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## REVIEW

# Rough Roads to Sustainability

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*From Bauhaus to Ecohouse: A History of Ecological Design*, by Peder Anker, Baton Rouge, LA: Louisiana State University Press, 2010, 188 pp., \$34.95 (cloth).

*Environmental Politics and Deliberative Democracy: Examining the Promise of New Modes of Governance*, edited by Karin Bäckstrand, Jamil Khan, Annica Kronsell and Eva Lövbrand, Cheltenham: Edward Elgar, 2010, 256 pp., £69.95 (cloth).

*Metaphors for Environmental Sustainability: Redefining our Relationship with Nature*, by Brendon Larson, New Haven, CT: Yale University Press, 2011, 320 pp., \$40.00 (cloth).

The publication of the Brundtland Report in 1987 and the subsequent popularization of the concept of sustainability alerted many people to the urgency of making progress toward a different form of economic and social development than the one currently being pursued. This new mode of development would remain sustainable into the future and would not involve depleting the Earth's natural resources or harming the natural environment. Since that time, the idea of sustainability has become an important rhetorical concept and conceptual tool for policy and social development. The debate that has taken place over the 20-odd years since the report's publication—on the prospects for a 'sustainabilization' of modern society and on how to change current economic growth to achieve

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more sustainable forms of development—may not have led to any clear-cut definitions or general acceptability of the term ‘sustainability’, but it has certainly led to its widespread usage throughout the world. The three books discussed here reflect the broad nature of this debate but should not, I hasten to add, be seen as yet another sign of the weakness of sustainability as a concept and as a general principle; quite the contrary, in fact.

Karin Bäckstrand and her co-editors’ book *Environmental Politics and Deliberative Democracy* seems at first sight to fit into the classical strand of social science research on sustainability, environmental governance, and questions pertaining to the democratization of (environmental) science. At the same time though, the book clearly moves things forward by not merely setting out (sometimes rather lofty) goals but by also providing interesting details about certain processes and techniques of practical implementation. Peder Anker’s and Brendon Larson’s treatises also plough relatively novel terrain. Anker’s *From Bauhaus to Ecohouse: A History of Ecological Design* contains a set of historical episodes recounting some early attempts at designing ecologically sensitive architecture. Larson’s book *Metaphors for Environmental Sustainability: Redefining our Relationship with Nature* presents a normative stance on the ethical implications of metaphors and their usage by environmental scientists.

### Ecology and Language

Unlike many previous books on sustainability, Brendon Larson does not discuss the pros and cons of sustainability as a workable concept. Instead he explores how the use of certain metaphors, especially by scientists themselves, can mislead policy-makers and the general public more broadly. Larson uses the term ‘feedback metaphor’ to describe the relationship between metaphors released by scientists into society at large and their influence on how we think about sustainability more generally. Although the book surely is an excellent read, from a science studies perspective (and thus many readers of this journal), Larson’s musings on the social dimensions of scientific metaphors used by ecologists and the way they ‘interweave science and society in a significant way’ (p. 22) may not appear to be developed very far. For instance, when Larson asks whether a metaphor is used correctly, he is implying that there *is* indeed a correct way—it only needs to be discovered. In this view, there are pure metaphors that become polluted *ex post*. By taking this position, Larson is not only analyzing the use of metaphors but he is also asking whether the metaphors are good for our thinking about sustainability. At this point the favorably-disposed reader would like to have learned more about Larson’s understanding of sustainability and how exactly it is connected with the use of metaphors in specific fields within environmental science.

However, the cases that Larson scrutinizes to convince his readers ‘of the importance of thinking about the social context of the metaphors of environmental

science' (p. x) are extremely interesting, nevertheless. They focus on the relationship between evolution and progress, competition and capitalism, DNA barcoding and consumption, and the notion of meltdown used in some areas of biology and its connection to a general social climate of fear. Larson makes clear that the cases should not be representative but be able 'to demonstrate different dimensions of how metaphors operate at the interface between environmental science and society' (p. 24).

