

member of the Ku Klux Klan [*Fairbanks Daily News-Miner*, 2/10/05]). Anyone who does his or her homework, as Don Mitchell has done, or at the minimum actually reads *Sold American*, will know better.

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RELATIONS BETWEEN TRADITIONAL KNOWLEDGE AND WESTERN SCIENCE: A NORTHERN FORUM HELD AT CARLETON UNIVERSITY, OTTAWA, ONTARIO, 7 MARCH 2003. Conference Report by MARY McGUIRE; Technical Production by MARK VALCOUR. CD-ROM. (Available from Dr. C.R. Burn, Department of Geography and Environmental Studies, 8349 Loeb Bldg., 1125 Colonel By Drive, Ottawa, Ontario K1S 5B6).

Over the past 30 years, recognition of the validity of indigenous peoples' geographies and resource-management practices by the broader society, evident shortcomings in the way in which much scientific investigation has proceeded, and the assertion of Aboriginal rights, have contributed to making Traditional Knowledge (TK) an increasingly important component of investigation in northern Canada. The requirement to incorporate TK into decision-making processes is entrenched in land-claim and co-management agreements, and it plays an important role in a wide range of activities, which include yielding information on environmental change, generating primary data for scientists, and prescribing appropriate courses of action for resource management. As TK has assumed wider significance, it has spawned a veritable cottage industry churning out papers and conference presentations addressing its use, limitations, relevance, and translation. Over the past 20 years, these works have dealt with the relationship between TK and what is often referred to as "Western science," its role in decision-making and co-management processes, and appropriate contexts for its use. It should not be surprising, therefore, that the initial reaction of this somewhat jaded reviewer on receiving *Relations between Traditional Knowledge and Western Science* was "No, not another one!"

"Relations between Traditional Knowledge and Western Science" was the theme of a panel discussion held at Carleton University in 2003, which brought together some of Canada's leading practitioners and academics with interest in TK. The forum proceedings are in the form of an edited audio CD, with no accompanying written text, and this break with convention initially appeared to be highly appropriate, given that the principal means for communicating TK has always been oral. The participants—Alestine

Andre, Julie Cruikshank, Peter Usher, Barney Smith, Rosemary Kuptana, Mary Tapsell, George Wenzel, and Rachel Crapeau—brought with them a healthy mix of high scholarship and pragmatic application. Between them, they have contributed in no small way to facilitating broader understanding of the nature and validity of TK and its contemporary applications, and it is refreshing to hear experts and practitioners whose works are largely known through print express themselves freed of the strictures and protocols of academic journals. Julie Cruikshank speaking with eloquent verbal economy telling stories about the telling of stories, Peter Usher conveying wisdom and a gentle curiosity as he discusses the nature of traditional environmental knowledge, Rosemary Kuptana speaking passionately of the need to integrate TK and science, and Rachel Crapeau explaining the importance of local knowledge in explaining environmental trends encapsulate the spirit of the group's deliberations.

At the outset, the work seems somewhat contrived. The narrator introduces the discussion by stating that Traditional Knowledge and Western science see and interpret the North differently, and consequently, reconciliation of the two is very difficult. This assertion ignores the considerable progress that has been made in integrating TK and science over the past several years, and the qualifying adjective "Western" provides scope for all sorts of mischief. Nowhere is "Western science" clearly defined. Are its properties different from those of "science"? Was science only the prerogative of the West? Or does the prefix "Western" carry so much colonial baggage that science becomes the whipping boy for a wide range of socially generated evils? Similarly "traditional" as a prefix to "knowledge" leaves the impression that the body of knowledge is archaic and immutable: it is a powerful semantic alienating it from "science," which to the popular mind is current, dynamic, and always discovering. That indigenous knowledge is current is well known. That the panel members were well ahead of the conference organizers in recognizing this was reflected in a perhaps unintended riposte offered by almost every participant who one way or another argued that "traditional" as a prefix to "knowledge" does some disservice to a broad understanding of TK's currency and validity in describing and explaining environmental processes.

Two broad arguments usefully emerged from the deliberations, one revolving around the way in which TK and science operate from an epistemological standpoint, and the other around the institutional context in which TK is used. Although the two are clearly related, the distinction is a useful one because it allows us to separate characteristics inherent to processes of investigation and explanation that may distinguish TK from "science," from institutional factors or bureaucratic arrangements that run foul of wider use of TK.

