International Journal of Cultural Property (2016) 23:119–140. Printed in the USA.

doi:10.1017/S0940739116000084

Sustainability Concepts in Indigenous and Non-Indigenous Cultures

David Throsby*

Ekaterina Petetskaya†

Abstract: The concepts of sustainability, and of the more specific notion of sustainable development, have become entrenched in national and international policy making over the last half century. However, little attention has been paid to sustainability as it relates to indigenous communities. This article discusses sustainability concepts as understood in indigenous and non-indigenous societies, drawing a number of illustrations from the experiences and practices of the Aboriginal and Torres Strait Islander peoples of Australia. We point out that the two approaches to sustainability share many common concerns, although significant differences are evident. While the paradigm of sustainability can be seen as a universal concept that can be applied irrespective of social, political, or cultural context, it is argued that a fully realized model of sustainability for application in non-indigenous societies will only be possible if it acknowledges the importance of culture and incorporates the insights that have been accumulated over generations in indigenous knowledge systems.

*Department of Economics, Macquarie University, Sydney, Australia; Email: david.throsby@mq.edu.au
†Department of Economics, Macquarie University, Sydney, Australia

ACKNOWLEDGMENTS: The research on which this article is based was supported by a Discovery Grant from the Australian Research Council (DP120101387). The authors would like to thank Yananymul Mununggurr, Dhanggal Gurruwiwi, and Joseph Neparrnga Gumbula for providing valuable insights into Yolngu sustainability practices. We are also grateful to Howard Morphy and Marianne Riphagen of the Australian National University for their constructive advice and comments. In addition, we express our gratitude to two anonymous referees whose comments enabled us to make significant improvements to the article. Views expressed in the article are entirely our own.

INTRODUCTION

The concepts of sustainability and of the more specific notion of sustainable development have become entrenched in national and international policymaking over the last half century. These ideas have evolved in the scientific and policy circles of the Western world and have been applied in the formulation of development strategies in both developed and developing countries. However, despite the wide-ranging ambit of these concerns, they have paid little attention to sustainability as it relates to indigenous communities. Yet sustainability principles are fundamental to the cultures of many of the world's indigenous peoples and cannot be ignored in any consideration of desirable development paths for first peoples living on land that their communities have occupied for countless generations. So the question arises as to the similarities and differences between indigenous and non-indigenous concepts of sustainability. Can they co-exist in an increasingly globalized world?

In this article, we discuss sustainability concepts as they are understood in indigenous and non-indigenous societies, drawing a number of illustrations from the experiences and practices of indigenous societies in diverse parts of the world, with particular reference to the Aboriginal and Torres Strait Islander peoples of Australia. Our focus is on sustainability as an overarching paradigm defining the desirable long-term properties of systems in economic, social, or biological spheres. Within this context, the more particular concept of sustainable development comprises a specific interpretation of development processes in terms of sustainability principles. In considering the interpretations of sustainability that are held by indigenous peoples in different parts of the world, we argue that there are certain characteristics of such interpretations that are common across indigenous cultures, enabling us to put forward what might be described as a set of "stylized facts" about indigenous sustainability. However, we also maintain that the characteristics of specific cultures' concepts of sustainability might depart in various ways from these depictions and that actual circumstances may vary in detail from one culture to another. In this regard, our references to Australian Aboriginal practices should be seen as illustrations of the application of the general principles to one particular cultural group, not as generalizations applicable to all.

The article is structured as follows. In the second section, we outline the evolution of the sustainability paradigm in the Western discourse over the past 30–40 years, pointing out that it relates primarily to environmental or ecological sustainability and shows little concern, at least so far, for issues relating to the sustainability of culture. The third section turns to the elements in indigenous cultures that underpin sustainability for indigenous communities, including the intrinsic importance of land, languages, and traditional knowledge. In the fourth section, we discuss the relationships between indigenous and non-indigenous approaches for achieving sustainability—both are concerned with a holistic interpretation of the world, but they differ in a number of important respects. The fifth section explores

whether or not the two systems can coexist, and it draws some conclusions about the implications for public policy toward indigenous peoples, especially in the light of efforts to reformulate the United Nation's (UN) development agenda in the post-2015 period.

THE WESTERN CONCEPT OF SUSTAINABILITY[1]

The origins of international interest in sustainability in the latter half of the twentieth century can be found in concerns raised during the 1950s and 1960s about burgeoning environmental problems in a world where national and international developmental policy was relentlessly focused on economic growth. Books such as Rachel Carson's *Silent Spring*, which painted a picture of a dystopian future without birds or trees, and the Club of Rome's *Limits to Growth*, pointed to the growing environmental problems arising from a pursuit of economic growth at all costs and helped to expose the inadequacy of growth in the gross domestic product per capita as an indicator of human development.[2]

However, it was not until the 1980s that the concepts of sustainability, and of sustainable development as a pathway to achieve sustainability, were introduced to the world through the work of the UN World Commission on Environment and Development (WCED), which also became known as the Brundtland Commission. The commission argued that the environmental degradation caused by exploitative resource use in industrialized countries, especially in the energy sector, was leading directly to problems of poverty and a lack of development in the global South. In this context, sustainability was seen as an overarching paradigm enabling the integration of the biosphere and the economy in a holistic or whole-system interpretation of the development process. The great ambition for the framework has been to become a fundamental principle recognized and applied globally in development practices at the local, national, and international levels. We refer to this framework henceforward as "the WCED framework" or "the WCED model."

The Brundtland Commission's well-known definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" encompasses the core idea of sustainability as implying long-run viability, a capacity of systems to reinforce and maintain themselves over time.[3] Thus, policies for sustainable development would be those directed not at temporary fixes but, rather, at long-term strategies achieving lasting improvement. From its very beginning, however, the concept of sustainable development has faced many contradictions. Most of these come from the difficulties of balancing development and environmental objectives.[4]

The theoretical foundations of sustainability can be found in ecological economics in the concept of natural capital.[5] The elements of natural capital comprise renewable and non-renewable resources, the ecosystems that support and maintain life in the biosphere, and the multiplicity of species in the natural world referred

to as biodiversity. Achieving sustainability then implies the efficient and equitable management of these resources in such a way that present and future human needs are met. Overwhelmingly, discussions about sustainability in theoretical and practical contexts have focused on such an environmental or ecological interpretation. Nevertheless, there have been some efforts to broaden the concept, for example to incorporate social values into the assessment of sustainable development paths and to draw culture into the picture.[6] Indeed, in the latter respect, it has been argued that culture is "the fourth pillar" of sustainability, alongside the economic, social, and environmental dimensions.[7]

