoned when empirical anomalies require adaptations in order to protect the hard core. Based on the research program's hard core, research is conducted on the basis that some fundamental principles are simply not open to critical discussion. In this regard, the hard core is similar to Kuhn's concept of a paradigm.

Lakatos divided the levels within a research program into negative and positive heuristics. Negative heuristics point at methods and approaches to avoid, and positive heuristics refer to methods and approaches which are preferable. While the negative heuristic protects the hard core, the positive heuristic defines limitations for modification and changes to the protective belt in a general direction. Lakatos defined the main concepts in his theory in the following way:

the negative heuristic specifies 'the hard core' of the programme which is 'irrefutable' by the methodological decision of its protagonists, the positive heuristic consists of a partially articulated set of suggestions or hints on how to change, develop the 'refutable variants' of the research programme, on how to modify, sophisticate the 'refutable' protective belt (Lakatos and Musgrave 1982, 135).

Not all changes to a research program's protective belt are equally productive or acceptable. Lakatos argued that changes in the protective belt should be evaluated not just by their ability to defend the hard core by explaining anomalies, but also by their ability to come up with new explanations and understanding. He classified adjustments as "degenerative" if they failed to accomplish anything more than the mere maintenance of the hard core. Lakatos' model allows a research program to be progressive even if it contains some troublesome anomalies. He argued, essentially, that it is necessary to continue with a research program even if it has problems as long as there are no better alternatives. In order to falsify a research program, there must be a better one available.

Ideology and Utopia

The Hungarian sociologist Karl Mannheim (1936) contrasted ideology and utopia on the basis of their social functions. Ideologies are directed toward the past and are important to create and preserve the identity, individually and collectively, in a society. He argued that ideology contains explanations and interpretations of the social reality which preserve the status quo. Utopia transforms the status quo by setting out an alternative to the existing society. Utopias are future-oriented and important if we are to define the direction of, and the energy for, change. The French philosopher Paul Ricoeur (1986) nuanced the differences between the two concepts by arguing that ideology is an attempt to legitimize the power structures in the existing society, while utopia represents an attempt to replace power by

something else. "Ideology is the legitimization of present authority while utopia is the challenge to this authority" (Ricoeur 1986, p. xxi).

The tension between ideology and utopia could be described as a dialectic process with two poles, one referring to actuality and the other referring to potentiality. In reality, utopian and ideological elements are often interweaved. Without utopia, ideology becomes static, and without ideology utopia becomes an illusion. To illustrate the distinction between ideology and utopia, we can say that ideology is imagination as a picture which describes what exists, while utopia is imagination as a fiction, re-describing what exists. To understand the time we are living in, we must step outside the established ideologies and develop a utopian position from where we can observe it. Utopia provides a critique of the current ideology by providing alternative values and norms.

Ideologies relate mainly to dominant groups and serve to comfort the collective ego of these dominant groups. Ideologies reflect the general way in which groups determine what differentiates them from other groups and establishes an identity that satisfies the interests of the entire group. In addition, ideology legitimizes authority and it allows the authorities to convince the public that its regulations are necessary.

Utopias are naturally supported by minority groups and therefore more commonly by the lower strata of the society. At the first level, there is correlation between ideology as stability and at a second level, utopia is correlated to change towards the (im-) possible. From Ricoeur's (1986) perspective, there are two explanations why the ideological mentality assumes the impossibility of change. First, an ideology accepts the system of justification, explaining the non-congruence. Second, the non-congruence has been concealed by factors ranging from unconscious deception to conscious lie.

Ricoeur concludes by observing that the correlation between ideology and utopia forms a circle, a practical circle: "the two terms are themselves practical and not theoretical concepts" (Ricoeur 1986, p. xxii). This means that utopia in one period of time could be the ideology in a later period of time. In order to make the circle a spiral, it is of the greatest importance to imagine new utopias as ongoing processes. A spiral in the dialectic of ideology and utopia would occur if "the utopia of a given society challenged current ideologies at least to the point where they could be reflected on and compared to alternatives" (Steeves 2000, p. 226). "The death of utopia would be the death of society. A society without utopia would be dead because it would no longer have any project, any prospective goals" (Ricoeur 1986, p. xxi). This is in harmony with Whitehead's (1967) assertion that a society without adventure is in full decay and the conjunction of ideology and utopia typifies the social imagination. Imagination is constitutive of social reality itself.

