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**Economic Growth and Valuation of the Environment: A Debate,
edited by Ekko C. van Ierland, Jan van der Straaten & Herman
Vollebergh**

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from his heroic expeditions. Why did the man exhibit this sort of courage?

Worster provides insight into that based on Powell's upbringing. Despite living in a small Ohio town as a child, Powell's parents were drawn into the greatest debate of the day, the morality of slavery, and chose to open their home to the activists of the time. Their stands were not comfortable ones, and their son learned the costs of dissent. In this way, his story completes an American life: active involvement in public life and principled dissent were obligations that he gladly assumed.

Perhaps it is not helpful of a reviewer to suggest that each book has merit; winnowing or ranking is surely not too much to expect. Each of these books is worth reading, however, depending on what one wants to know. William deBuys gives us a well chosen selection of the man's own words in an elegantly presented text that allows one to sample a lifetime's wide ranging work. Edward Dolnick tells an engrossing action story that skillfully integrates some of the historical context for the river voyage. It would be a mistake to think one knew Powell after reading this book, but the story epitomizes a chapter in the settling of the West that would captivate any reader. Donald Worster is comprehensive, schooled in historical methods, and brings the full weight of his considered conclusions about western history and the western environment to this text. At 573 pages, without notes, his book will be the standard until another generation rediscovers Powell.

It is great to read these books with some magnificent photography at hand, especially if it refreshes memories of past trips. The two books of photography each call the canyons to mind. A decent map would have been a great aid or, now, a computer-generated map would allow one to follow the entire story on one's personal computer. What will the next 100 years hold for our explorations?

REVIEWS

Economic Growth and Valuation of the Environment: A Debate. Edited by Ekko C. van Ierland, Jan van der Straaten & Herman Vollebergh. Northampton, MA & Cheltenham, UK: Edward Elgar Publishing, 2001. Pp. 397. \$90.00 hardcover.

What is nature worth to us? This is the question that the Dutch environmental economist Dr. Roefie Hueting tried to answer in his seminal 1980 publication, *New Scarcity and Economic Growth: More Welfare through Less Production*. Hueting's criticism of traditional national income measures and his advocacy of a greener accounting spawned a lively debate in the field. The current book is the result of one of those public

debates, as most chapters comprise responses to Hueting's work during a symposium titled *Valuation of Nature and the Environment*, held in 1999 at the Royal Netherlands Academy of Arts and Sciences in Amsterdam. The editors of this book subsequently did an excellent job of organizing the various symposium papers into four distinct and logical parts.

In the first part, *Setting the Stage*, Hueting explains in detail his view on what he has called sustainable national income (SNI). Hueting's key argument is that conventional welfare measures neglect the deterioration of nature, *i.e.*, labor and consumption, besides having a positive effect on welfare (more produced goods), also have a negative effect by diminishing environmental functions. Environmental functions, *i.e.*, the vital roles the environment plays for humankind (*e.g.*, the oxygen we breathe and the forest we relax in) rest on the assumption that a majority of people has a preference for their preservation. Disregarding potential positive preferences, these losses are never entered in a national cost-benefit analysis.

The SNI, according to Hueting, would be the maximum net income that can be maintained over time if one incorporates the conservation of environmental functions. Hueting bases the persistence of nature's exclusion on the existence of three "myths." First, the supposed competition between environment and employment ignores the fact that scarce natural resources actually need production factors for their preservation or restoration. Second, economic success (a prerequisite for environmental conservation activities) is erroneously equated with production growth. This, however, contradicts economic theory, which assumes that humans aim to maximize their welfare, which by no means refers to production. Third, the argument that conservation is too expensive can easily be deflected by only reminiscing on examples, such as travels by bicycle versus travels by car.

The major debate in the following chapters of this book focuses on the pronounced differences in outcome that arise from major differences in assumptions regarding human preferences for the environment. Theorists either deny the existence of problems in the current system (called blockages), or, if blockages are recognized, assume a weaker preference for the environment.