Concern for the role of culture in sustainable development was strongly expressed by the World Commission on Culture and Development (WCCD), the UN's successor to the Brundtland Commission, in its report *Our Creative Diversity*.[8] The UN Educational, Scientific and Cultural Organization (UNESCO) carried the argument further in its two *World Culture Reports*,[9] and the need to incorporate culture into national development strategies was an explicit recommendation arising from the cultural "summit" held in Stockholm in 1998.[10] Subsequently, cultural policies in a number of European countries have devoted increasing attention to cultural rights, intercultural dialogue, and other cultural sustainability issues.[11] Since the early 2000s, the articulation of sustainability principles has also motivated discussion concerning the importance of cultural diversity, culminating at the international level in the 2005 UN Convention on the Protection and Promotion of the Diversity of Cultural Expressions, which entered into force in 2007.[12] Article 13 in this standard-setting instrument encourages signatories to integrate culture in their development policies at all levels to create "conditions conducive to sustainable development." It is but a short step from here to enunciate the relatively new concepts of cultural sustainability and culturally sustainable development.[13]

The theoretical basis for cultural sustainability derives from the close parallels between natural and cultural capital where the latter, in its economic interpretation, is defined as assets that embody or give rise to cultural value in addition to whatever economic value they may possess.[14] Just as natural capital includes natural resources, ecosystems, and biodiversity, so also does cultural capital contain cultural property (both tangible and intangible), cultural networks and support systems, and cultural diversity. These cultural resources are also renewable and non-renewable. Thus, it is possible to spell out a set of principles for culturally sustainable development that mirror those that can be specified for ecologically or environmentally sustainable development. These principles can be summarized in the following way. The most important is intergenerational equity—the management of cultural capital assets in such a way that they are passed on intact to future generations. Other principles include fairness in providing cultural access and recognition to the present generation, the maintenance of cultural diversity, and the observance of the precautionary principle. The latter provision is invoked in the natural world when species loss is threatened. The same situation arises when,

for example, items of cultural capital, such as historic buildings, are in danger of demolition or indigenous languages are faced with extinction.[15] We return to these issues later in this article.

A consideration of cultural sustainability in terms of the conservation of cultural capital raises issues that have been widely discussed in the literature of the economics of heritage.[16] As Alan Peacock pointed out in an early contribution to this debate, resources committed to the conservation of heritage for the benefit of future generations have opportunity costs in the present—not all heritage items can be preserved, and choices must be made.[17] Such choices depend on assumptions about future generations' preferences, the possible effects of changing technologies, and the willingness of the present generation to forgo current consumption to secure a future payoff.[18] Thus, the desirability of sustainability as a paradigm for decision making cannot be taken as being axiomatic but, rather, must be judged in a context that acknowledges the intertemporal allocation of resources. Nevertheless, the accepted definition of sustainable development quoted earlier, in which the needs of both present and future generations are accounted for, explicitly invites these trade-offs to be brought into consideration.

SUSTAINABILITY IN INDIGENOUS CULTURES

We now turn our attention to sustainability in an indigenous context. As noted in the introduction, this article is concerned with indigenous sustainability principles in general and will illustrate the argument with some examples drawn particularly from the experience of Australian Aboriginal and Torres Strait Islander cultures. These cultures have existed intact on the Australian continent for at least 40,000 years, yet the history of European settlement extends back only two centuries, dating from the British invasion of the country in 1788. The process of land alienation and dispossession that followed through the nineteenth and twentieth centuries led to many Aboriginal people moving to mission stations and government institutions, and it is only in the last 20 years or so that attempts at the national level have begun to be made toward recognition of native title to land, the restitution of cultural rights, and reconciliation between indigenous and non-indigenous Australians. Despite the dispossession from their land and a policy of assimilation, the cultural traditions of the Aboriginal and Torres Strait Islander people have remained resilient, celebrated in the visual and performing arts and now recognized as a definitive feature of Australian identity. Aboriginal and Torres Strait Islander cultural practices continue to be maintained in many Aboriginal communities throughout Australia and are living manifestations of a cultural heritage that incorporates clearly observable interpretations of the sustainability concepts discussed in the following sections.[19]

It was noted above that a key characteristic of the concepts of sustainability and sustainable development in the contemporary Western world is a focus on

intergenerational equity, taking account of the needs of the earth's future inhabitants. A similar concern with the long run underpins indigenous cultures whose very existence is grounded on the inheritance of traditional knowledge and the transmission of cultural values to subsequent generations. In such cultures, the nature of sustainability is understood and experienced in terms of relationships to land, language, and knowledge systems. Linking these three dimensions together, the majority of indigenous societies recognize the importance of holism as a basis for interpreting the world. Each of these characteristics is considered in turn.

Land

It is apparent that the connection between the land and people lies at the heart of indigenous cultures all over the world. The term land in this context refers to land, sea, and associated resources. Land has a spiritual, social, cultural, economic, and political significance to indigenous societies that derives from deeply held spiritual beliefs. Relationships with land vary somewhat between indigenous groups according to the form of societal organization, including pastoral societies, slash-and-burn agriculture groups, and hunter-gatherers, for example.[20] In all of these cases, however, land is seen not as a means of production or a commodity to be acquired but, rather, as an integral part of existence connecting all living beings, including humans and their spirituality. This way of understanding land is only possible "once humans and non-humans are connected with land in their everyday relational practices," when meanings can then be "co-constituted as a totality" and the land comes to be interpreted as "relationships, culture, and spirituality where humans and non-humans connect in their everyday interactions."[21]

The nature of indigenous peoples' relationship with land typically implies an obligation to safeguard and protect rather than to acquire. As such, the occupation and use of traditional lands by indigenous communities may conflict with prevailing legal systems governing land ownership and may require special recognition in the land title arrangements granted to such communities by governments.[22] In Australian indigenous communities, land is referred to as "country," and stewardship of the land is known as "caring for country." However, as in many other indigenous societies, the Australian indigenous concept of country extends beyond the physical presence of the earth. It embraces ecological, cultural, and economic values that include spiritual beliefs, behavioural norms, concepts of stewardship and ownership of country, and associated property rights.[23] Deborah Bird Rose sums up the concept as follows:

> Country is multi-dimensional—it consists of people, animals, plants, Dreamings, underground, earth, soils, minerals and waters, surface water, and air. There is sea country and land country; in some areas people talk about sky country. Country has origins and a future; it exists both in and through time.[24]

The relationships described in this quotation are reflected in Aboriginal law that governs the ways of living on country and determines the pattern of life itself. The stories underlying the law have multiple layers of interpretation and are connected with particular geographic localities, although there are levels of organization in many Australian indigenous societies that extend over more than one location. Ownership of resources and rights of access to them are articulated through cultural symbols such as clan designs, emblems, and song cycles.[25] Thus, the connection between land and law for Aboriginal people is apparent. Each specific geographical location has its law, and this law would not be applicable outside its areas of origin—the law stories come from particular places and belong to these places.[26] Aboriginal knowledge and law are the intellectual property of the people who own them and constitute evidence of relationships between these people and their country.