I found the chapter on invasive species and Larson's discussion of the 'invasional meltdown' metaphor especially insightful because it most strongly shows the fear-laden aspects of using a metaphor but at the same time also the well-intended background of scientists doing so. The term 'invasional meltdown' was originally introduced to describe the process by which groups of non-indigenous species support one another's invasion in various ways so that unintended negative effects may occur for 'native' species as a result. This usage fostered other military metaphors such as the 'war' against invasive species. Larson now fears that a spiral of violent metaphors will greatly distract from the original issue of the accumulation of mutations in small populations of a species that can lead to their extinction.

In the final two chapters of his book Larson thus reflects on how to break out of the spiral of feedback metaphors, what he calls 'the boomerang effect' to point out the danger of using extreme metaphors because it can have the opposite effect upon the receiver. He states: 'The overuse of war metaphors may lead to their becoming vapid when we really need them, like crying wolf' (p. 177). What can be done about this? Larson believes, for instance, that early public participation in scientific debate would be a useful way to avoid the pitfalls of choosing unfortunate metaphors.

In the midst of such reflections the book eventually fizzles out. Larson calls for 'us' to take greater responsibility for 'our' choices of metaphor and proposes 'that deliberation needs to occur relatively early in the process of considering a metaphor' (p. 200). How should this be done? Larson lines up the usual suspects in basic democratic participation (e.g. roundtable discussions) and new digital media as means of increasing stakeholder involvement in making the right choices. Finally, he ends on a paradoxical note: scientists cannot control the metaphors they invent or the way they are understood and become established beyond their own turf, yet they should still use metaphors responsibly.

Viewed in a positive light, Larson's book shows very clearly how difficult our path toward a more sustainable society is when even the most seemingly benign metaphors (not to mention military ones) can foster the opposite of what their users intend. *Metaphors for Environmental Sustainability* can even be seen as more than just an eye-opener on that score, however. After finishing the book I was certainly more aware than I had been before of the metaphors used in ecological discourse: I began to realize how frequently they were used in newspaper clippings, radio and television programs—and, indeed, by myself. Whenever I was

reminded of a term, I went back to Larson's index and—despite it being just seven pages long—always found what I was looking for. Thus the book is not only a great collection of four beautifully written case studies but can also be used as a reference work of contemporary ecological metaphors.

### **Ecological Design and Eco-Housing**

Peder Anker's *From Bauhaus to Ecohouse* might be said to open up a new genre of sustainability writing that could be labeled 'sustainability history': a hybrid between environmental history and sustainability studies. Anker reconstructs the fascinating history of interaction between architects and ecologists—especially around the early Bauhaus scholars from the 1920s onwards—and the direct lineage between this history and more recent experiments with low impact eco-housing projects. The bulk of the historical reconstruction ends, however, in the late 1980s—in other words, in the post-Brundtland years when the debate about sustainability was just getting started.

Although Anker calls his book a history of ecological design, he does not discuss ecological restoration projects (though he does mention them briefly in a footnote), projects in landscape architecture, the development of sustainable household support tools, or other forms of human intervention that attempt to improve conditions and thereby create greater ecological sustainability. Anker's focus is solely on the design of houses and not on issues to do with community housing or eco-villages. Given the increasingly broad usage of the eco-design label, I found Anker's narrowing of focus somewhat unfortunate. Especially since Anker's slim volume consists of only 131 pages of text (without notes and index) some more historical information on the relation to other forms of ecological design would have made the book even more interesting.

Having said this, it is fascinating to see how Anker unearths the early and as yet little known history of architects and their concerns in relation to eco-efficiency and sustainable housing (although they did not use this term in the late 1980s). Anker goes so far as to state that the 'unification of art and science is at the heart of the history of ecological design' (p. 126). Early Bauhaus ideas about sustainability were based simply on the insight that design must follow the limits and laws of nature, otherwise it would not be able to function effectively over a longer period of time. Against this background it is not surprising to learn that ecologists made up a good proportion of the natural scientists involved in the Bauhaus faculty's work in London in the mid-1930s (Chapter 2).