Green Economy and Ecological Economics

In order to understand the creative tension between actuality (the dominating ideology) and potentiality (a realistic utopia), we find it relevant to start with a brief description of green economy and ecological economics in the context of Lakatos' theory of research programs. As a starting point, we accept that both perspectives are based upon a willingness to solve the environmental and social problems. Inspired by the distinction between ideology and utopia, we maintain that green economy has made changes in the protective belt of mainstream economics without questioning the hard core. Ecological economics is revising the hard core of mainstream economics in order to change the whole research program. In other words, green economy focuses on reducing negative symptoms to save the existing economic paradigm while ecological economics claim that the problems are caused by the hard core of existing economic paradigm for which an alternative has to be found.

Supporters of green economy accept that in a short-term perspective, increased growth has the highest priority in order to solve the current crises in economy, ecology, and society. The goal is to reduce the damaging effects of established economic theory and practice but to do it without making any hard-core changes. Because the methods do not depart from the established hard core (ideology) we can see that green economy strives to, and achieves, little more than maintaining business as usual. As long as the argumentations for the changes in the protective belt do not challenge the principles in the hard core, then mere greening of business is acceptable (Fig. 1).

Business ethics and CSR are introduced as means to reduce the most criticized consequences of aggressive competition which is to be retained and safeguarded as one of the main postulates in the dominating economy's hard core. Green economists often argue that environmental responsibility is closely coupled to green growth because we need more resources to handle the most serious economic and social challenges. They also argue that greening the economy is an efficient marketing tool to develop a reputation based on ecological and societal responsibility. By these means, green strategy is presented as an effective instrument to increase a company's profits and its competitive advantage. In a long-term perspective, they argue that growth should be as green as possible.

Ecological economics differs from green economy in that it asks critical and apposite questions about the hard core of the dominating economy and challenges current theory: first of all, growth is not part of the solution but is rather, right on the

Fig. 1 Greening the economy (change in protective belt)

Hard core	Protective belt
Growth	Green growth
Competition	Business ethics/CSR
Strategy	Green strategy

Hard core (main stream economy)	Hard core (ecological economics)
Growth (quantitative)	Development (qualitative)
Competition	Cooperation
Strategic planning	Partnership approach

Fig. 2 Ecological economics (change in hard core)

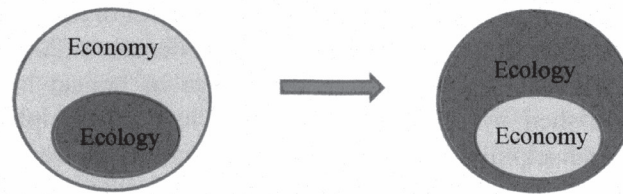
contrary, at the very core of the problem. Ecological economists such as Herman Daly and John B. Cobb Jr. (1994) argue that it is necessary to implement a de-growth economy and, in a long-term perspective, shift the focus away from quantitative growth towards qualitative development. Further, ecological economists argue that competition must be replaced by cooperation in order to handle the serious anomalies. Finally, if we are to find solutions to enhance the common good then strategic planning must make way for a partnership approach (Fig. 2).

So, ecological economics offers an interesting alternative to the hard core of the dominating economy and we can see for sure that ecological economics is not focused primarily on merely finding new answers to the old questions by making changes in the protective belt. Rather, ecological economics focuses critical questions on the hard core. By asking, and answering, these critical questions it is possible to uncover new perspectives and develop a more life-enhancing economic theory and practice. Ecological economics, fundamentally, asks how we can develop an economy and a society based on peaceful relations between humans and nature, between humans, and within the individual.

Ecological Economics as Utopia

In order to encourage change utopia has to challenge the existing ideology by, on the one hand, providing a critique of the current ideology and, on the other, providing alternative solutions. The term ecological economics refers to changes on different levels - ontology, system, practice and human consciousness. On the pure ontological level, it is a question of change from a mechanical to an organic worldview. One consequence of this change is that the status of economics changes and falls subordinate to ecology. To adapt the economy to the limits of ecosystems, organic knowledge and understanding are essential. The idea that natural science provides knowledge that gives man power over nature has to be replaced by an approach in which the goal is to learn from nature and develop a knowledge and a value system which teach us how we can best work with nature and fulfill human needs and improve our quality of life. The implication of this reasoning is the radical change which says economic activity is not an end in itself but a means to strengthen the life processes in nature and society. In any kind of social and

Fig. 3 Change from mechanic to organic worldview



ecological system economics has only one valid purpose and that, at its best and most basic, is to serve life processes (Fig. 3).