Language

The importance of language as an integral component of all indigenous cultures is paramount—it is far more than simply a means of daily communication. It acts as a storehouse of indigenous knowledge that is encoded in local languages and as a primary means for transmission of that knowledge to future generations.[27] So fundamental is language to the culture of indigenous peoples that indigenous populations in some parts of the world believe that losing their language would mean that they would no longer be able to practise their spirituality.

At a more practical level, the loss of language could also mean the loss of the traditional knowledge about how to manage sensitive ecosystems and protect biodiversity. Indeed, linguistic diversity and biodiversity are closely interlinked, since indigenous languages "are treasures of vast traditional knowledge concerning ecological systems and processes and how to protect and use some of the most vulnerable and biologically diverse ecosystems in the world."[28] The location-specific characteristics of indigenous languages mean that much of the traditional ecological knowledge that they embody is particular to that environment and may not be translatable to other languages. For the Inuit, for example, this position was articulated by Eben Hopson, founder of the Inuit Circumpolar Conference: "Our language contains an intricate knowledge of the Arctic that we have seen no others demonstrate."[29]

Australian indigenous languages are important as a vehicle for expressing the law governing ways of behaviour and specifying social relationships. They also have strong links to culture and the land, providing complex and intrinsic understanding to both of them, as emphasized in the findings from the 2005 Australian National Indigenous Languages Survey.[30] Languages hold the knowledge of specific local environments and cultures and act as the vehicle for interaction with these environments. Amelia Turner, of the Lhere Artepe Aboriginal Corporation in the Northern Territory of Australia, describes how her language connects her people to the land and ancestors:

> Words are given to us by the land and those words are sacred … The land needs words, the land speaks for us and we use the language for this. Words make things happen—make us alive. Words come not only from our land but also from our ancestors … Language is ownership; language is used to talk about the land.[31]

According to Ross Williams, of the Papulu Apparr-Kari Aboriginal Corporation based in Tennant Creek in the Northern Territory, "[i]f you do not know your language, you do not know your country and you do not know your Dreaming."[32] Of course, this does not mean that once people no longer speak their language they lose their spiritual connection to land. Indeed, in many areas of Australia, strong spiritual ties to land and deep knowledge of the environment still exist where languages are no longer spoken. Nevertheless, maintaining language remains a significant issue for Aboriginal communities, and people feel a loss when their language disappears.

Knowledge

The term "indigenous knowledge" is used in this article interchangeably with other terms such as "traditional knowledge," "local knowledge," or "traditional ecological knowledge." While there is no universal criterion that separates indigenous from Western or scientific knowledge,[33] it is generally understood that indigenous knowledge refers to the inherited intangible cultural capital that has been transmitted from individual to individual and from generation to generation in indigenous societies. It can be defined as

> the complex arrays of knowledge, know-how, practices and representations that guide human societies in their innumerable interactions with the natural milieu: agriculture and animal husbandry; hunting, fishing and gathering; struggles against disease and injury; naming and explaining natural phenomena; and strategies for coping with changing environments.[34]

Traditional knowledge, in effect, represents an accumulated body of knowledge, practice, and belief covering all aspects of indigenous societies, handed down between generations by processes of cultural transmission. As a result of the intimate connection between indigenous people and the land, a significant component of such knowledge systems is traditional ecological knowledge, which informs the ways in which indigenous societies manage ecosystem processes. A particular concern of such knowledge relates to the maintenance and enhancement of ecosystem resilience. The management practices developed by indigenous societies to respond to environmental disturbances can be seen to have certain similarities to the modern day concept of "adaptive management" of ecosystem function.[35]

The traditional knowledge of any indigenous community is not static but, instead, evolves through time and incorporates new information through processes of observation, interpretation, and discussion. Indeed indigenous knowledge could

be understood not simply as content but also as process. For example, while many indigenous societies have developed extensive capacities in monitoring environmental change, knowledge concerning such phenomena as climate change may not necessarily be transmitted directly but, rather, might be given as knowledge about what to look for and how to look for it.[36]

The knowledge systems of Australian Aboriginal and Torres Strait Islander people typify the ways in which the concept of indigenous knowledge captures the people's collective relationship with land, language, and law as described above. Such knowledge, reflecting the cultural values specific to a particular place and people, informs their art[37] and determines the processes of land use and resource management in the face of environmental variability.[38] For example, in a study carried out in the East Kimberley region of Western Australia, Sonia Leonard and colleagues showed how indigenous groups accumulate detailed baseline information about their environment and develop interpretations of the world and cultural values associated with this knowledge.[39] The study documented the essential role of traditional knowledge in the social, economic, and cultural lives of the people, influencing individuals' beliefs, preferences, and day-to-day practices.

HOLISM AND INTERCONNECTEDNESS

As discussed earlier, the WCED's concept of sustainability is an overarching paradigm bringing environmental and economic relationships together in an integrated system that connects the biosphere and the global economy in a holistic interpretation. An implication of such interconnectedness is that individual components of the system cannot be considered in isolation—for example, the economic production of goods and services may have impacts on the environment that cause changes, which in turn affect production processes in the economy. In other words, feedback effects and interdependencies proliferate throughout the system.

Indigenous sustainability frameworks are also holistic in nature, and the characteristic of interconnectedness in these frameworks carries with it the same implications that are described above. Nevertheless, the building blocks in the two frameworks are somewhat different. Although the idea of culture as a way of life is common to both systems of thought, indigenous cultures typically embrace a wider coverage and, in particular, provide a closer engagement with the physical and spiritual properties of the natural world:

> Indigenous peoples' cultures include tangible and intangible manifestations of their ways of life, achievements and creativity, and are an expression of their self-determination and of their spiritual and physical relationships with their lands, territories and resources. Indigenous culture is a holistic concept based on common material and spiritual values.[40]

A holistic interpretation of culture and sustainability is evident in many indigenous societies in Australia, deriving from a paradigmatic worldview where humanity is

https://doi.org/10.1017/S0940739116000084 Published online by Cambridge University Press

totally integrated with the natural world. The interconnectedness between land (country), language, culture, traditional knowledge, and law that we have discussed above creates a system in which all elements are interrelated and a change in any one element will inevitably affect the others.[41] These interconnections are succinctly summarized by the Indigenous Remote Communications Association in Australia in their submission to the 2012 Inquiry into Language Learning in Indigenous Communities.[42] Lance Box from the Yipirinya School Council in Alice Springs explains the interrelation of land, law, language, and culture:

