Book Review

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Economics and Sustainability: Social-Ecological Perspectives
by Karl Bruckmeier
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The early policy and governance processes from the UNCED conference in 1992 and the global 'Agenda 21' have been the subject of criticism for not providing a clear pathway to sustainability, for being excessively normative and abstract, and for giving the misleading impression that they can be achieved in a few decades. In fact, only a few countries, including Sweden, Denmark and Finland, have achieved three-quarters of the UN goals. To facilitate the continuous enhancement of the sustainability process, it is essential to identify and address the problems and challenges that arise during the sustainability process. The combination of economic, social, and ecological fields is essential for the development of effective sustainability policies, as well as the cooperation between the various scientific disciplines, which are in a continuous state of change.

The book is divided in three parts. Part one is 'The Sustainability Process: Context and Scope', part two is 'Economic and Ecological Knowledge in the Sustainability Process', part three is 'The Future: Sustainability Transformation'. Every part is divided in small chapters, it contains graphics, boxes of in-depth analysis in specific argument and at the end of each chapter there are some academic exercises and material for understanding more the topic. The initial section presents an analysis of the policy context of the sustainability discourse, the historical context of sustainability in modern society, and the knowledge context of the sustainability discourse. Karl Bruckmeier begins by discussing the Brundtland Report of the United Nations World Commission on Environment and Development in 1987, the 'Agenda 21' document from the UN Conference on Environment and Development in Rio de Janeiro in 1992, and the 'Limits to Growth' document of the Club of Rome in 1972. The author puts the attention on the Brundtland Report's contents with a critical view and an improvement perspective. The general problem across this field is the lack of integration of the programmes at regional and international levels. Furthermore, there is a lack of a clear and shared definition and common views in the scientific field of sustainability. In the policy context of sustainability is important to learn from failures and successes, integrating knowledge from social ecology, ecological economics and science, with an interdisciplinary view and continuing research, to find a new balance between production, consumption and pollution.

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Effective sustainability requires an examination of the economic, social, religious, cultural and political changes that have occurred in our world throughout history and their impact on the environment; and moreover, how our perspective on the environment has changed and the sustainability discourse that emerged in the 1970s. It is essential to have an awareness and a critical view of these changes in historical context to develop a sustainable future. The author discusses the agricultural type of society and its reflection on the economy and the environment. He also addresses the first environmental crisis, the forest crisis, and the subsequent emergence of industry and post-industry societies with their new cultural and environmental perspectives and their subsequent crises. These include the land use crisis due to privatisation, the population crisis and the social and political movements that have emerged in the past such as Marxism, or Fridays for Future nowadays; it is evident that social changes are consistently influenced by environmental factors. Other significant factors to consider are the resources utilised during the past, initially wood and subsequently fossil fuels, nuclear energy and renewable energy sources over the past few decades. Each transformation in the socio-metabolic system of human history has resulted in a corresponding shift in population density, production methods, energy consumption and the extent of environmental damage. The Industrial Revolution and the Scientific Revolution were periods of significant cultural change. These changes included the diffusion of rationalism and alterations in the relationship between humans and nature. In this context, man is often conceptualised as the manager of nature, and this is exemplified by the idea that we must repopulate nature in order to maintain its use. The inter- and transdisciplinary knowledge integration means to bring together different types of knowledge. The study of ecology helps us understand many topics: the overuse of natural resources, the causes of pollution and global environmental changes, the use of energy and material in the various societies during the history. Social scientific research helps us understand how institutions, economies, societies and work are changing; these insights are often overlooked in ecological studies and sustainability initiatives. Furthermore, applying knowledge is difficult because of the link between knowledge and power, this is particularly true for economic research. Consequently, economic knowledge must be integrated with the findings of ecological, social, and environmental research to gain a comprehensive understanding of the subject.

The Intergovernmental Panel on Climate Change (IPCC) oversees the dissemination of knowledge in the field of international climate policy. The chapter analyses the challenges associated with the integration of inter- and transdisciplinary knowledge in the context of the sustainability process. Reducing environmental pollution is not a sufficient solution if the lifestyles of overconsumers remain unchanged. To achieve long-term sustainability, it is essential to consider the complexity of this process and analyse the interaction between the ecological, social, and economic systems. The perspective of Bennett from 1976, as well as the anthropological considerations from Steward from the 1940s and other contributions from Geertz in the 1960s, emphasise the interconnectivity between ecosystems and social systems as part of the broader discourse on sustainable development. The seventeen Sustainable Development Goals of the UN serve as a framework for integrating knowledge across various relevant fields. The field of economics is significant in the context of sustainability, both at the macroeconomic level, which encompasses national economies, agriculture, fishing, forestry, industry and service sectors, and at the microeconomic level, which focuses on the role of private households and consumers.