From an organic perspective, the global eco and social systems are comprised of closely interacting and interdependent subsystems based upon dissipative structures. The earth itself and all its living and nonliving components are interrelated, and the human being is a member of this integral community and must strive to find a proper role in it. Every system is connected to, and depends on, all the others in continuous evolving processes. Ecological economics, as a heterodox tradition, “accepts the transformative power of human agency with emergent properties arising from a dynamic interconnected process of multi-layered social interactions” (Spash 2012, p. 44).

Efforts to facilitate a sustainable future are hopelessly and inadequately covered by the existing scientific traditions of objective disciplinary approaches. To capture the interconnectedness of nature and society ecological economics is based on a transdisciplinary approach. Kenneth Boulding, one of the most influential contributors to ecological economics, once said that “the pursuit of any problem of economics draws me into some other science before I can catch it” (Kerman 1974, p. 6). He was looking for connections between different fields of knowledge, for the threads of theory that would tie together nature, society, and economy at the systemic, business, and individual levels. Today, the transdisciplinary approach is being rediscovered, unveiled, and put to use rapidly to meet the unprecedented challenges facing our troubled world. In its search to understand life as life, the transdisciplinary field of ecological economics examines the relationships between ecosystems, social systems, and economic systems in the broadest possible sense.

To meet the challenges of sustainability, and that means locally, nationally, and globally, we need an integrated knowledge based on transdisciplinary research. In transdisciplinary research, a disciplinary cross-fertilization makes the borders between the different sciences more transparent, (even to the point of disappearing) and practice and culture becomes integrated. Different kinds of systematic dialogs (world café, Socratic dialog, open space, and reflective dialog) are used as a means to connect people from all the different areas. This type of research also includes reflexive distancing that makes it possible to detect phenomena and contexts that have not previously been visible. By changing the focus of putting the individual business at the center of study and instead study the business as an integral part of a broader context, it is possible to achieve new insights into several areas.

Accepting that nature and society are not like lifeless and static machines (Nicolescu 2002; Capra and Luisi 2014), a transdisciplinary approach enables us to

discover the resurrection of man as a subject of his own discourse. Furthermore, this line of research offers, according to Nicolescu (2002), not the end of history but rather the beginning of a new stage in human history. "Transdisciplinarity is nourished by disciplinary research; in turn, disciplinary research is clarified by transdisciplinary knowledge in a new and fertile way. In this sense, disciplinary and transdisciplinary research are not antagonistic but complementary" (Nicolescu 2002, p. 45).

Because ecological economics develops a theory and a practice that initiate constructive interplay between the surrounding cultural and natural conditions, the practical solutions will be different depending on time and place. Future solutions will not be exactly similar to solutions suggested today and solutions will differ according to geographical and cultural circumstances.

At the systemic level, the hard-core principle of the dominating economy, claiming that the market is made up of autonomous competing actors, is replaced by a view of the market as an integrated network of interdependent cooperating actors. Thus, the focus shifts away from objects toward relationships. Since the individual has to respect broad public values, a transition is required away from the egocentric economic man towards the "I-We" understanding. Although local production for local markets is the ideal, it is, of course, necessary to open up cooperation through and between international networks as well.

Ecological economics, inspired by natural growth curves, (increasing rapidly first then stabilizing), makes it possible to initiate continuous development in the quality of life without increasing the consumption of natural resources. The focus on qualitative development points to major changes in business; many companies and, indeed, whole industries will disappear, and new ones, far more in line with ecological principles and humanist values, will appear and take over.

At a practical level, strategic planning is replaced by a partnership approach founded on dialog and network-based cooperation. Free competition on the world market means that small producers in poor countries have always been and will always be the losers compared to powerful multinational corporations. Poor countries are forced to accept free trade in order to gain entry to the markets and the result is that the big companies gain increasingly larger proportions of the global markets and, for the system to work, poor countries have to receive aid. This results in a vicious cycle where the quality of life deteriorates both among those who have too little, and among those who have too high consumption. Today, the resources are distributed in such a way that the gap between rich and poor constantly increases.

Instead of focusing on top-down solutions, based on the initiative of politicians and business leaders, the focus within ecological economics is based on bottom-up initiatives. The change occurs when those who work and operate in the practical reality at the local level create solutions based on direct experience. It will always be, of course, necessary in top-down initiated rules and monitoring (for example, through national authorities) to have the United Nations and other global organizations.

