Sustainable Development: Science, Ethics and Public Policy *edited by John Lemons and Donald A. Brown* (Kluwer Academic Publishers, Dordrecht, 1995), pp. xvii+281, US$149, ISBN 0-7923-3500-7.

Sustainable Development: Science, Ethics and Public Policy is a collection of edited papers originating in a conference held at the United Nations in New York in 1994. However, it is far more coherent and integrated than most books which arise in this way. The first five chapters are written by the book's editors and they provide the general framework for later chapters, focussing on the role of science, ethics, economics and law in sustainable development and environmental protection. The subsequent chapters, five in all, follow through these themes with in depth analysis of how science, economics, ethics and law affect particular environmental problems: biodiversity, climate change, marine and freshwater resources, toxic substances and nuclear waste.

This contribution from Lemons and Brown stands out from the many books and reports on sustainable development in three respects. The first is its multidisciplinary approach. Not everybody agrees with the need for a multi-disciplinary approach. As environmental coordinator at the University of Sydney I interviewed many academics about how their research and teaching related to environmental education. Many believed that their discipline was the one that was central to environmental matters. In particular, scientists argued that students should not be able to specialise in environmental studies without an undergraduate degree in science since without this basis they could not hope to understand environmental problems.

And if scientists believe they have a monopoly on knowing how environmental problems are caused, many economists believe, equally strongly that they are the ones that know how to solve those problems. Many politicians in Australia believe them too. However, this book correctly points out that environmental protection requires the application of several disciplines including science, economics, law and ethics as well as people who understand the capabilities, limitations, strengths and weaknesses of the tools each discipline brings to bear on the problems. This book's contribution will be in furthering that understanding amongst practicing and potential environmental managers and decision-makers.

The inclusion of ethics as a major reference point throughout is the second way in which this book stands out from the crowd. The ethical dimension has been paid lip service in the sustainable development debate but not really taken seriously in formulating policy. It has tended to be a neglected dimension of the sustainable development debate. The rhetoric of sustainable development includes talk of rights and obligations to future generations but the reality of sustainable development strategies and agreements is that they are based largely upon utilitarian ethics. All the authors in the book criticise this approach and promote policies that emphasise principles of justice for current and future generations of humans as well as the intrinsic value of nonhumans.

Thirdly *Sustainable Development: Science, Ethics and Public Policy* distinguishes itself in its critique of the accepted policy tools of environmental protection. It examines the policy tools of science, law and economics for their ethical and value content as well as their efficacy in achieving sustainability. Intergovernmental agreements and national sustainable development policies rely heavily on the ability of science to eventually produce objective, certain, and predictive information. The authors point out the fallacy of this assumption in terms of both certainty and objectivity:

> unless the value-laden dimensions of scientific and technical studies and information are disclosed, the positions of decisionmakers will appear to be justified on objective or value-

neutral scientific reasoning, when in fact they will be based, in part, on often controversial and conflicting values of scientists and decisionmakers themselves.(p. 21)

The critique of economic tools such as cost-benefit analysis and market instruments is also refreshing given the dominance of neo-classical economic thinking in most sustainable development texts. The contributors consistently uncover the ethical assumptions that such thinking is based on, in particular individualism and utilitarian theories. Although this critique is not original the editors have brought together and synthesised a wide range of material in order to give a comprehensive and balanced coverage of the arguments for and against these tools. They conclude that one of the most difficult problems that decisonmakers will have to face is whether to use these market mechanisms for sustainable development policy making.

Sustainable Development: Science, Ethics and Public Policy is an excellent book for thinking environmental professionals and would be a useful source of readings for senior university students studying environmental management or environmental science. At US$149 this book is probably too expensive, and perhaps too difficult, to be set as an undergraduate text.

Whilst much of the book requires some concentration and effort it is rewarding in terms of the intellectual stimulation that can be obtained from it. It is not the sort of book that you would read cover to cover, although the first five chapters really are a must for anyone serious about environmental protection. As the conclusion of the book points out, sustainable development policy requires the application, understanding and integration of disciplinary expertise from science, economics, law, and ethics. People working in this area need a broad-based understanding of a variety of disciplinary frameworks apart from their own speciality.

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For whom the phone rings - Residential Consumers and Telecommunications Competition *by Consumers' Telecommunications Network* (CTN, Surry Hills, NSW, 1995), pp. 310, A$30.00, ISBN 0-646-23617-2.

Since the introduction of legislation in 1991 allowing a second carrier to compete with Telecom Australia, as well as competition in the mobile market, Australia has seen great changes in telecommunications. In this context it is often assumed by policy makers that residential consumers have enjoyed benefits, particularly reduced prices and improved service. Usually such assumptions rest upon rudimentary analysis of prices and quality of service indicators. They do not take into account the range of needs of residential consumers and whether these have been met, nor do they examine the relative distribution of the benefits of competition amongst different groups of residential consumers and business.

A lack of both summative and detailed research on the outcomes of telecommunications reforms for residential consumers was the reason for the Consumers Telecommunications Network (CTN) to start a research project on how competition has actually benefited resi-