

## REVIEWS AND RESOURCES

### Reviews

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## Dynamic Sustainabilities: Technology, Environment, Social Justice

**Melissa Leach, Ian Scoones and Andy Stirling**, Earthscan, London, 2010,  
224 pages, \$34.95 (paperback)

**Reviewed by Niko Roorda**

One of the starting points of this book is the idea that static situations and equilibriums don't really exist in our world, although they may seem to be present in many places. For instance, if we think we see a natural balance in an ecosystem, this is due to the fact that we see it just for a short period. The apparent stability is due to dynamic forces that balance each other for some time, but hardly ever for long. The same is true for economic systems.

The way the authors explained this principle was, I must say, an eye-opener for me. I had the impression that I already knew all this: in my own writing I have described the fact that, over time, species come and go, and that a natural balance is just an illusion. Nevertheless, the book made me aware that thinking in terms of static situations is inherent in several of the terms that I regularly use, for example, 'nature conservation' and 'carrying capacity', perhaps even in the concept of 'ecological footprint'. In real life, however, the world is full of non-equilibrium and nonlinear occurrences, every now and then going from complexity to chaos through thresholds and tipping points.

While reading this, I had a strong association with the well-known evolutionary term of 'punctuated equilibrium', introduced by Eldredge and Gould (1972). It would have been interesting if the authors had mentioned this principle or made a comparison between it and their own approach. In any case, the principle that static situations don't exist brings us to a new approach to sustainability. This is what the book offers us, in a fascinating way.

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The authors have taken a number of well-known principles, expanded several of them, and moulded them together to form an innovative conceptual approach.

One example of such an expansion of principles is the idea of a paradigm shift between ‘control’ and ‘adaptation’, two fundamentally different ways to deal with threats and unsustainable conditions. This has been studied in the literature before. But the authors add a second dimension, indicating the rate of change, varying from sudden shocks to long-time stresses. Putting these two dimensions in a  $2 \times 2$  matrix, they are able to define four different sustainability principles: stability, resilience, durability and robustness.

Pivotal to the book is the idea that a situation of unsustainability will be described by different stakeholders in different ways. They will tell their ‘narratives’ in various ways, thus ‘framing’ the situation differently, for example, varying the scale (from local to global) or the action perspective (from control to adapt, or ‘respond’ as the authors describe it). Usually there is a dominant narrative, in many cases highly focused on control, large scale, and technology and economy driven. But if you take the time to listen to other ‘narratives’, you will be able to discover alternative ‘pathways’ to sustainability, the authors argue. Many of these alternative approaches will offer better opportunities for social justice, especially for poor and marginalised groups.

If the book had stopped there, it might have been no more than just another call to ‘listen to the wisdom of the ancients’. But it doesn’t. Instead, it makes the ‘pathways’ principle come alive. First, this is done by introducing four real-life cases, which the authors keep using throughout the book: water resources in India, seeds in Africa, epidemics and health systems, and energy and climate. Based on these examples, the book explains the ‘pathways to sustainability’ through several steps. These are phrased in terms of questions, for example, ‘Who are the actors and networks telling the narratives?’ ‘What are, according to them, the goals, scales and framings of the system and its dynamics?’ ‘Do the narratives focus on shocks or on stresses, and on control or on response?’ and ‘What appraisal approaches close down to one narrative or open up towards alternative ones?’

After these questions have been treated and answered thoroughly—as the authors illustrate for the four cases—it will be up to the ‘policy arena’ to make decisions. Processes to get there include sensitivity analyses, open hearings and consensus conferences. If necessary, tools in the arena may be ‘protest, mobilization, citizen engagement and alliance building’, leading to empowerment of the powerless, that is, the poor and marginalised. Ideally, in many cases this will not lead to the selection of just one framing as the sole basis for policy and action, but rather a well-designed combination of framings.

This notion of empowering designs resembles the concept of transition management through networks of market, government and society (Grin et al. 2010; Rotmans et al. 2001). It might be interesting to compare these two concepts more closely. There are more opportunities to widen the theme of the book further. It would be fascinating to link the pathways approach to the principle of backcasting (Weaver et al. 2000), relating the narratives and pathways to the question ‘In what kind of world do we want to live?’ in which the word ‘we’ might refer to the various actors

and networks that tell the various 'narratives'. Such a comparison might be made even more interesting by studying the various scenarios of the Millennium Ecosystem Assessment, with names such as 'Global Orchestration', 'TechnoGarden', 'Order from Strength' and 'Adapting Mosaic' (Millennium Ecosystem Assessment 2005).

A final recommendation: It would be fascinating to relate the 'pathways' approach to the 'syndrome' approach (Barth and Burandt 2008; WBGU 1996), another way to diagnose unsustainable situations, this time in terms of characteristic complex 'illnesses' of systems. Which narratives and framings might be linked to such syndromes?

All in all, *Dynamic Sustainabilities* is a fascinating and readable book which gave me new ideas and insights concerning sustainable development, and which I recommend to readers.

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## Schooling for Sustainable Development in Chinese Communities: Experience with Younger Children

**John Chi-Kin Lee and Michael Williams** (eds), Netherlands, Springer, 2009, 300 pages, \$189 (hardcover) ISBN: 978-1-4020-9685-3

**Reviewed by Alicia Constable**

**T**his book provides a comprehensive overview of the progression and current situation of education for sustainable development (ESD) in primary level education within the Chinese context. The content is based on information directly

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