> In the Warlpiri, we have a word called ngurra-kurlu, which is a term that speaks of the interrelatedness of five essential elements: land, law, language, kinship and ceremony. You cannot isolate any of these elements. All of those elements hang together. If you take people away from country, they cannot conduct ceremony, and if they do not conduct ceremony, they cannot teach strong language. Ceremony is the cradle to grave, a delivery place for education for Indigenous people. If you do not have ceremony and you do not have language, then your kinship breaks down. Then law breaks down and the whole thing falls apart.[43]

To sum up, in their whole system view of the world at least, indigenous cultures parallel the general global paradigm of sustainability as it has been informed by Western thought. Unlike the WCED framework, however, indigenous sustainability systems stress a deeper understanding of the relationship between humans and land. This relationship is guarded by indigenous cultural laws, and the understanding of this relationship is possible through language that carries the accumulated knowledge of this historical relationship.

COMPARISONS AND CONTRASTS

It is clear from the outset that the WCED model and the indigenous holistic frameworks are fundamentally motivated by long-term concerns for intergenerational transmission, whether of straightforward items of natural or cultural capital or of more complex phenomena such as human capacities for satisfying economic, social, or cultural needs. The origins of such motivation can be found in these models in the recognition of the continuity of human life, interpreted in both material and spiritual terms. In the following paragraphs, we draw attention to some major points of similarity and difference between indigenous and non-indigenous approaches to sustainability.

An initial similarity between the two approaches is that both are essentially normative. Although the societies to which they relate are very different, they both introduce values and behavioural norms reflecting in some sense an idealized view of the world. As such, it will be expected that some divergence will exist between the desirable state of affairs that they envisage and the actual reality to which they relate. However, perhaps the most obvious similarity between the WCED model and the indigenous frameworks can be seen in the way in which they both represent

the world as holistic systems—models in which everything is interconnected with everything else and nothing exists in isolation. But there the similarity stops. The extent to which the holistic nature of the systems is articulated differs markedly between the two approaches. In the WCED model, connections are essentially specified between major aggregates—the macro economy, the stock of natural capital, the climatic system, and society. In indigenous societies, on the other hand, the model is more detailed and comprehensive, encompassing kinship, country, languages, ceremony, laws, and so on, as we have discussed.

In particular, a marked point of contrast lies in the importance given to culture in the respective models. Culture is intrinsic to notions of sustainability in indigenous societies, underlying and permeating all aspects of life. In the WCED's discourse, on the other hand, culture enters, if at all, in instrumental terms. So, for example, the cultural and creative industries are recognized in both developed and developing countries as important sources of income, employment, exports, and economic growth, while the sustainability of local communities is strengthened through such avenues as cultural tourism.[44] It could also be argued that the promulgation of the WCED's concept of sustainability by various interest groups since its introduction has constituted an attempt to induce a cultural shift in values and consciousness in order to change a socio-ecological regime that was seen to be unsustainable.[45] However, there is little explicit recognition or understanding of a more comprehensive role for culture in the WCED model, as discussed later in this article.

A second aspect for comparison between indigenous and non-indigenous approaches lies in their acknowledgement of the precautionary principle. In the WCED model of sustainability, this principle is spelled out in terms of a non-binding injunction against hasty or ill-thought decision making—for example, when development may entail the destruction of cultural heritage. But by the nature of Western law-making, it is difficult to make the precautionary principle into a legal obligation.[46] In indigenous societies, on the other hand, the application of this principle is enshrined in beliefs, rituals, and social conventions, such that compliance becomes an integral part of cultural law and normal acceptable behaviour. This does not mean that there is no individual autonomy in indigenous societies or that breaking the law does not happen. Some laws, however, are more dangerous to break than others, and in some indigenous cultures, failure to comply may lead to serious punishment.[47]

A third point of contrast can be seen in the priority given to specific components of the sustainability framework. In the WCED model, the economic, environmental, and social dimensions are accorded more or less equal importance, at least in principle. However, despite these heroic intentions, policy application of the WCED's sustainability concept in practice have been all too ready to abandon, if necessary, the holistic ideals in favour of economic or sectoral gain at the expense of environmental or social principle. The difficulties of securing international cooperation on measures to deal with climate change provide an apt illustration. By contrast, in

indigenous societies, a stronger focus on the absolute necessity of a whole systems approach indicates a more balanced interpretation of priorities. Such an approach has had its successes—many holistic indigenous frameworks of the world's first peoples have existed since long before the development of the WCED model, and some have already proven to be successful in achieving for their societies the sorts of goals enshrined in the WCED's concept of sustainability.

These considerations lead to a further point of significant difference. The WCED's concept of sustainable development implies growth—smart growth, to be sure, but growth nevertheless. By contrast, indigenous holistic frameworks are more likely to focus on a steady state with an emphasis on maintenance rather than development. For example, the Yolngu people of Eastern Arnhem Land in Australia see their role as one of maintaining capital stocks as they are—their country, their culture, their traditional knowledge, and their creative practices. However, this does not imply cultural or economic stagnation. Indeed, remote communities in Eastern Arnhem Land are pursuing new methods for creative expression and are looking for new economic opportunities that can be interpreted within an overall framework of cultural maintenance. New avenues by which the Yolngu can earn revenue, including new media and the utilization of copyright law, are seen as a means to underpin the continuation of Yolngu culture.

An apparent difference between indigenous and non-indigenous approaches to achieving sustainability relates to their spatial and social applicability. Indigenous holistic frameworks are predominantly location- and society-specific, whereas the existing WCED sustainability concept was developed to be applied worldwide. The difference reflects the nature of the knowledge systems on which these frameworks are based. Indigenous knowledge originates from particular locations and regions, while Western scientific knowledge is thought to be universal and applicable irrespective of location or scale.[48] Nevertheless, the difference is more apparent than real since, on the one hand, the WCED model allows for multiple interpretations and adaptations to specific national or regional circumstances and, on the other, there is sufficient commonality across indigenous approaches to sustainability to enable the identification of the shared components of a generalized indigenous sustainability framework. Thus, the two can be validly compared at a meta- or non-location/non-society-specific level. For example, when formulating their version of an indigenous holistic framework as a strongly interlinked system of land, language, and culture, Ernie Grant and colleagues claimed that the approach is "common to many if not most, indigenous people in the world."[49] They argue that the framework can be adapted to different geographical locations, different time periods, and different societies.[50]

Finally, notwithstanding the normative orientation of the sustainability concepts held in indigenous and non-indigenous societies, there are profound differences in the value systems and behavioural norms that provide these foundations. Principles of indigenous holistic frameworks are embedded in the cultural and moral values of indigenous societies and are integrated within these cultures. Knowledge of these

values and norms determines responsibility as well as ownership. Indigenous cultures are built on a system of shared responsibility, whereas the predominant value underlying economic and social policy in the West is one of individualism that supports private ownership of resources and ideals of unrestricted economic growth.

