People and Nature: Operationalising Ecological Economics, the International Society for Ecological Economics Conference, Canberra, 5-8 July

Plenary address

Operationalising ecological economics: an academic perspective

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This commentary cannot pretend to synthesise a conference such as this: the quantity and range of the papers defy summary. So, the following comments touch on some of the themes that recur in ecological economics and which were evident at ISEE2000. My perspective is one of tangential engagement with ecological economics since its formal inception a little over a decade ago, and from my main preoccupations with policy and institutional dimensions of sustainability, natural resource management, and environmental history. I will touch on three areas relevant to an academic perspective: research directions; connections with policy; and education. The coverage of these is limited to just a few aspects of each that strike me as interesting or important.

Some research directions

A perennial research theme in ecological economics is the nature and use of market mechanisms. Market mechanisms are useful but not a panacea. Attention to the educative, statutory and institutional settings of market mechanisms has been unfortunately and significantly less intense than the advocacy of them by economists and neo-liberal political actors. Two questions seem interesting. First, why is that, with respect to the environment, we only put fairly inoffensive market mechanisms in place, ones that will not substantively influence the behaviour of governments, firms and individuals? Second, there is much detailed, empirical research to be done, getting beyond the assumptions, towards a context-sensitive understanding of how those price and rights instruments we have in place actually work in practice. Initial work in Australia on water markets and individual transferable fish quotas is revealing and useful, showing how the assumptions do not always hold, how some positive outcomes are emerging, but also how some unexpected, less positive effects are emerging. We need more such research, and economists cannot do that research. in isolation.

Much more profound that the application of market mechanisms has been the related phenomenon of market oriented reform of public institutions.[1] Privatisation, corporatisation, contracting out, user pays and the onset of managerialism have changed the face of public institutions and policy over the past two decades. Ecological economics has been fairly silent on this, as have, unfortunately, environmental law and policy. Which is a pity, given that there are strong implications for the whole-of-landscape or -catchment approaches, the environmental monitoring, the long term view, and the cross-sectoral integration that are central to sustainability. Again, research into these institutional changes would be necessarily cross-disciplinary.

One important implication of market-oriented reform of public institutions is for on public participation and community involvement, as citizens are redefined as consumers. Too little analysis has been undertaken on this. Yet this conference would suggest that community involvement is a rising theme in ecological economics. In recent years, most policy and intellectual attention has been targeted at local community-based programs of short duration. We need more sophisticated treatment of participation, recognising the great range of possibilities, from voting and corporatist inclusion in national policy formulation right down to community based on-ground programs and co-management.[2] Public participation at higher levels of policy formulation has in fact been diminished in many jurisdictions in recent years. Judith Innes at this conference gave examples of collaborative approaches, and there are thousands more, but we still know very little about the institutional, informational, statutory and economic settings that most favour effective participation in the long term.

Another perennial theme in ecological economics is natural resource or green accounting. What is it we think green accounting will actually do? The idea that a new set of numbers will cause the scales to fall of the eyes of decision makers is laughable. Existing economic data and accounts are ignored often enough by political decision makers to suggest otherwise. Information only has effect through institutions, and new accounts will be as effective as the institutions generating and adopting them. Work on indicators and reporting systems strikes me as similar. Most of the attention seems to be on the 'middle' of the span of relevant questions and processes: indicators and reporting procedures. The foundation of basic ecological monitoring receives too little attention, as does the end use within policy institutions and the issue of policy monitoring.

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[1] Dovers, S. and Gullett, W. 1999. Policy choice for sustainability: marketisation, law and institutions. In: Bosselman, K. and Richardson, B. (eds). *Environmental justice and market mechanisms*. London: Kluwer Law International.

[2] Dovers, S. 2000. Beyond EverythingCare and EverythingWatch: public participation, public policy, and participating publics. *Proceedings International Landcare 2000*, Melbourne, 2-5 March.

Similar comments apply to non-market valuation. Perhaps research into valuation, and actual valuations, perhaps has gone far enough for the moment, and it is time to take stock and assess the utility of these methods in actual policy making. The stated purpose of valuation techniques is to help make more informed decisions – do they? This is a highly empirical task, and will need input from other disciplines as well as economists. The results would inform both theoretical and methodological development, and the purchase of ecological economics on policy questions.

More generally, ecological economic research has produced a sizable theoretical literature in a short space of time and there appears little chance that this will diminish. Nor should it. But is there sufficient iteration between theoretical development and policy application? Hypothetical testing through modeling is no substitute for empirical testing in policy contexts. That invites a few comments on the connections between ecological economics, and policy processes and policy institutions.

