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Methods

Cross-cultural environmental research in New Zealand: Insights for ecological economics research practice

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ABSTRACT

Indigenous cultures and knowledge systems have been virtually ignored by Ecological Economics theory and practice, in spite of the increasing willingness of indigenous peoples to engage in the holistic and integrative research that ecological economists aspire to. This paper draws on the involvement of ecological economists in cross-cultural research in New Zealand, to distill insights on how ecological economists can usefully and legitimately engage with indigenous peoples in environmental research. The main bodies of western ecological knowledge are reviewed and compared with indigenous knowledge, illuminating the main similarities, differences and challenges. This leads into a broader analysis of how these different 'knowledge systems' can be mobilised to provide cross-cultural environmental research of practical use to indigenous peoples. Accordingly, principles, characteristics, and structures of applied cross-cultural environmental research are discussed, not as a prescriptive template but as suggestions for future researchers. We conclude that Ecological Economics is well placed to embrace the perspectives and frameworks of indigenous and western knowledge systems. We strongly assert, however, that methodological pluralism needs to be practiced, not just preached. Ecological economists need to resist 'knowledge imperialism' and even 'knowledge integration' (except where appropriate), which has sometimes been the case in the recent Ecological Economics literature.

1. Introduction: A Challenge for Ecological Economics Research Practice

Many Ecological Economics scholars advocate that this field needs to take stronger account of 'social, political, ethical, institutional and cultural factors', as well as biophysical and economic factors (Ropke, 2005; Spash, 2009). Indeed, in the opening session of the recent ISEE Conference, for example, the ISEE President John Gowdy (2010) encouraged the audience to step back from the western economic system, to take a longer term view, not to ignore the social context, and to learn from other human societies.

In spite of these pleas, however, rarely in Ecological Economics is much serious attention given to indigenous cultures and knowledge. One could be forgiven for thinking that Ecological Economics is confined to frameworks derived from 'western culture'. Even less is written on how ecological economists can or should engage with indigenous peoples. Norgaard (1989, 2001) and O'Hara (2001), in their critical appraisals of Ecological Economics, are examples of the few in the Ecological Economics literature who have even recognised the need to engage in cross-cultural research and communication. This is despite the fact that the majority of the world's population and many of the emergent sustainability problems occur in cultures that are not intrinsically part of the Anglo-European-American 'mainstream'. As Norgaard (2001) puts it, "the voice of indigenous people are in a distant corner", and "implementing solutions requires contextual, experimental and in some cases, traditional or indigenous knowledge of local people and practitioners".

Only a few publications in this journal, *Ecological Economics*, have provided a focus on 'indigenous knowledge' and 'indigenous cultures', or offered perspectives on how ecological economists might approach cross-cultural research. Failing et al. (2007) advocate a formal structured decision-making process with analytical tools on how to 'integrate' local (including indigenous knowledge) and scientific knowledge, and how this can be tackled from a post-normal science perspective. Venn and Quiggan (2007) consider "the problem of accommodating indigenous cultural heritage values in resource assessment and evaluation", which indigenous scholars may consider little more than 'shoe-horning' indigenous cultural knowledge and values into a western academic framework. Other ecological economists publishing in this journal have viewed 'indigenous culture' as one of the boxes in their analytical framework that needs to be 'ticked off' and completed. For example, 'cultural and historical' information forms part of Chiesura and de Groot's (2003) 'critical natural capital' framework. Yet other papers in this journal consider 'indigenous knowledge' from an even narrower perspective — that is, for example, Zerbe (2005) and van Overwalle

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(2005) analyse 'indigenous knowledge' from a utilitarian perspective vis-a-vis the 'intellectual property' benefits that can be gained from it.

On a more positive note, Jollands and Harmsworth (2006) explain how indigenous groups can monitor progress towards sustainability, and they advocate that this can be done within a framework of 'methodological pluralism', arguing that this can provide a "richness of perspectives of sustainable development".

The overwhelming impression of the treatment of indigenous knowledge in Ecological Economics, however, is that it is seen as an externality that needs to be internalised into a 'western science style' analytical framework. Few ecological economists seem to be explicitly challenging this academic imperialism when it comes to indigenous cultures and knowledge. As Šunde (2008, Unpublished) argues, there are a number of questionable ethical and philosophical assumptions in this imperialistic approach. First, there is an assumption that different cultural perspectives and knowledge can and should be 'integrated' into one framework. This call for 'knowledge integration' under the guise of transdisciplinarity was a recurrent theme at the 2010 ISEE Conference (Lux, 2010; Scholz, 2010), but that is questionable in the cross-cultural research context that ecological economists are often confronted with. As Šunde (2008) argues, it is not so much a matter of 'integrating' knowledge (as there are fundamental incommensurabilities), but more a matter of having a respectful dialogue between the different cultures and knowledge systems and realising they cannot be reduced to one universal framework, no matter how 'holistic' or 'integrated' that framework might be. In fact, perhaps we should go even further in actively resisting 'knowledge integration' across cultures as this somewhat inevitably results in 'knowledge imperialism' where one body of cultural knowledge supplants or dominates the other (Smith, 1999).

