

Frontiers in Ecological Economics: Transdisciplinary Essays by Robert Costanza

Robert Costanza

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Normally in reviews I concentrate on content but the Costanza volume is so poorly produced and edited that the potential buyer (or reader) should be warned. There is no attempt to make the various articles from which the material is drawn appear uniform. Some chapters have triple, some double and some single columns; font size varies from about 6 point (and hard to read without a magnifying glass) up to 12 point; some chapters have abstracts others none; the borders go in and out (e.g. a 7 cm bottom border in Chapter 5 while the text is 6 point!); references appear as footnotes and endnotes and in numerous formats or not at all and in the case of Chapter 23 will be found at the end of the introduction on page xxv. Perhaps the absence of a subject index should be of no surprise. In terms of the articles included there seems to have been little thought about repetition of concepts and indeed actual blocks of text. For example, substantial sections of the article reproduced in Chapter 21 are repeated two chapters later. Basically this is a photocopy collection of editorials, articles and book chapters bound together in four parts - each following a chronological ordering with little thought as to repetition or presentation. That said, let me turn to content.

There are 29 chapters in four parts covering the initiation of the current ecological economic movement, energy modelling, ecosystem modelling, and instruments for regulation. The chapters are best referred to as 'pieces' because some are hardly more than abstracts or comments, covering only a few pages, and certainly not 'essays' (e.g. Chapter 8 is just over two pages and Chapter 9 four pages). Chapter 1 is an unedited

introduction to a special issue referring to the articles which would then have followed but here are absent. Chapter 2 supplies Costanza's editorial introduction to the then new journal, *Ecological Economics*, which includes editorial policy and again refers to the absent articles following. Chapter 5 is the introduction and overview of a book from 1991. Already the reader will begin to realise that drawing out the key concepts from amongst the general clutter is a task that has been left to them. There is however plenty of repetition, so if you missed the idea first time just keep reading, as similar text reappears several times across the pieces.

Costanza was formerly president of the International Society for Ecological Economics (ISEE) and his book title would suggest the reader will learn about the distinct novelties which ecological economics might hold. The section called 'Creating an Ecological Economics' has nine pieces from 1987 to 1995. However, the ideas portrayed under the 'creation' tend to lack any detail as to the historical context of the subject. The 1970s is about as far as any reference goes. Costanza might have been expected to show familiarity with the widely known work on the subject by economic historian Martinez-Alier (1990) who organised the meeting in 1987 where the ISEE was initiated and was appointed by Costanza as a fellow ISEE Board member. In terms of central figures whose writings have inspired the movement little will be found here. The emphasis is rather on conceptions of ecological economics gleaned from those involved in the journals and books he was editing around the late 1980s. Topic areas which appear include limits to systems growth, natural capital, discounting and future generations, monetary valuation of non-market goods and, perhaps primarily for Costanza, modelling ecosystems and linking them to economic models. This latter area is where most of the pieces, and the more substantive research articles, concentrate.

In terms of learning what constitutes ecological economics the key concept appears to be that of a 'transdisciplinary' subject. This is described as non-territorial, co-operative, collaborative, and intended to avoid any threat of being replaced which economists or ecologists might feel (p. xiv). As can be easily gleaned from the approach and co-authors of Costanza's work, he is content with the basic tenets of modern economics. Ecological economics is defined as using the tools of conventional economics and ecology, and new tools and models are far from the focus but 'may emerge where the coupling of economics and ecology is not possible with the existing tools' (p. 51). Thus, clearly the idea is to building bridges between existing subjects and is strongly antithetical to developing a new paradigm. The subject for Costanza is merely ecology and economics.

There is an apparent lack of awareness over the extent to which views in ecological economics conflict with those of conventional economics and applied ecology. This is surprising, given the juxtapositions clearly presented in the form of a table (p. 53). Thus, rejecting mechanistic, static, atomistic world views makes using conventional economic models rather difficult. Centring values on whole ecosystems, including humans, can only challenge those using models and tools built to represent only humans. As I have noted elsewhere (Spash, 1999), if there is any content to ecological economics then certain conventional viewpoints will be rejected and they are under attack, even if unwittingly, as appears to be the case in the work presented in this volume.

In criticising the market and human value perception Costanza himself states 'Some notion of intrinsic value must therefore be introduced as a check on human perceptions and to allow us to study the economies of nature which do not include humans' (p. 6). Whatever this 'notion of intrinsic value' might be, and there is no explanation, it would seem incompatible with the use of conventional cost-benefit tools. However, Costanza

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goes on to rely upon individual human preferences to value wetlands, and is encouraged that these merge with his energy analysis. In fact, he uses the results of a contingent valuation study to calculate the 'total present value' of the average acre of wetland in Louisiana, noting in passing that discounting does have some problems. The reader may wonder where the non-reductionism and pluralism of ecological economics is to be found in such studies. There has of course been some change in perspectives over the last decade so that new literature encourages bolder steps in the direction of alternatives to conventional tools, but unfortunately there is no discussion of such changes. In fact the collection suffers from a lack of reflection, which might have been provided by a concluding chapter or substantive introduction.

The book is meant, according to the introduction, to provide 'synthesis and analysis'. However, no attempt has been made to synthesise ideas or present these to the reader. The belief that a 'sense of the development of ideas within the topic over time' might appear from ten years of one person's work (even with 28 co-authors) is questionable at the best of times. Costanza has mainly contributed to energy analysis, ecosystems modelling and the potentially interesting concept of ecosystems health. However, there are several areas where the contributions of others in ecological economics make no appearance and would need attention to begin any assessment of 'the topic', e.g. Norgaard or Gowdy on co-evolutionary development, O'Connor on political ecology, Munda on multiple criteria, and O'Neill on ethics. There is also a false sense of the historical importance of the pieces being presented by Costanza, which must explain why unedited short introductions to journals and books are included. Overall a better service would have been done to the author's own work and the reader by taking some time to edit the material and present the main topics and arguments.

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References

- Martinez-Alier, J. (1990) *Ecological Economics: Energy, Environment and Society*. Oxford, England: Basil Blackwell.
- Spash, C. L. (1999) 'The development of environmental thinking in economics', *Environmental Values* 8(4): 413-435.