Connections with policy

Proposed instruments and methods relevant to sustainability policy abound, in ecological economics and elsewhere. But there are very many of them, all are contested, and few have been implemented widely enough to provide a basis for assessment of their effectiveness. Of the few that have, even fewer have been subject to rigorous analysis. For example, the simplistic cry that regulation does not work is based more on disciplinary or political bias than on reasoned analysis of statutory design or implementation. Proper monitoring and detailed evaluation of policy interventions are rare, as is properly structured policy learning, and this will require sustained interaction between research and policy.

The institutional environment in which instruments and methods will operate is both crucial and poorly understood. It has been a commonplace over the past two decades that our institutional arrangements are not merely insufficient, but in fact a root cause of unsustainability. Yet there has been too little attention to institutional theory or institutional design. If John Proops was right in his proposals for ecological economics research presented at this conference and an evolutionary view of environmental policy is needed, that must account for the slow, complex evolution of social institutions.

Policy processes and institutions are central to most of what has been discussed at this conference and, in terms of these, the sustainability field cuts across sectors, jurisdictions, issues and disciplines. Amidst all this, is ecological economics positioned to claim a pre-eminent role in research for policy for sustainability? Absolutely not, and that is not a criticism but a recognition of the nature of the task. If ecological economics wishes to lay claim to the sustainability problem in a

broad sense, and I perceive that is a hope of many in ISEE, then this is a problem. At a basic level, few ecologists are involved in interdisciplinary endeavours, including ecological economics, and those that are represent some but not all of ecology. The bulk of ecology is highly empirical, focused on fine scale analysis, and not closely connected to policy or to questions of human-natural system interactions.[3] The empiricism is crucial and essential to the strongly grounded approach recommended by some at this conference. But the poor purchase of ecology on policy issues weakens its potential for connection to other disciplines. And ecology should on some arguments 'lose the plot' and move more toward the landscape scale, where, inter alia, better connection might be made to economics.

Also, taking 'ecology' as code for the natural sciences is misleading – just ask a geomorphologist, hydrologist or climatologist. The situation with other social sciences is similar. Picking up an ongoing theme of the conference, I do not see a great deal of notice being taken within ecological economics of some pertinent social science disciplines. If policy processes and institutions are important, then disciplines with a history in and purchase on these are necessary partners. The increasing presence of institutional economics in ecological economics goes only part way in addressing this. Closer connections are required with political science, public policy, organisational theory, institutional theory and especially the law. Given that institutions are deeply shaped by the past, and that the long view forward demanded by sustainability concerns should be matched with a longer view back than in neoclassical economics, then the discipline of history should be included.[4] On the basis of these observations, ecological economics is understaffed when it comes to broader sustainability questions.

Some ecological economists fail to recognise the maturity and relevance of these disciplines. But, importantly, some of these disciplines have not demonstrated great interest in the nature of sustainability problems. Economists involved in ecological economics are so engaged, I presume, because they are willing to question the theoretical propositions, operating assumptions and methods of mainstream neoclassical economics as these apply to sustainability questions. That is a leap too few lawyers, political scientists, public policy analysts, institutional theorists or historians have yet made with respect to their own disciplines. Whether they might be enticed to make that leap into ecological economics, and what their reception would be, I leave for others to judge.

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[3] Dovers, S., Norton, T. and Handmer, J. 1996. Uncertainty, sustainability, ecology and policy. *Biodiversity and Conservation*. 5: 1143-67.

[4] Dovers, S. (ed). 2000. *Environmental history and policy: still settling Australia*. Melbourne: Oxford University Press.

If I had to pick one discipline as particularly important and particularly overlooked, it would be the law. If new policy approaches are to work – such as market mechanisms or community involvement – it will be within a statutory framework. The statutory frameworks enabling market and participatory approaches to environmental management are poorly developed. Few lawyers are involved in interdisciplinary alliances such as ecological economics, and too few in those alliances seem to view the law as important. And, much of ecological economics speaks of embedding new values and principles into social decision making. This might be achieved by the long-shot of moral suasion, which begs connections with philosophy, education, communication, and like fields. (Mick Common's thoughts at this conference on the role of the media are very pertinent to this issue.) But I believe the embedding of values is most likely to be achieved through statute or common law, in the form of statutory objects and the building of a body of jurisprudence around sustainability principles. Principles of sustainability are now expressed in more than 120 Australian laws – perhaps not well expressed, but this is significant.[5] The most influential discussions of the meaning of sustainability principles will occur in the courts. Judges will be called upon to decide the operational meaning of ideas like precaution, essential ecosystem services and intergenerational equity. Ecologists and economists are largely absent from that arena.