Second, it is often presupposed by employing such frameworks that the issues at hand should be approached in a strictly 'rational' way, based on precepts of western science and academic thinking. In indigenous cultures, in particular, the spiritual and the metaphysical are often inseparably part of everyday reality, and these cannot be approached using 'rational, western modalities', which is applied, for example, in the case of a number of ecological economics research publications.

Third, and related to the last point, several of the few attempts of ecological economists to take account of indigenous culture and values assume a utilitarian motive, or assume that indigenous knowledge only has value in-so-far as it provides a base for providing benefits or income (e.g., van Overwalle, 2005). However, on the contrary, in indigenous cultures this is often not a dominant motive, with spiritual and collective motives often being more important. As Paavola and Adger (2005) put it in their plea for an 'institutional ecological economics', there is a "plurality of behavioural motivations", and this applies to both indigenous and western cultures.

Therefore, the purpose of this paper is to explore ways in which cross-cultural[2] research might be undertaken by ecological economists in a way that it is respectful of indigenous cultures and can build upon a common (but not unified) understanding of how to achieve desirable outcomes for indigenous peoples and for all peoples. We will draw primarily on examples of our New Zealand-based research undertaken by Massey University in collaboration with other research partners, including Māori researchers and local Maori communities. Specifically, we will refer to two Massey University-led large-scale government-funded ($NZ9 million) research programmes: (1) Ecosystem Services Benefits in Terrestrial Ecosystems (2005–2008); and (2) Manaaki Taha Moana: Enhancing Coastal Ecosystems for Iwi (2009–2015).

In putting forward this critical review of cross-cultural research appropriate for Ecological Economics, we wish to acknowledge that first of all, we don't in any way wish to be prescriptive or set out a template of how ecological economists should engage in cross-cultural research. Rather, we only wish to report on some of the insights and practical lessons we have learned in our New Zealand-based experiences. It would be presumptuous to imply that these insights and lessons automatically apply to other cultural contexts or research programmes. Secondly, we wish to acknowledge that this experienced-based review is written from the perspective of two non-Māori (Pākeha) researchers involved in these cross-cultural environmental research programmes. Due to the complexities and challenges of this type of research, it is inevitable that other researchers doing related research may have different insights and perspectives. In our view, whilst researchers can benefit from the insights provided by others who have undertaken research in related contexts, there is no universal, unified, or singular view of cross-cultural research, and nor should there be.

2. Mobilising Indigenous and Western Ecological Knowledge Systems

2.1. Overview

Increasingly, ecological economists will be required to work across cultures, as the extent of environment-economy problems intensifies and impinges on indigenous cultures and they become more empowered to do something about this. In this cultural context, however, it is not a simple matter of using conventional ecological economics tools and templates, but instead a more nuanced and culturally-sensitive approach is needed. Nor is it a simple matter of 'integrating' both 'indigenous' and 'western' knowledge to address these problems. Instead, we argue that a methodological pluralism (Panikkar, 1995) needs to be extended, not only to work across disciplines, but cultures as well. Ecological economists need to be able to 'mobilise' and 'learn to understand' different cultural perspectives and knowledge systems in innovative ways that respect the originating cultures of those participating in cross-cultural dialogue, respect and preserve rights to self-determination, and resist the methodological and knowledge imperialism that has characterised so much of the interactions of researchers with indigenous peoples in the past.

In the cross-cultural research presented in this paper, we have incorporated both indigenous Māori knowledge (mātauranga Māori) and western ecological knowledge. Our raison d'être being that neither knowledge system is in its own right sufficient to derive practical solutions to the types of complex multi-dimensional problems (e.g., water use and management, climate change, ecological restoration, urban planning) we are increasingly dealing with.

It is important from the outset to recognise that neither 'indigenous knowledge systems' nor 'western knowledge systems' are homogenous; rather, both have a rich variety of approaches and often contested perspectives. There are variations between iwi, hapu and whanau[3] over interpretations or expressions of knowledge and value systems in the 'Māori worldview' (Mead, 2003). Nor should it be assumed that mātauranga Māori is static or unchanging, as sometimes there is a distinction between 'contemporary' and 'traditional' knowledge. Likewise, 'western ecological knowledge' has a variety of approaches ranging from reductionistic, which downplays the importance of ecological systems, to more contemporary approaches that embrace ideas of integration, complexity, uncertainty and adaptive management.

[2] It needs to be made explicit that the focus of this paper is 'cross-cultural' research. In the New Zealand context, not all indigenous-focussed research is cross-cultural. 'Kaupapa Māori research' refers to research that is strictly based on Māori traditions and principles, and may involve little or no use of non-Māori research methodologies, often under the axiom of "for Māori by Māori". Smith (1999) summarises Kaupapa Māori research as: (i) related to being Māori; (ii) connected to Māori philosophy and principles; (iii) takes for granted the validity and legitimacy of Māori, the importance of Māori language and culture; and (iv) is concerned with the struggle for autonomy over our own cultural wellbeing.

[3] Iwi refers to "tribes"; Hapu refers to "sub-tribes"; Whanau refers to "family groupings".