Nevertheless, it should be borne in mind that the WCED's sustainability concept was developed to maintain and protect a common good, with the corollary that implementing and enforcing sustainability principles is seen as a collective responsibility. In the contemporary world, this responsibility can only be discharged by government, which brings an obvious free-rider problem that is difficult to deal with under current conditions governing international relations. Unless there is a shift in peoples' values that could eventually result in a behavioural change away from the prevailing orthodoxies of individualism and unrestrained choice, it is likely that progress toward sustainability will be significantly constrained.[51]

THE WAY FORWARD

Considering their similarities and differences, could these two frameworks coexist with one another or, more ambitiously, could they be integrated into a single sustainability framework of universal relevance and applicability? Neither of the frameworks should be seen as being static. The WCED model has been refined and elaborated as it has evolved over the past nearly three decades. Likewise, the indigenous knowledge systems that inform indigenous holistic frameworks are not closed—they constantly evolve, focused on process as well as on content, and allow for the incorporation of new elements. Theoretically, these considerations should serve as a good starting point for the exploration of possibilities for the two frameworks to come together.

Certainly, some policymakers and scientists have been attempting to integrate the indigenous holistic frameworks into the WCED's sustainability model.[52] Indeed, as long ago as 1987, the Brundtland report was arguing that

> the larger society … could learn a great deal from [the] traditional skills [of indigenous peoples] in sustainably managing very complex ecological systems. It is a terrible irony that as formal development reaches more deeply into rain forests, deserts, and other isolated environments, it tends to destroy the only cultures that have proved able to thrive in these environments. The starting point for a just and humane policy for such groups is the recognition and protection of their traditional rights to land and the other resources that sustain their way of life.[53]

The implication of such sentiments expressed in this context was that the sustainable development model emerging from the WCED's process should be informed by the cultural knowledge of indigenous communities and be responsive to their needs, a proposition reiterated in the proceedings of the so-called Earth Summit in 1992. Chapter 26 of Agenda 21, which emanated from that meeting, noted that indigenous peoples "have developed over many generations a holistic traditional

scientific knowledge of their lands, natural resources and environment," and it stressed the need to "recognise, accommodate, promote and strengthen the role of indigenous peoples and their communities" in the quest for national and international sustainable development.[54] Principle 22 of the 1992 Rio Declaration on Environment and Development encourages states to recognize and support indigenous peoples' role in environmental management because of their traditional knowledge and practices.[55] Subsequently, the Earth Charter endorsed the transmission and dissemination of those values that "support the long-term flourishing of Earth's human and ecological communities"—in other words, it provided for incorporating those indigenous values and practices that align with the existing internationally recognized concept of sustainability. Principle 12b of the Earth Charter also affirmed "the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods."[56]

The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions expresses similar sentiments in its preamble, where the "positive contribution to sustainable development" made by the knowledge systems of indigenous peoples is recognized.[57] This convention has standing as an international treaty, but the other documents referred to earlier have only quasi-legal status and do not have any legally binding force. Nevertheless, they demonstrate an attempt at the international level to incorporate traditional knowledge and indigenous frameworks into decision-making processes concerning sustainable development and, at the very least, recommend that such processes should acknowledge the validity of indigenous understandings of sustainability.[58]

Alternatively, efforts to integrate the two systems may arise from the other side, with attempts to describe indigenous holistic frameworks in terms of the WCED's sustainability concept. For example, an attempt to interpret the Australian indigenous governance model in terms of sustainability principles does so by reference to traditional indigenous knowledge.[59] This study focuses on the Nhunggabarra, an Australian indigenous society from Nhunggal country, located on the border of south Queensland and New South Wales, to analyze 10 law stories that governed the Nhunggabarra people before the arrival of the English in 1788. The study found 40 behaviour rules and concepts that relate to sustainability principles, which can be classified into three categories to refer to the sustainable development pillars—ecology, society, and economy—as understood in the non-indigenous discourse.[60]

A further illustration comes from the findings of a project undertaken by the Australian Research Institute in Education for Sustainability, which aimed at identifying how better to integrate indigenous value systems, practical skills, and knowledge of the Australian landscape in community education for sustainability. The final project report concludes that the ecological perspective of Australian indigenous communities, as described in the concept of country, also embodies the non-indigenous sustainability principles.[61]

However, it should be noted that thus far only those indigenous values that fit the WCED's sustainability concept have been given consideration in efforts to

integrate the two systems, a characteristic also demonstrated in the international documents cited earlier—all of these efforts have been restricted in the range of values that they call upon. To some extent, this limitation may be due to a limited understanding of indigenous worldviews in non-indigenous societies. Although ethno-scientific research conducted in different parts of the world (including research cited in this article) has helped to shed light on indigenous concepts and values, more research is needed, especially involving indigenous researchers themselves. In particular, it can be argued that one of the most effective strategies that can help to articulate indigenous perspectives, as well as protect traditional knowledge from misappropriation, is the engagement of indigenous peoples in the design of research protocols. In addition, the dissemination of information and increased media visibility are required for the indigenous holistic frameworks to be understood by wider audiences. International bodies such as the United Nations Permanent Forum on Indigenous Issues can also give voice to indigenous peoples and challenge the dominance of Western knowledge and values.[62]

It may be concluded that, given the dominance of the WCED model in international policymaking and our limited understanding of indigenous perspectives, it is unlikely that an integration on equal terms of these two different worldviews on sustainability will emerge in the near future. However, it should be possible at least to outline the potential next step toward a closer coexistence of the two concepts and a greater recognition of how they could reinforce and strengthen one another, eventually leading toward a more comprehensive view of sustainable development in the years ahead. It can be argued that the key requirement lies in forging a stronger role for, and the institutionalization of, culture as an equally important dimension along with the economic, social, and environmental dimensions in the WCED's concept of sustainability.