To an extent, Anker's story is also one of feedback metaphors, this time of terms used and shifted between ecologists, architects, and especially aerospace scientists. The National Aeronautics and Space Administration (NASA) even supported research on space colonies because of the 'finite resources and ominous pollution' (p. 91) on spaceship Earth. The major part of the book focuses on the use of 'colonial terminology' in space travel during the Cold War and the way ideas associated

with space research were taken up by designers. Anker's argument is that, although the notion of a 'space colony' may have appeared at first sight to be unproblematic (since no other peoples were colonized), when the metaphor was fed back into the minds of architects and ecological designers, Anker contends, human beings on Earth became the object of colonization.

As he shows in Chapter 6, the idea of terraforming other planets by building closed autonomous systems there in turn also became part of the style of thinking of architects on planet Earth, as it resonated well with the environmental movement's negative outlook on the ecological state of the world in general. This included the consideration given to mainstream political opinion. 'The outside world was simply described as "industrial" and thus not worth listening to', writes Anker (p. 129). Ecological architects consequently 'struggled to encapsulate buildings so that the inhabitants would be sheltered against the coming doom' (p. 116). Anker argues that what he terms 'the cabin ecological industry' was generally met with great enthusiasm by contemporary architects in its attempt to build houses that were gradually to become as self-sufficient as possible—culminating, perhaps, in the Biosphere 2 project with 'Noah's Army' as its settlers. Biosphere 2 was the name of a project in the Arizona desert that attempted to build a materially-closed ecological system on earth and Anker shows that the core idea 'to provide shelter in which ecologists and venture partners could survive in co-evolution with thousands of other species' (p. 123) was indeed the inspiration and even standard setting for many ecologists and architects.

Anker, however, is highly critical of this part of the story of ecological design because the narrow focus on the circulation of energy and the self-sufficiency of buildings 'came at the expense of a wider cultural, aesthetic, and social understanding of architecture and the human condition' (p. 129). The repercussions of this oversight have led to an exclusion of human health, well-being, and everyday practical issues in sustainable housing developments until the early 1990s. Consequently, social and cultural patterns for the viability of innovative and sustainable technologies and architecture today have become increasingly omnipresent since successful ecological design and sustainability needs to be integratable into the whole panoply of modern society (cf. Molotch, 2003). Furthermore, returning to Larson, we may also note that even where, as in more recent debates on sustainability, attempts are made to conceptualize and put into practice the long-term preservation of nature and culture by integrating ecological, economic, and social dimensions, the use of metaphors to connect these dimensions certainly does not make things any easier.

### **Governance and Sustainability**

For a while, the more political dimension of debates about sustainability was dominated by prescriptive thinking about sustainable development as well as about the criteria to be used to evaluate the achievement of pre-set goals.

*Environmental Politics and Deliberative Democracy*, however, edited by Karin Bäckstrand and colleagues, represents an attempt to move the issue forward, as it focuses on the ‘governance of sustainable development’. It does this by exploring processes of decision-making rather than normative goals or a gold standard for development. The volume’s strength lies in the fact that it locates debates around environmental governance within the broader scholarly context of environmental politics and deliberative forms of participation as well as work on the democratization of the environmental sciences in general.

In the context of the sustainability debate, governance has often been equated with ‘good governance’. This indicates a normative program (used by influential international institutions such as the World Bank) that includes norms, rules, and procedures for achieving the (seemingly) pre-set goals of sustainable development. The authors in this book, by contrast, criticize some of these normative promises and explore their feasibility and the empirical evidence for them, using examples ranging from legitimacy in environmental governance, to food safety, to forestry, to climate change.