As a start to building bridges with the law, ecological economics must get beyond the simplistic and politically-charged description of the law as 'command-and-control', of law as strict regulation only. Statute law offers much more than that.[6] It expresses social values, defines policy instruments, enable public participation, forces transparency and accountability, and shapes and directs human institutions. The common law is nothing if not a complex adaptive system of great longevity and influence. Ecological economists need to talk to lawyers.

Education and training

What will future ecological economists look like, those ones now being shaped now through undergraduate and post-graduate education. Education is, in the long term, more crucial than a journal or conferences, but has received little attention at this conference compared with research.

It appears to be not known what education and training is going on around the world under the rubric of ecological economics. A wide ranging survey, by ISEE, could help to establish that, and could create some much needed linkage capacity between students and teachers across the globe. The information from such a survey would begin to allow better discussion of the fundamentals of

[5] Stein, P. 2000. Are decision-makers too cautious with the precautionary principle*? Environmental and Planning Law Journal*. 17:3-23.
[6] Dovers, S. 1999. Adaptive policy, institutions and management: challenges for lawyers and others. *Griffith Law Review*. 8: 374-393.

an ecological economics curriculum. I think that discussion should place ecological economics as one part only of the broader range of eduction and training relevant to sustainability.

Post-graduate training is where research and training meet. Often, the most interesting research is being done by post-graduates, with the added benefit of pulling together academics in collaborative supervisory arrangements. There has been evidence of that at this conference. But we have yet to advance far with the art and craft of supervision in interdisciplinary fields – it is still too often individualistic and ad hoc. This needs more analysis and assessment, especially drawing on accumulated student experiences. We need better incentive structures within academia for these ecological economists of the future. Most ecological economists have one foot in a root discipline still, and should argue the case interdisciplinary research and education in those disciplines. We need explicit awards, scholarships and prizes for interdisciplinary theses, proper recognition and evaluation of interdisciplinary research by funding agencies, and professional rewards for post-graduate supervision are necessary.

Concluding comments

To close, I would raise some broader questions. Many of the themes strongly represented here are just as commonly found at all sorts of other conferences I go to in the resource and environmental policy and management field. So what defines ecological economics, when many paper here hardly connect with economics or ecology in the sense of these as intellectual disciplines? And when it is only one of the interdisciplinary alliances attending sustainability, along with environmental politics, human ecology, green social theory, environmental education, environmental history, and others.

Is ecological economics a poorly defined refuge for the disaffected, with a consequent loss of focus, agenda and rigour? Or is it starting to achieve its potential as a major arena for discussing sustainability in the broader sense? Or should it be, primarily, a corrective to mainstream economics? Can it be all of these and remain a coherent grouping?

Ecological economics clearly has an identity crisis and concern about that has been apparent here. That this is still the case a decade on is a little strange. My advice would be to live with multiple agendas and purposes – celebrate them even – but articulate them clearly. Ecological economics is young – ten years as an intellectual field or as an institution is not sufficient for sensible judgement. Ecological economics should not yet have to decide what it wants to be when it grows up. Enjoy the diversity in theory, method, language and intent while you can, before the enterprise ossifies and you have to create another one. As Martin O'Connor put it at this conference, we are an agitated species. I suspect that ecological economists are an unusually agitated subspecies. Admit

the crisis of identity, and seek advice on parts of it that fall outside your own capabilities – from institutional theory, public policy and law, from public health, the psychology of risk, from history and all the other fields of inquiry of which their have been glimpses of at this conference. Beneath those glimpses are the rest on many icebergs – powerful intellectual and practical traditions that you need and that need you.

And accept the contingent nature of the task. I would disagree mildly with John Proops in his plenary address – we do not in fact know much about our ignorance. We do not use what little knowledge we have. Basic ecological monitoring is, by a large, in a pathetic state.. We do not apply instruments we know would help, like taxes, and we do not stop doing things that we know, ecologically, to be stupid. Our constructions of risk and uncertainty and related issues are neither robust, nor widely shared. We need to recognise that quantifiable risk and reducible scientific uncertainty are one thing, but other forms of ignorance are more important in politics, institutions and policy – forms such as presumed irrelevance, surprise, taboo, distortion, confusion, and ambiguity.[7] What ecological economics thinks now to be important may not stay that way for very long.

Sustainability will remain an impossible goal – the task is to construct intellectual and policy pathways that take us nearer rather than further from that goal. But the goal will shift as values and understanding change, the methods we develop will appear quaintly inadequate in future, and new issues and problems will emerge. Shared theory, uncontested methods and certainty as to goals will remain elusive. 'Operationalising ecological economics' is not something that will happen very soon. Such a view is not pessimistic. It is optimistic, because it suggests that ecological economics will remain an interesting place for some time yet.

[7] Smithson, M. 1989. *Ignorance and uncertainty: emerging paradigms*. New York: Springer-Verlag.