Indeed, the incorporation into policymaking processes of the principles of culturally sustainable development (as outlined earlier in this article), alongside those for ecologically sustainable development, would be a significant step in this direction. Such a move would enable a stronger recognition in the sustainable development paradigm of the sorts of cultural values that underpin indigenous approaches to achieving sustainability. Some progress in this direction is being made through the efforts of UNESCO and a range of non-government organizations at the national and international levels to raise the profile of culture in the UN's post-2015 sustainable development agenda. However, much more remains to be done.[63]

CONCLUSIONS

The phenomenon of globalization that characterizes the contemporary world is seen in some quarters to constitute a threat to traditional cultural values, cultural diversity, and the protection of tangible and intangible cultural property. In particular, the situation of the world's indigenous peoples, frequently marginalized and vulnerable, is becoming increasingly precarious. In these circumstances,

the concept of sustainability as a global paradigm for economic, social, and environmental decision making has taken on a new significance. Interpretations of sustainability and strategies for achieving it often differ markedly between those held in non-indigenous societies and those that have evolved over many centuries among indigenous peoples and still govern their daily lives.

In this article, we have reviewed indigenous and non-indigenous approaches to sustainability in general, drawing illustrations particularly from the cultures of the Aboriginal and Torres Strait Islander peoples of Australia. We have pointed out that the two approaches to sustainability share many common concerns, although significant differences are evident. The acceptance of the WCED model in many parts of the world as a concept that can be applied irrespective of social, political, or cultural context demonstrates the potential of this framework to set values that could be shared globally. However, the cultural underpinnings of the WCED's sustainability model need to be acknowledged for this model to become truly universal. For instance, the model reflects the separation of nature and culture, environment and society, and rationality and spirituality—cultural constructs that are integral to the worldview of natural science.[64] The argument in this article implies that a fully realized model of sustainability will only be possible if it incorporates, alongside the Western scientific knowledge on which the WCED's concept is built, the insights of indigenous knowledge systems that have been accumulated over generations. In instances where local perspectives could be seen to be important in defining the political, social, ecological, and cultural context within which sustainability is to be sought, indigenous holistic frameworks could complement the WCED's sustainability model and, in principle, even serve as alternatives on a smaller scale.

ENDNOTES

1. This section and the next draws on discussion of the sustainability provisions contained in the UN Educational, Scientific and Cultural Organization's (UNESCO) Convention on the Protection and Promotion of the Diversity of Cultural Expressions (Cultural Diversity Convention), 20 October 2005, as contained in Throsby 2012a, 2012b.
2. Carson 1962; Meadows et al. 1972.
3. World Commission on Environment and Development (WCED) 1987, 43.
4. Neumayer 2010.
5. See Costanza 1991; Jansson et al. 1994; Lawn 2007; Tisdell 2012.
6. Munro 1995; Enyedi 2002.
7. Hawkes 2003.
8. World Commission on Culture and Development (WCCD) 1995.
9. UNESCO 1998b, 2000.
10. UNESCO 1998a.
11. See the Compendium of Cultural Policies and Trends in Europe, http://www.culturalpolicies.net/web/index.php (accessed 11 December 2015).
12. Cultural Diversity Convention in Throsby 2012a, 2012b.
13. Throsby 2010, 195.

14. Throsby 1999, 2008; Rizzo and Throsby 2006.

15. For an overview of the scientific discourse on cultural sustainability, see Soini and Birkeland 2014.

16. For a recent collection of papers in this field, see Rizzo and Mignosa 2013.

17. Peacock 1995; Benhamou 2011.

18. Peacock and Rizzo 2008.

19. For accounts of Australian Aboriginal history, see Reynolds 1996; Prentice 2011. For a collection of documents concerning relations between Aboriginal people and white settlers since 1788, see Reynolds 1972.

20. Myers 1988.

21. Datta 2015, 109. See also UN Commission on Human Rights (UNCHR) 1986; UN Human Rights Council (UNHRC) 2012.

22. For a range of examples, see Emery 2000; International Fund for Agricultural Development (IFAD) 2003; Gilbert 2007.

23. Lal and Young 2001.

24. Rose 1996, 8.

25. In some instances, these stories and their associated symbols extend over vast areas—e.g., the Seven Sisters track or the Nintaka song lines cross half the width of Australia. See Peterson 1972, 28–29; Haynes 1995.

26. Kwaymullina 2005; Sveiby 2009.

27. International Council for Science (ICSU) and UNESCO 2002; Nakashima and Roue 2002; Permanent Forum on Indigenous Issues 2008; UNESCO 2009.

28. Permanent Forum on Indigenous Issues 2008, 4.

29. UNCHR 2001, 7.

30. See Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) and Federation of Aboriginal and Torres Strait Islander Languages (FATSIL) 2005.

31. Standing Committee on Aboriginal and Torres Strait Islander Affairs 2012, 10.

32. Ibid., 11.

33. Ellen, Parkes, and Bicker 2000.

34. Nakashima and Roue 2002, 315.

35. Berkes et al. 1998; Berkes, Colding, and Folke 2000.

36. Gadgil, Berkes, and Folke 1993; Emery 2000; Berkes 2009; Lynch, Fell, and McIntyre-Tamwoy 2010.

37. Morphy 1991.

38. See, e.g., Peterson 1972.

39. Leonard et al. 2013.

40. UNHRC 2012, 12.

41. Grant 1998; AIATSIS and FATSIL 2005; Kwaymullina 2005; Sveiby 2009.

42. Standing Committee on Aboriginal and Torres Strait Islander Affairs 2012.

43. Ibid., 10–11.

44. See UN Conference on Trade and Development (UNCTAD) 2008, 2010; Organisation for Economic Co-operation and Development (OECD) 2009; Richards 2011.

45. Beddoe et al. 2009, 2483.

46. In some jurisdictions, the conservation and use of cultural heritage is governed by enforceable regulation (so-called "hard regulation" in Throsby's terminology). See Throsby 1997, 20–21. Whereas in other situations, only "soft regulation" is in place—non-enforceable or voluntary agreements not involving penalties. Either way, observance of the precautionary principle in practice may be subject to some uncertainty.

47. In regard to the Australian case, see Myers 1986.

48. Chapin et al. 2010; Smith and Sharp 2012.

49. Grant et al. 2011, 4.

50. See also Rose 1996; Maragia 2006.

51. Beddoe et al. 2009.

52. Australian Research Institute in Education for Sustainability (ARIES) 2010.
53. WCED 1987, 114–115.
54. Agenda 21, 13 June 1992, UN Doc A/CONF. 151/26 (1992), section 26.1.
55. Rio Declaration on Environment and Development, 13 June 1992, 31 ILM 874 (1992).
56. Earth Charter, March 2000, available at http://earthcharter.org/charter/charter.pdf.
57. To date, more than 140 member states of UNESCO are signatories to the Convention on Cultural Expressions.
58. Note that the UNESCO LINKS project, e.g., advocates for the recognition and integration of indigenous knowledge, practices, values, and worldviews as they exist worldwide into sustainable development and resource management processes. See UNESCO Local and Indigenous Knowledge Systems (LINKS), http://portal.unesco.org/science/en/ev.php (accessed 14 December 2015).
59. Sveiby and Skuthorpe 2006; Sveiby 2009.
60. Sveiby 2009, 344.
61. ARIES 2010, 10.
62. Smith and Sharp 2012, 469, 473.
63. Despite these efforts, the new sustainable development goals and targets agreed to by the UN in September 2015 contain only fleeting references to culture and only incidental mention of indigenous peoples. See Sustainable Development Goals, http://www.un.org/sustainabledevelopment/sustainable-development-goals/ (accessed 6 October 2015).
64. Nakashima and Roue 2002, 323.