The common concern expressed in the various contributions to this volume is to turn the promise of the ‘deliberative turn’ in sustainability policy into something workable and practicable. This turn is manifested in a revitalized interest in deliberative democracy (coupled with calls for novel forms of public–private governance) and in the paradoxes it entails (cf. Lövbrand *et al.*, 2011). As the editors state in their introductory chapter, the main question posed in the book is whether ‘new modes of governance generate more effective and legitimate policies simultaneously’ (p. 19). The authors thus challenge the promise that deliberative processes will automatically and simultaneously lead to effective and legitimate policies—and thus also challenge Larson’s hope that participatory processes might be a solution for using the right (sustainability) metaphors.

However, the causal relationship and resulting win–win logic of using processes that would directly lead to both the legitimacy *and* effectiveness of policy outcomes has been taken for granted by environmental economics and political science for quite some time now. The contributions in *Environmental Politics and Deliberative Democracy* correct these assumptions of clearly traceable causal relationships between institutional procedures and outcomes and their quite often naïve epistemological and political implications. As an alternative, the contributors to this volume present a rich picture of conflicting and complementary rationalities and forms of governance, such as markets, states and networks, which are deeply embedded in political contexts and cultures. Traditional hierarchical forms of governance and market liberalism do not vanish but rather raise new questions about the role of hierarchical forms of governance. In short, the win–win rhetoric underlying the promotion of new modes of governance fails to translate into practice.

In an enlightening essay by Roger Hildingsson (Chapter 8), for instance, on the deliberative turn in Swedish sustainability governance, the author provides



evidence that policy developments in Sweden and the call for more stakeholder and citizen participation have remained at the rhetorical—or, to refer back to Larson's book, the purely metaphorical—level. In contrast to Larson's account, Hildingsson argues that the figures of speech used in environmental governance have not led to positive or negative feedbacks but have actually had very little real influence at all. In other words, an ecological theme has played successfully into the realm of politics but has not had any effective resonance on the larger political scale.

Hildingsson now brings into sharp relief the widening gap between problem-solving based on the guiding principles of sustainability, on the one hand, and participation and governance on the other. This may not be a problem for the politics of sustainability: even if their deliberative potential cannot be fully realized, they feed back into the political realm and may contribute to the strengthening of the procedural values of representation and deliberation. What is missing, however, in this and other case studies in this volume, is any exploration of what type of governance leads to improvements in the natural environment 'itself'. This is surprising, given that this issue has not only been the subject of controversial debate among many environmental governance scholars (cf. Newig and Fritsch, 2009) but also appears to embody the crucial question facing all forms of new environmental governance: has improved governance led to more effective improvements in the state of nature?

### **Good Questions Needing Answers**

Taken together, these three books give a useful overview of social science research on sustainability. The books will appeal to those running both advanced undergraduate and postgraduate courses as well as to practitioners and scholars of environmental politics, environmental sociology, and international relations. Larson's and Anker's books especially may also be of interest to a general audience.

As convincing as these books may be to the favorably-disposed reader, however, they also, paradoxically, leave this reader with a certain sense of unease. In particular, Anker's historical reconstructions of attempts to design ecologically sustainable forms of housing make it abundantly clear that simple solutions are not to be expected in the near future. Worse still, even the best intentions (as all three books show in one way or the other) can have unintended side effects that can turn the goal to move forward towards more sustainability on its head. Bäckstrand *et al.*'s book supports this unease as regards the gap between ambiguous rhetoric and the justification of very different actions; Anker shows how the best-laid plans for designing sustainable houses are dependent on the limitations of contemporary discourse as much as on political and institutional hindrances; and Larson shows how allegedly 'pure' scientific metaphors are often 'tainted' by military, racist or otherwise highly problematic and misleading undertones.



However, in all three books more nuanced and theoretically informed frameworks to analyze institutional practices and assumptions about metaphors would have been in order. Given the unresolved problems on our path towards more sustainable forms of co-evolution between nature and culture, however, the books discussed here can be seen as a sign that at least some of the right questions are being asked.

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