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Book Review

Ecologists as the New Management Elite?

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Can a set of articles published by some of the most prominent ecologists of our time be analyzed in a fashion that increases our confidence about the meaning of sustainable development? Yes, according to Emery Roe's (1998) *Taking Complexity Seriously: Policy Analysis, Triangulation and Sustainable Development*.

The objective of this book is to analyze the debate about sustainable development that took place in 1993 in the journal *Ecological Applications*. This debate was sparked by an article in *Science* by Ludwig et al. (1993), who stated, among other things, that plans founded on claims of sustainability should be "distrusted." Roe not only analyzes the views of various ecologists on sustainable development, but he does this from the perspective of four specific theories and frameworks. These include Girardian economic theory (dealt with in Part I of the book), cultural theory (Part II), critical theory (Part III), and the local justice framework (Part IV).

The reason Roe selected these four approaches is because they differ so dramatically from each other. By taking these approaches, Roe is making use of a conventional method in the social sciences known as triangulation. Triangulation uses multiple methods, databases, and theories to study the same object, event, or phenomenon. In triangulation, the selected approaches should be as radically different (orthogonal) as possible, and each approach should function as a critique of the others to "confirm the complexity" analyzed. As Roe puts it, triangulation may increase "our confidence as to what sustainable development is all about, given the admitted complexity of the topic."

Throughout Parts I-IV, Roe tries to provide answers to these four questions: What is sustainable development? Why is it an issue? Ideally, what needs to be done? What can be done from a practical point of view? When answering these questions, Roe successively disguises himself as a Girardian economist, a cultural theorist, a critical theorist, and a local activist. Thus, the reader is offered 16 different replies, although the answers to the

third question may initially converge.

Roe's message is that the complexity of sustainable development is far greater than the *Ecological Applications* debate reflects. Ecologists, faced with uncertainty over what the concept means, resort to reductionist thinking when describing how sustainable development is to come about. Although advocating a nonreductionist view in the management of complex ecological systems, ecologists resort to reductionist thinking by suggesting what needs to be done in the social setting, a field that is, according to Roe, perhaps "even more complex than biological and physical systems." As a major example of this, Roe refers to suggestions made by Ludwig (1993) on what must be done to sustain the Earth's biosphere. These include halting the increase in the human population and reducing per capita consumption of resources. Such propositions are not only reductionist in Roe's terminology, but they are also wrong, and they create "perverse incentives and disincentives" in the local justice framework.

To me, this book brings forth many worthwhile considerations, especially in the introduction, where Roe describes how written policy documents may be analyzed and evaluated in terms of actual policy performance. Also, I like the 12 recommendations on how policy makers should make decisions when matters are chaotic and complex. Roe argues that, due to major uncertainties about how the system will respond to management policies, managers of complex systems often end up managing by inspiration. Instead, Roe argues that decision making should take the notions of uncertainty and complexity into account and be based, among other things, on triangulation analyses, methods that allow for rapid adaptive responses, the accommodation of surprises, the testing of rival management hypotheses, and the maintenance of institutional memory. What is interesting is that these methods are generally consistent with the measures advocated by adaptive management (Holling 1978, Walters 1986), although Roe's recommendations stem from the social sciences literature.

The most striking and provocative part of the book is when Roe takes the guise of a critical theorist. In this part, Roe characterizes the ecologists participating in the *Ecological Applications* debate as "New Class ecologists," "the techno-manage elite," or "management gurus." He also argues that the debate itself is not really a debate, but rather the "New Class jockeying among themselves" to settle disagreements about rules and means of management among "They Who Must Be Obeyed." These are provocative words to most ecologists, I suspect. Thus, when the subject of sustainable development is examined using a critical theory approach, the message is that we should simply distrust these ecologists, because they offer reductionist solutions to complex problems in the social domain.

Because the critical theory approach is so provocative, I would like to suggest some reasons why I think this view may be unproductive from the perspective of environmental management. If we go along with the idea that sustainable development is nothing more than the "New Class version of resource managerialism" or that "nothing needs to be done, because organic negativity will eliminate the need for New Class domination," we may end up in a situation of laissez-faire management of ecosystems. By turning the sustainable development debate into nothing more than an issue of local politics, we ignore the fact that the interplay of biotic and abiotic processes does not acknowledge any geographic or social boundaries. Regardless of whether local, regional, or national borders actually exist, aquatic systems, migratory species, greenhouse gases, CFC emissions, and the ecosystem services required to maintain human well-being do not recognize such borders. It is precisely for this reason that regional, supranational, and global policies are necessary to maintain resilience in combined social-ecological systems.

If the conclusion is that biodiversity loss and ecosystem degradation can be prevented without scientific ecological knowledge, I think that we are oversimplifying the notion of what sustainable development is all about. In fact, such an argument may lead to the same kind of reductionism that critical theorists criticize ecologists for adopting.

BOOK INFORMATION

Roe, E. 1998. *Taking Complexity Seriously: Policy Analysis, Triangulation and Sustainable Development*. Kluwer Academic, Boston, Massachusetts, USA. 152 pp., hardcover, US\$ 119.50. ISBN 0-7923-8058-4.

RESPONSES TO THIS ARTICLE

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