REFERENCES

AIATSIS and FATSIL. 2005. "National Indigenous Languages Survey Report 2005." Canberra: Department of Communications, Information Technology and the Arts for AIATSIS and FATSIL.

ARIES. 2010. "Incorporating Australian Indigenous Perspectives in Education for Sustainability: A Report prepared for the Australian Government Department of the Environment, Water, Heritage and the Arts." Sydney: Australian Research Institute in Education for Sustainability.

Beddoe, Rachael, et al. 2009. "Overcoming Systemic Roadblocks to Sustainability: The Evolutionary Redesign of Worldviews, Institutions, and Technologies." *Proceedings of the National Academy of Sciences of the United States of America* 106: 2483–89.

Benhamou, Françoise. 2011. "Heritage." In *A Handbook of Cultural Economics*, edited by R. Towse, 229–35. Cheltenham, UK: Edward Elgar.

Berkes, Fikret. 2009. "Indigenous Ways of Knowing and the Study of Environmental Change." *Journal of the Royal Society of New Zealand* 39: 151–56.

Berkes, Fikret, Johan Colding, and Carl Folke. 2000. "Rediscovery of Traditional Ecological Knowledge as Adaptive Management." *Ecological Applications* 10, no. 5: 1251–62.

Berkes, Fikret, Mina Kislalioglu, Carl Folke, and Madhav Gadgil. 1998. "Exploring the Basic Ecological Unit: Ecosystem-like Concepts in Traditional Societies." *Ecosystems* 1, no. 5: 409–15.

Carson, Rachel. 1962. *Silent Spring*. Boston: Houghton Mifflin.

Chapin, F. Stuart, III, et al. 2010. "Ecosystem Stewardship: Sustainability Strategies for a Rapidly Changing Planet." *Trends in Ecology and Evolution* 25: 241–49.

Costanza, Robert, ed. 1991. *Ecological Economics: the Science and Management of Sustainability*. New York: Columbia University Press.

Datta, Ranjan. 2015. "A Relational Theoretical Framework and Meanings of Land, Nature, and Sustainability for Research with Indigenous Communities." *Local Environment Local Environment: The International Journal of Justice and Sustainability* 20: 102–13.

Ellen, Roy, Peter Parkes, and Alan Bicker. 2000. *Indigenous Environmental Knowledge and its Transformations: Critical Anthropological Perspectives*. Amsterdam: Harwood Academic.

Emery, Alan R. 2000. *Integrating Indigenous Knowledge in Project Planning and Implementation*. Quebec: International Labour Organization, World Bank, Canadian International Development Agency, and KIVU Nature.

Enyedi, Gyorgy. 2002. "Social Sustainability of Large Cities." *Ekistics* 412: 142–44.

Gadgil, Madhav, Fikret Berkes, and Carl Folke. 1993. "Indigenous Knowledge for Biodiversity Conservation." *Ambio* 22: 151–56.

Gilbert, Jérémie. 2007. "Historical Indigenous Peoples' Land Claims: A Comparative and International Approach to the Common Law Doctrine on Indigenous Title." *International and Comparative Law Quarterly* 56: 583–61.

Grant, Ernie. 1998. *My Land, My Tracks: A Framework for the Holistic Approach to Indigenous Studies*. Innisfail, Australia: Innisfail and District Edication Centre.

Grant, Ernie, Sonya Geffrey, Caroline Grant, Shane Muriata, Dorothy Webster, Tonya Grant, and Donna Henry. 2011. *Jirrbal Workbook*. Tully, Australia: Ingan Aboriginal Corporation.

Hawkes, Jon. 2003. *The Fourth Pillar of Sustainability: Culture's Essential Role in Public Planning*. Melbourne: Common Ground.

Haynes, Roslynn D. 1995. "Dreaming the Stars: The Astronomy of the Australian Aborigines." *Interdisciplinary Science Reviews* 20: 187–97.

ICSU and UNESCO. 2002. *Science, Traditional Knowledge and Sustainable Development*. Series on Science for Sustainable Development No. 4. Paris: ICSU.

IFAD. 2003. *Indigenous Peoples and Sustainable Development: Roundtable Discussion Paper for the Twenty-Fifth Anniversary Session of IFAD's Governing Council*. Rome: IFAD.

Jansson, Annmari. M., Monica Hammer, Carl Folke, and Robert Costanza, eds. 1994. *Investing in Natural Capital: The Ecological Economics Approach to Sustainability*. Washington, DC: Island Press.

Kwaymullina, Ambelin. 2005. "Seeing the Light: Aboriginal Law, Learning and Sustainable Living in Country." *Indigenous Law Bulletin* 6, no. 11: 12–15.

Lal, Padma, and Elspeth Young. 2001. "The Role and Relevance of Indigenous Cultural Capital in Environment Management in Australia and the Pacific." In *Heritage Economics: Challenges for Heritage Conservation and Sustainable Development in the Twenty-First Century*, 195–217. Canberra: Australian Heritage Commission.

Lawn, Philip. 2007. *Frontier Issues in Ecological Economics*. Cheltenham, UK: Edward Elgar.

Leonard, Sonia, Meg Parsons, Knut Olawsky, and Frances Kofod. 2013. "The Role of Culture and Traditional Knowledge in Climate Change Adaptation: Insights from East Kimberley, Australia." *Global Environmental Change* 23: 623–32.

Lynch, Jasmyn, David Fell, and Susan McIntyre-Tamwoy. 2010. "Incorporating Indigenous Values with 'Western' Conservation Values in Sustainable Biodiversity Management." *Australasian Journal of Environmental Management* 17: 244–55.

Maragia, Bosire. 2006. "Indigenous Sustainability Paradox and the Quest for Sustainability in Post-Colonial Societies: Is Indigenous Knowledge All That Is Needed?" *Georgetown International Environmental Law Review* 18: 197–248.

Meadows, Donella H., Dennis L. Meadows, Jørgen Randers, and William W. Behrens, III. 1972. T*he Limits to Growth*. New York: Universe Books.

