

Published in *Economic Geography* 89 (4), pp. 431-433. DOI: 10.1111/ecge.12022

*Creating a Sustainable Economy: An Institutional and Evolutionary Approach to  
Environmental Policy*

Edited by Gerardo Marletto.

London and New York: Routledge

One does not need to be a “tree hugger” to argue that creating a sustainable economy is one of the key challenges our global society is facing. Yet, the exact meaning of sustainability, the conceptualisation of ‘the economy’, as well as the normative implications for environmental policy remain contested issues. The overall ambition of this book is to challenge mainstream economic approaches to environmental policy and to present alternative pathways based on institutional and evolutionary economics. The overarching argument is that market instruments are not sufficient for facilitating sustainability transitions. Instead, institutions and technologies need to be included as part of a systemic and dynamic understanding of structural change. Following a succinct preface by the editor, the book is organised in four parts and includes twelve articles by distinguished academics. Since it would go beyond the scope of this review to elaborate on each paper in detail, I will reflect on the overall structure and discuss some important themes.

Part I provides a broad introduction to a dynamic and systemic conceptualisation of economic change with articles on agency and economic change (Safarzynska), technologies, markets and economic change (Amedola and Gaffard), and an institutional/evolutionary framework of economic change (Marletto). Part II goes one step further and links institutional and

evolutionary views to environmental policy. These chapters elaborate on an institutional economics approach to governing the environment (Vatn), discuss the role of evolutionary thinking (Hodgson), and introduce a coevolutionary framework (Foxon).

The contributions illustrate that the exact nature of institutional and evolutionary theorising is far from clear-cut as there is a wide range of intellectual traditions. Some strands are fiercely opposed to mainstream economics, whereas others are more relaxed about linking to mainstream approaches. Different streams of research have developed, and there can be considerable overlap between institutional and evolutionary theorising.

Several contributions in this book reflect on the ontological building blocks of evolutionary theories. Perhaps as an unavoidable side-effect of an edited collection, certain topics are mentioned multiple times, which makes for a slightly inefficient reading at times. The theoretical building blocks include heterogeneity of agents, and the interactions between agents producing non-equilibrium dynamics. Additional usual suspects include the interplay between variety-generating innovation, variety-reducing selection, and co-evolution as systemic interaction effects between technologies, industries, institutions/routines, culture, behaviour, and economic systems. Furthermore, the issue of individual versus group selection (e.g. Safarzyńska) leads to a multi-level perspective with the mechanisms of upward and downward causation relating to the debates on emergence and the micro-macro problem in social theory. Depending on the genre, also the concepts of bounded rationality, networks beyond methodological individualism, knowledge and learning theories, as well as power can play a prominent role. More generally, whilst Generalised Darwinism provides an inspirational meta-theoretical perspective for bridging the natural and social sciences, there is a need to develop middle-range theories on the specific mechanisms in the respective domains (Hodgson, Safarzyńska).

What constitutes a key problem for sustainability is that co-evolutionary processes can lead to path-dependence and lock-in effects. Here institutional approaches can complement and enrich evolutionary ones. An institutionalist perspective can clarify resource regimes understood as institutions that govern access to and use of resources (Vatn). Furthermore, the work on socio-technical regimes and the multi-level perspective of sustainability transitions is utilising institutionalism to elaborate on how a set of rules reproduces socio-technical systems.

Overall, as mentioned in previous review articles, evolutionary and institutional economics are evolving diverse fields and currently do not represent coherent paradigms. In particular, it remains to be seen which of the diverse approaches to evolutionary economics will be selected by evolution. The same, of course, also applies to respective geographical versions. Whilst intellectual diversity may facilitate creativity, the lack of coherence may hamper the development of an influential paradigm. Also methodologically the approaches are diverse ranging from traditional mainstream modelling, to agent-based modelling of complex adaptive systems to qualitative comparative case studies of different institutional regimes.

One of the consequences of all this intellectual diversity is that the policy implications generated by evolutionary/institutional economics approaches can vary substantially. Yet, a distinct cornerstone stressed by this book is that sustainability transitions require a systemic approach to change. Whereas mainstream environmental economics often tends to ignore interdependencies, evolutionary and institutional economics approaches highlight that transitions require changes of a range of systematically interrelated dimensions. Part III of the book illustrates this with three case studies of regime change: the transition to low carbon vehicles (Köhler), energy retrofitting of the residential housing stock (Brown and Vergragt), and renewable energy (Genus).

Finally, part IV on creating a sustainable economy starts with a contribution on the role of entrepreneurship and markets for sustainable innovation (Bergek). This is followed by an insightful article on unlocking the techno-institutional complex by Unruh and del Río. Here, the limitations of internalizing environmental externality via ‘getting the price right’ are elaborated upon. Even much of mainstream environmental economics has realised that in addition to internalising costs, targeted technology policies and sector-specific policies may also be required. However, mainstream approaches usually do not really take the intrinsic interdependence between technologies and institutions into full consideration. An interdependent policy mix includes for instance supporting new entrants, generating actors’ and technological diversity, promoting learning, fostering shared visions, and improving firms’ and countries’ innovation capacities. The book closes with ten brief memos for effective policies by the editor. Among other dimensions, these stress the importance of considering multiple dimensions of change in a systemic fashion, weakening the establishment whilst supporting actors for change, and facilitating niche experiments and their up-scaling.

However, as indicated by Hodgson, any normative policy approach involves a critical limitation. Evaluating economic, ecological, social and aesthetic dimensions intrinsically involves incommensurability because the dimensions are measured differently and are difficult to weigh and order. In other words, there is no neutral viewpoint for making an overall evaluation, which unavoidably makes environmental policy an ideologically and politically contested space. I believe that this issue deserves more attention in the normative discourse on environmental economics and sustainability transitions. Overall, whilst the policy implications outlined in the book are inspirational, much research still needs to be done to substantiate evolutionary/institutional theorising and to develop specific policy options for the respective domains. It is my hope that at least this strand of economics will

interact with related social sciences. The field of sustainability transitions has started to become a vibrant area of research, which can and should integrate insights from a wide range of disciplines. Finally, whilst many insights from evolutionary/institutional economics are of direct relevance to economic geography, the volume does not address the role of spatial dimensions for the concepts and processes. This is good news for economic geographers, who have already started to fill this gap.

Overall, I highly recommend this book to those who can afford its relatively high price and want to gain an overview about various theoretical approaches to evolutionary/institutional economics and their policy implications for sustainability transitions.

Franz Huber

Southampton Management School, University of Southampton