

Melissa K. Nelson and Dan Shilling (eds.), Traditional Ecological Knowledge: Learning from Indigenous Practices for Environmental Sustainability (Cambridge: Cambridge University Press, 2018), xiv + 267 pp., \$105.00 (hbk), ISBN: 978-1-108-42856-9.

The term Traditional Ecological Knowledge (TEK) came into widespread use in the 1980s particularly following the 1987 Brundtland Report; yet, there is no universally accepted definition today, in large part because the terms traditional, ecological, and knowledge are themselves ambiguous (Berkes 1993). This has left space for a wide array of meanings for the term to emerge, most of which have been generated by Western academics.

Unique in this volume edited by Nelson and Shilling is its inclusion of leading indigenous scholars and activists, who not only teach and do research in TEK-related disciplines but also actively engage in community programs educating different publics about the 'human-nature accord through indigenous points of view' (p. 15). The volume is the product of a 2013 Seminar on TEK at the Amerind Museum in Dragoon, Arizona, where 11 of the 18 contributors presented and discussed their papers.

The majority of the indigenous contributors are from North America, including such well-known writers and scholars as Robin Wall Kimmerer and Simon Ortiz. Indigenous knowledge specialists from throughout Native North America join together with a contingent of Maori scholars and businesspeople from Aotearoa, as well as philosophers and natural scientists, to stimulate new discussions on indigenous understandings of sustainability. The editors have organized a pathbreaking volume that constantly engages the reader in a reflection on sustainable vs. non-sustainable modes of living in different types of environments.

The volume is organized into four parts. The first group of articles discusses the concept of sustainability, usefully contextualized in Shilling's essay, until the discovery by Western science that the concept was very well-known and practiced by indigenous peoples in their land ethics, agricultural and other food-producing activities, and spiritualities. Indigenous scholars Gregory Cajete, Robin Kimmerer, and Kyle Whyte offer compelling reflections on Native Science, the environmental ethics embedded in traditional ecological knowledge, and its importance for indigenous self-governance.

Noteworthy are Kimmerer's eloquent discussions of the 'Original Instructions', which are commonly found in indigenous societies, that tie humans and other-thanhumans together in a bond of reciprocity; the 'Honorable Harvest'—'unwritten guidelines, both ethical and practical, which govern human consumption' (p. 33); and the 'lessons of [sweet-] grass', plant knowledge which instructs on the proper manner



of harvesting which can thus be of importance to ecological restoration. Kimmerer raises key issues of the continued depletion of traditional knowledge, and of the fundamental differences and complementarity between scientific and traditional knowledge (e.g., 'The science behind plant harvesting can produce descriptive knowledge, which traditional knowledge also produces prescriptive wisdom' [p. 47]).

For Potawatomi scholar Kyle Whyte, the challenge is whether Western science will understand how Traditional Ecological Knowledge is the foundation for governance, which is to say 'they [indigenous knowledges] serve as irreplaceable sources of guidance for resurgence and nation building' (p. 63). Consensus among Native scholars is that the historical pressures from the dominant colonial system have severely circumscribed and thus crippled the kinds of cross-knowledge communication necessary for the health and well-being of an indigenous people. That, plus the new and immediate demands of climate destabilization, require strategies and planning by indigenous peoples beginning with the recovery of cross-knowledge communication.

A second set of articles focusses on 'The Kincentric Ethic', perhaps the most crucial of differences between TEK and the Western scientific worldview. This is primarily because the ethic involves a direct and intimate relation to the land and all that comes from it, material and spiritual. Simon Ortiz reminds us that for the Acoma Pueblo—as for most indigenous peoples—land is never a commodity, but rather it is part of a totality defined by 'relationships, partnerships and collaboration' (p. 90). From these, language and culture emerge, as in the ceremonies people celebrated in gratitude for the abundance of the land and 'its resources'. There is a mutual understanding between 'the land' and humans who live on and with it, of spiritual responsibilities, obligations of reciprocity, and ethics that are held in common by human and nonhuman beings. For the Syilx (Salish-speaking) of British Columbia, in Jeannette Armstrong's understanding, the notion of tmix* refers not only to the ecology of the land and all its life-forms, but also philosophy, spirituality, native knowledge systems, and governance connected with it. The notion provides the foundation for a reconnectedness to the land through recognition of the 'life-force of place'. Ecofeminist Joan McGregor adds a metaphysical understanding of TEK, demonstrating its coherence with concepts elaborated in feminist theory.

The following set of three articles centers on the theme of 'Land-Care Practices and Plant and Animal Relationships'. O'odham activist Dennis Martinez, Chickasaw writer Linda Hogan, and Cree scholar Priscilla Settee offer engaged views on the indigenous Kincentric Ethic in practice. Fundamental to each is a critique of Modern and Neo-liberal Capitalism that has had such devastating impacts on indigenous peoples' health, food security, and relations with animals and plants. Restoring and healing are possible, including the broken relations with the animal and plant worlds, even despite resistance from the corporate-industrial system. It is through multiple and diverse local projects seeking to conserve and restore knowledge, and the exchange of this knowledge across the networks of communication among indigenous communities, that perhaps a new view of 'sustainability' may emerge, one in which, as Linda Hogan says, 'the question is, How do we use Traditional Ecological Knowledge to take us over the border from this vastly changed world into another, more sustainable, way of living' (p. 194). Hogan reminds us that our relations with the animal world, like our relations with the planet, are in major need of a more humanistic, compassionate, and respectful connection.



The final set of articles throws the net wide, first by including the experiences in promoting sustainability of the Maori of Aotearoa and the implications for the growth of indigenous businesses. Traditional values of home, kin and community, and social transformation are critical to the resilience of Maori economy and well-being. Second, legal issues exist at all levels in the protection of TEK, in Rebecca Tsosie's evaluation, but beyond protection there is need for its recognition as a cultural heritage fully controlled by indigenous people and necessary for their governance.

Native peoples of the Americas had and have extensive and profound knowledge of the diverse 'environments' in this hemisphere, some of them unbelievably challenging, and were able to transform harsh environments into productive ones, through a collaborative relationship with all that exists, material and spiritual. The Amazon region of South America provides dramatic examples of how large and complex civilizations sustained cultural and ecological diversity over many centuries. In this regard, it is hoped that future collaborations will include indigenous scholars from Latin America and elsewhere in the continuing dialogue on Western science and Indigenous Knowledge systems. In particular, Davi Kopenawa, of the Yanomami people in the northern Amazon, provides in his recent and highly acclaimed book, *The Falling Sky* (2013), a uniquely insightful view of the Amazon spiritual ecology written by a powerful shaman and environmental activist.

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References

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