Morphy, Howard. 1991. *Ancestral Connections: Art and an Aboriginal System of Knowledge*. Chicago: University of Chicago Press.

Munro, David A. 1995. "Sustainability: Rhetoric or Reality?" In *A Sustainable World: Defining and Measuring Sustainable Development*, edited by T. C. Trzyna and J. K. Osborn, 27–35. Sacramento: California Institute of Public Affairs.

Myers, Fred R. 1986. *Pintupi Country, Pintupi Self: Sentiment, Place and Politics among Western Desert Aborigines*. Washington, DC: Smithsonian Institution Press.

———. 1988. "Critical Trends in the Study of Hunter-Gatherers." *Annual Review of Anthropology* 17: 261–82.

Nakashima, Douglas, and Marie Roue. 2002. "Indigenous Knowledge, Peoples and Sustainable Practice." *Encyclopedia of Global Environmental Change* 5: 314–24.

Neumayer, Eric. 2010. *Weak versus Strong Sustainability: Exploring the Limits of Two Opposing Paradigms*, 3rd ed. Cheltenham, UK: Edward Elgar.

OECD. 2009. *The Impact of Culture on Tourism*. Paris: OECD.

Peacock, Alan. 1995. "A Future for the Past: the Political Economy of Heritage." *Proceedings of the British Academy* 87: 187–243.

Peacock, Alan, and Ilde Rizzo. 2008. *The Heritage Game: Economics, Policy and Practice*. Oxford: Oxford University Press.

Permanent Forum on Indigenous Issues. 2008. *Report of the International Expert Group Meeting on Indigenous Languages*. New York: United Nations Economic and Social Council.

Peterson, Nicolas. 1972. "Totemism Yesterday: Sentiment and Local Organisation among the Australian Aborigines." *Man* 7: 12–32.

Prentice, Malcolm. 2011. *A Concise Companion to Aboriginal History*, 2nd ed. Kenthurst, Australia: Rosenberg Publishing.

Reynolds, Henry, ed. 1972. *Aborigines and Settlers: the Australian Experience 1788–1939*. North Melbourne, Australia: Cassell.

———. 1996. *Frontier: Aborigines, Settlers and Land*. St. Leonards: Allen and Unwin.

Richards, Greg. 2011. "Creativity and Tourism: The State of the Art." *Annals of Tourism Research* 38, no. 4: 1225–53.

Rizzo, Ilde, and Anna Mignosa, eds. 2013. *Handbook on the Economics of Cultural Heritage*. Cheltenham, UK: Edward Elgar.

Rizzo, Ilde, and David Throsby. 2006. "Cultural Heritage: Economic Analysis and Public Policy." In *Handbook of the Economics of Art and Culture*, vol. 1, edited by V. A. Ginsburgh and D. Throsby, 983–1016. Amsterdam: Elsevier/North-Holland.

Rose, Deborah Bird. 1996. *Nourishing Terrains: Australian Aboriginal Views of Landscape and Wilderness*. Canberra: Australian Heritage Commission.

Smith, Heather A., and Karyn Sharp. 2012. "Indigenous Climate Knowledges." *Wiley Interdisciplinary Reviews: Climate Change* 3: 467–76.

Soini, Katriina, and Inger Birkeland. 2014. "Exploring the Scientific Discourse on Cultural Sustainability." *Geoforum* 51: 213–23.

Standing Committee on Aboriginal and Torres Strait Islander Affairs. 2012. *Our Land Our Languages: Language Learning in Indigenous Communities*. Inquiry into Language Learning in Indigenous Communities. Canberra: House of Representatives.

Sveiby, Karl-Erik. 2009. "Aboriginal Principles for Sustainable Development as Told in Traditional Law Stories." *Sustainable Development* 17: 341–56.

Sveiby, Karl-Erik, and Tex Skuthorpe. 2006. *Treading Lightly: The Hidden Wisdom of the World's Oldest People*. Crows Nest, Australia: Allen and Unwin.

Throsby, David. 1997. "Seven Questions in the Economics of Cultural Heritage." In *Economic Perspectives of Cultural Heritage*, edited by M. Hutter and I. Rizzo, 13–30. London: Macmillan.

———. 1999. "Cultural Capital." *Journal of Cultural Economics* 23: 3–12.

———. 2008. "Linking Cultural and Ecological Sustainability." *International Journal of Diversity in Organisations, Communities and Nations* 8: 15–20.

———. 2010. *The Economics of Cultural Policy*. Cambridge: Cambridge University Press.

———. 2012a. "Article 13: Integration of Culture in Sustainable Development." In *The Unesco Convention on the Protection and Promotion of the Diversity of Cultural Expressions: Explanatory Notes*, edited by S. Von Schorlemer and P. T. Stoll, 361–70. Berlin: Springer.

———. 2012b. "Sustainable Development and the Convention on the Diversity of Cultural Expressions." In *The UNESCO Convention on the Diversity of Cultural Expressions: A Tale of Fragmentation in International Law*, edited by T. Kono and S. Van Uytsel, 353–61. Cambridge: Intersentia.

Tisdell, Clem. 2012. *The Nature of Ecological and Environmental Economics and its Growing Importance*. Working Paper No. 186. Brisbane: University of Queensland.

UNCHR. 1986. *Study of the Problem of Discrimination against Indigenous Populations*. Geneva: UNCHR.

———. 2001. *Indigenous Peoples and their Relationship to Land: In Prevention of Discrimination and Protection of Indigenous Peoples and Minorities*. Final Working Paper prepared by the Special Rapporteur, Mrs. Erica-Irene A. Daes. New York: United Nations Economic and Social Council.

UNCTAD. 2008. *The Creative Economy Report*. Geneva: UNCTAD.

———. 2010. *The Creative Economy Report*. Geneva: UNCTAD.

UNESCO. 1998a. *Final Report of Intergovernmental Conference on Cultural Policies for Development: The Power of Culture*. Paris: UNESCO.

———. 1998b. *World Culture Report: Culture, Creativity and Markets*. Paris: UNESCO.

———. 2000. *World Culture Report: Cultural Diversity, Conflict and Pluralism*. Paris: UNESCO.

———. 2009. *Learning and Knowing in Indigenous Societies Today*, edited by P. Bates, M. Chiba, S. Kube, and D. Nakashima. Paris: UNESCO.

UNHRC. 2012. *Role of Languages and Culture in the Promotion and Protection of the Rights and Identity of Indigenous Peoples: A Study of the Expert Mechanism on the Rights of Indigenous Peoples*. New York: UNHRC.

WCCD. 1995. *Our Creative Diversity*. Paris: WCCD.

WCED. 1987. *Our Common Future*. Oxford: Oxford University Press and WCED.