After an introductory overview of the context of the discourse on sustainability and the interdisciplinary nature of the subject, the second part of the book focuses on economic and ecological knowledge as a result of this interdisciplinary approach. The management of natural resources is treated as the core of the sustainability process, the author analyses the ecological criteria and economic criteria in the use of natural resources, these criteria cannot exclude each other in a sustainable appropriation, distribution and use of natural resources. There are controversies between the different approaches to economics from the past to the present because these approaches have always influenced the use of resources. There is an orthodox economic view that sees the economy as a market-based autonomous system, and there is the actual combination of neoclassical microeconomics and Keynesian economics called the 'neoclassical synthesis'. The neoliberal or market ideology and orthodox economics guided the economic globalisation process, but there are other views, like the economy of nature and the economy of society, common in ecology field, that discuss about the interaction between nature and modern society, like the example made by Odum (1997). All these visions suggest that the modern market economy should also be embedded in the ecosystem, and the interaction between the ecosystem and the economic system should be regulated. The author talks about 'economising ecology', and then he makes a debate on the different ideas of economic of resource management and the need to combine this with ecological principles and criteria. The first, second, and third sectors of the economy, along with the ecological principles of resource management in these sectors, are considered. The discussion encompasses not only the agricultural, fishing, forestry, and industrial sectors, but also the mining and energy sectors, and the resource use in these sectors has consequences at the local and global levels. There are many approaches to resource management, but all of them must deal with property rights in the use of natural resources; the discussion of property rights and its environmental consequences makes the sustainability process more complicated. It is also considered the 'tragedy of the commons' in the property rights discussion, and the new forms of privatisation of natural resources, such as the genetic resources of plants, animals, and humans; this issue was affronted in the United Nations Conference on Environment and Development (UNCED) in 1992. In the European Union 'The Economics of Ecosystems and Biodiversity' (TEEB), later hosted by the United Nations Environment Programme (UNEP), is an early attempt to combine economic knowledge with environmental protection and sustainability, but it has been criticised for the dominance of economic knowledge that leads to marketisation and monetarisation of ecosystem services by the financial and banking systems. To achieve its goals, TEEB must deal with the ecological criteria of ecosystem valuation. Therefore, this book raises the problems of combining different economic concepts and ideas that need to be considered in the sustainability discourse.

Environmental economics emerged in response to the global environmental crisis that began in the second half of the 20th century, its aim is to limit and prevent environmental destruction. This process is closely linked to economic and political discourses. The scope of environmental economics depends on the approach used, there is a more economic approach, but also a natural resource economics. Theoretical knowledge and integrating interdisciplinary knowledge are important, as well as working with multiple actors in sustainability policy. The knowledge derived from empirical economic research

is insufficient for achieving sustainability objectives, in the end the author attempts to respond to the practical question of how to reconcile economic growth with the transition to sustainability.

Ecological economics is an interdisciplinary and transdisciplinary field of study that plays a crucial role in the sustainability process. It encompasses a range of concepts, including ecological indicators about ecosystems, critiques of economic growth, the concept of degrowth, post-industrial, post-capitalist and post-growth ideas and the inequality between global north and south. These concepts must be taken into account in the sustainability discourse. The author also considers the actors who must confront these concepts, like governmental institutions, political parties and organisations, business institutions, non-governmental actors like social movement and civil society actor. The transformation to a future sustainable economy will require the participation of numerous actors, a collaborative approach, and a commitment to joint learning. These conflicts manifest at various levels and across different fields, such as social inequalities, poverty and hunger, biodiversity loss and resource use conflicts. Behaviours such as fear of change, even if it is non-violent, can impede or retard the process, as has been the case until now. The renewal of the sustainability process necessitates the analysis of problems and obstacles to enable continued progress towards sustainability.

Going one step further, the concluding section of the book describes the science and practice of the sustainability process, the time aspect of this transformation, and concludes with the changes that need to be initiated to improve the sustainability process. The relationship between science and practice in the sustainability process is unsatisfactory, there is a mismatch between the quantity of scientific knowledge and its limited and selective application. The transformation of the global economy is systematically paralysed due to its subjection to various political and economic actors, conflicting interests and a lack of knowledge and experience of sustainable growth and degrowth. This final part emphasises the need to rebuild intergenerational solidarity, to develop different models and pathways for the transition to sustainability, and to generate new ideas about the future global economy. The way forward is a knowledge debate on the triangle of economics, ecology and political science. Not focusing on research alone, but integrating knowledge on global environmental change, global environmental governance and economics. The future society of sustainability, post-industrial, post-capitalist and post-growth society is not a homogeneous system, the idea is a combination of different forms of economy, production, consumption, ways of life, accompanied by ecological criteria of non-pollution and preservation of natural resources for future generations. The author is critical of the green growth and green economy experiments that have been conducted so far. These have been dominated by the economic interests of the powerful global players, the UN, the OECD and the EU. Global sustainability is a process that requires the strategy of socio-ecological transformation and will take a long time, with continuously improving strategies and mixed economies. This new transdisciplinary transformation is a peer-to-peer learning, and it is not possible to rely on established economic and ecological discourses in isolation. The sustainability process also requires non-commercial forms of sharing and solidarity economy, redistributive institutions, the creation of new empirical knowledge, and learning action strategies used in many phases.

In summary, the social-ecological strategy is a progressive interdisciplinary synthesis of knowledge that transcends the boundaries of existing scientific disciplines. The book offers a realistic portrayal of the conflicts that currently exist in our world and those that will emerge as we transition towards a more sustainable future. It is notable that the book addresses a wide range of fields, while also offering constructive critiques of the actual sustainability discourse. The social-ecological strategy is presented in an open manner, with a clear focus on future improvement.