George Wenzel incisively argues that the problem is not the way in which scientists or users of TK approach investigation (it is accepted that they may do things

differently), but rather the failure by representatives of either side to explain their epistemology: to explain why they do the things they do. This statement sets the scene for a range of observations about characteristics of TK and science. TK is used as a source of data and information for scientific investigation, but the nature of scientific methodology is such that information is often selectively abstracted from its broader context, and in the process the meaning or validity of the information is compromised. Additionally, the way that conventional science has historically employed Cartesian cartographic rigor to disaggregate and describe northern landscapes is at odds with the more holistic and integrated perspectives of the North's indigenous populations. Julie Cruikshank cited differences in the ways that indigenous people and scientists frame research questions as demonstrating widely different views on what constitutes relevance. She described her first endeavours as a social scientist in the Yukon, when those she thought would be the subject of her research had a far different agenda and sense of what was important. Scientists often pose questions that local populations, who have an intimate understanding of local conditions and confront a wide range of local stresses, do not see as immediately relevant to their needs. It is perhaps not "science" that dictates the research questions, but broader society, and "scientific" questions are often viewed as irrelevant because many scientists go north to ask questions that are of global rather than local significance, or questions that are framed in the rather abstract and isolated world of southern academia. As Wenzel points out, these various differences are not symptomatic of irreconcilable solitudes, but rather reflect very different ways of investigating and explaining the world, and both the knowledge systems are flexible, receptive, and able to absorb new ideas. Although there is considerable evidence for this view, it would have been illustrative to have more examples of "success stories" about the integration of TK and science (e.g., the wide use of TK in climate change impact studies and environmental assessments, and the use of GIS by Aboriginal Canadians to marry scientific and local perspectives on landscape change).

Although a wide range of formal requirements exists for incorporating TK and science, many participants felt that institutional arrangements were still inadequate, and that this inadequacy, rather than the nature of science, was the major barrier to integration. Rachel Crapeau argued that the environmental assessment associated with the BHP diamond mine was not structured to accommodate TK in a useful way, and Rosemary Kuptana noted that more had to be done to bring about closer cooperation between participants in addressing the climate change issue. Barney Smith lamented that while land-claim legislation required the use of TK in resource management, it did not address the question of "how." Indeed there was a sense that often the way in which TK was used reflected the requirement but not the spirit of agreements: that while agencies may conduct or facilitate research using TK as a source of

information, their treatment of this source material is often cursory, and they do not adequately involve communities in data-gathering. Julie Cruikshank observed that high-quality, community-based research takes a long time, is costly, and is not just an appendage to standard scientific investigation. Thus institutions' arrangements regarding TK reflect their epistemology. Agencies that fail to understand the nature of TK—and the complexities of obtaining it and placing it in a format that is both useful to the specific application and acceptable to the community—also fail to provide adequate money and time to facilitate its use.

It is a pity that the quality of the panel was not matched by the quality of the edited proceedings. While the narrator set the context at the outset, there was no concluding summary: the work ends abruptly with questions from the audience, and it seems to be very heavily edited. There are no "liner notes" setting the scene, introducing the issues, or describing the participants and their backgrounds. It is particularly unfortunate that one presentation used visual aids, something that does not translate too well onto an audio disk. One would have perhaps expected higher production standards given the high-profile sponsors (The Royal Canadian Geographical Society, The Canadian Polar Commission) and the caliber of the participants. Overall, the work is significant inasmuch as the panel moved well beyond the constraints of the introductory context to demonstrate how far we have come in understanding the limitations and potential of the different knowledge systems and how they can work together. The CD would be a good addition to a university library, but it is not as tactile, inviting, or easy to reflect on (or return to) as a book on the topic.

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COMING TO SHORE: NORTHWEST COAST ETHNOLOGY, TRADITIONS AND VISIONS. Edited by MARIE MAUZÉ, MICHAEL E. HARKIN, and SERGEI KAN. Lincoln: The University of Nebraska Press, 2004. ISBN 0-8032-8296-6. xxxviii + 508 p., b&w illus., bib., index. Softbound. US\$29.95; UK£22.95.

Coming to Shore is a collection of 21 papers presented at the Northwest Coast Ethnology Conference in Paris, France, in the year 2000. The participants were from France, Canada, and the United States. The conference also honored Claude Lévi-Strauss, and several articles reflect his approach to understanding cultures. At the same time, anthropologists from the Boasian "American" tradition