The second part, *Reflections*, consists of comments on several important presumptions behind the SNI concept. Daly starts this chapter by discussing the nature of objective values and sustainability versus utilitarian ethic. He argues that sustainability should be seen as an objective value whose legitimacy does not derive from private subjective preferences any more than does democracy. Unfortunately, the rooting of values in individual preferences has become a basic dogma in

economics. Daly speculates that this might have to do with a larger cultural assumption that excludes purpose from science.

In his strong rebuttal to Hueting's theory, Beckerman challenges green accounting's implicit assumption of intergenerational rights. He argues that unborn people do not have any rights, because it makes no sense to attribute a property to a non-existing entity. Rather, our moral obligations for future generations should be seen in the realm of theories of distributive justice, distributing some basic scarce resource between generations. Here, Beckerman claims that the scarce resource is not environmental stocks but basic human rights. Transferring a respect for these rights would include the transfer of decency and respect in regard to the environment.

With the third part, *Green Accounting and Sustainable National Income*, the debate moves from a discussion about the content of Hueting's approach to the execution of it. Authors reflect on both the conceptual and operational variety of computing a green national income. El Serafi elaborates on the difference of national accounting as an instrument for estimating "welfare" as opposed to correcting gross national product. He argues that Hueting's method requires data not available for macro-economic analysis. He concludes that the use of adjusted measures to the GNP based on losses in environmental capital (also known as welfare) are not in the interest of most politicians.

Pearce et al. contribute to the debate by arguing for the essential need of shadow pricing, *i.e.*, the price a population is willing to pay in order to allow for the preservation of natural assets. This was an idea Hueting himself rejected. They assert that government targets for a sustainable GNP can never be considered the reflection of individuals' preferences. If we believe in individual preferences for the environment, and a government is meeting these preferences, there would be no need to bother any further. Therefore, Pearce et al. consider Hueting's analysis suspect and offer an alternative estimation. The estimate of what they call a green net national product (GNNP) necessarily incorporates shadow prices.

Finally, Faucheux and O'Connor offer a structural perspective on sustainable development. They introduce the concept of the "monetization frontier" to demarcate two zones of natural wealth, leading to two types of economic indicators. On the one side, natural resources are only valued as contributors to future capital through their conversion into commercially priced goods. This method assigns a "weak" indicator role to natural assets. On the other side, assets are valued for the role they play as sites, scenery, and ecological life support to complement and support human economic life. This perspective

assigns a “strong” indicator role to natural assets. Either accounting technique would logically lead to distinctly different policy questions.

The fourth and final part, *Conclusion*, provides a detailed chronology of Hueting’s contributions to economic science and policies and lets Hueting himself respond to the contributions presented in this volume to clarify his views.

This book presents an inspirational dialogue that introduces us to viewpoints of nature that are very different from our average daily discussions. As average citizens, we want to preserve the environment, for the most part, but simultaneously prefer the comfort and convenience of technological advances, which deplete natural resources by providing the raw materials for our technologies. Little thought usually is spent on their interrelationship. Consequently, we end up wanting the best of both worlds, which, economists rightfully tell us, is impossible in a finite world. Only if we move from ethical and emotional preservation arguments toward economic ones will the environment truly have a chance to be included in our calculations of national welfare.

While authors with a variety of backgrounds contributed to the discussion in this book, the reader should nonetheless be cautioned that certain parts of the book may be difficult to comprehend, depending on the reader’s background. A minimal understanding of macroeconomic topics will certainly help, although it is not necessarily required.

Overall, the debate to move the implicit value of nature into economic models offers a valuable alternative for political pressure groups and anybody else interested in environmental protection and restoration to approach the ongoing political debate. Given that a majority of political parties and/or governments consider high growth rates and high welfare as signs of political and economic success, it is no surprise that environmental sacrifices are seen as unimportant in the long run. With the opposing political fronts in many countries hardening and arguments becoming shrill and emotion-laden, the ideas in this book might generate a shift in perception on both sides and offer directions for a win-win solution to the policy debate between economic growth and valuation of the environment.

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