It is of great importance, if we are to reach the common good as a result of cooperation based on mutual respect and trust, to make room for regular reflective meetings, and to create and empower forums for communicative action based on collaboration. Enterprises have a close connection to their local culture, and, by integrating in dynamic processes, culture becomes the source of inspiration and the connective glue. The network includes different sectors (for example, businesses, practitioners, and research and education institutions) and develops by integrating actors on several levels. This may serve as drivers for development of mutual principles for peaceful coexistence between the actors both locally and globally, where the actors are free to develop their own solutions based on their specific situational and cultural knowledge.

In general, we can say that committed cooperation between involved companies, interest groups, government agencies, and organizations, represents an innovative approach to many of the environmental and societal challenges we will face in the future. An important reason to establish forums for communicative and dialog-based interaction is to ensure that all affected actors are drawn into the preparation and implementation of concrete solutions. In this way, the actors are made responsible in joint efforts to realize the goals of sustainable development. A network of creative actors has better access to information when it comes to making oneself visible both locally and internationally. An advantage is that they promote their work and products, get inspiration to improve their work and products, and learn by sharing their experiences. Access to resources (both financial and material) from local, regional, and international sources, will further develop their ideas for activities and products and projects.

When the abstraction of “leaders hierarchy” is revealed and the structures are flattened by a fruitful combination of bottom-up and top-down processes, this will facilitate the development of nested networks of activities with the vital importance of integrating culture with economy and society and nature. In the perspective of the triple helix, circulation economics has life-enhancing connections to nature and culture which modifies and stimulates economic activity. Ecological economics requires that businesses have to include ecological and social values in their decision-making processes. Humans are part of the ecosystem and the ecosystem is a part of humans. By including social values in its thinking, business helps to create (optimal) conditions for the quality of life. As it is impossible to transform the different values into a monetary scale, policymakers should be able to handle the three different values simultaneously (Fig. 4).

Fig. 4 Ideology and utopia

	Ideology	Utopia
Ontology	Mechanistic	Organic
System	Competition	Cooperation
Practise	Strategy	Partnership approach
Individual	Economic man	Ecological man

On an individual level, ecological economics has significant implications for the definition of the economic actor. Instead of focusing solely on increasing profits and utility (the economic man), the economic actors put more weight and emphasis on the natural and social implications of production processes as well as products (the ecological man). A practical consequence is that market communication will have to include information about the working conditions for the workers in the entire production process and the extent to which the production process meets environmental requirements, requirements for animal welfare, the health implications for all involved, including the consumer. As regards ethics, a good and moral life, according to virtue ethics, is a life responsive to the demands of the world. Central concepts are good judgment, justice, courage, and self-control. To possess a virtue is to be a person with a given complex mind-set. "The most significant aspect of this mind-set is the wholehearted acceptance of a certain range of considerations as reasons for action" (Stanford Encyclopedia of Philosophy 2012). Virtue ethics focus on the moral person's character characterized by the ability to be aware of, to identify and to handle, and moral dilemmas in real-life situations.

Change Processes

In the preceding paragraphs, we have described and discussed ecological economics by contrasting it to green economy. We think this is essential because there are good reasons why most people, including scholars, have problems differing between green economy and ecological economics.

To illustrate and concretize the differences, we refer to the tension between ideology and utopia and the two components of Lakatos' research program. Green economy is anchored in the hard core of the dominating ideology. This means that changes in the protective belt are accepted as long as they do not disturb the hard core characterized by competition, growth, and strategy. Ecological economics represents utopian thinking, that is, a futuristic description of a potential society based on cooperation, development and a partnership approach. Within the vocabulary of Lakatos', ecological economics represents a scientific research program characterized by a hard core (negative heuristic) which includes fundamental assumptions that are completely different from the previous one.

When the hard-core principles change, the previous knowledge is re-interpreted and the whole research program changes; new questions are asked, new methods are introduced, and changes are implemented in practice. The change is like a Gestalt Switch where the context of understanding changes from economy to ecology. Instead of seeing nature merely as an economic resource base, our economy actually learns from nature. According to Colin Tudge (2016), all that stands between us and a glorious future is a bad strategy based on false ideas rooted in a debased ideology that puts short-term wealth and dominance above all else; in other words, the very definition of the hard core of the dominating economy.

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