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## **A Political Anthropology of TEK in the Canadian Subarctic**

### Introduction-

The present paper shall focus upon the political role which Traditional Ecological Knowledge (TEK) has begun to play in recent disputes over land use between Aboriginal peoples and development planners. Focusing largely, though not exclusively, upon the Cree of the James Bay drainage area, its central theme shall be to describe and compare the worldviews, and the patterns of adaptation with which they are consistent, of First Nations in the Canadian subarctic, and of public and private development planners. This comparison is meant to help us better understand recent debates within Canadian society at large over the role of TEK in development planning and environmental impact assessment, a discussion of which will provide the main theme in what follows.

This public policy debate, however, is closely related with two ongoing debates within academia as well, both of which have clear political implications in the debate over the nature of TEK, its value or lack thereof, and its role in resource management and environmental impact assessment. The first is a debate within the discipline of anthropology over the question of whether the traditional hunting practices and resource management strategies of the Aboriginal Peoples of North America, and the Cree in particular, were actually guided by a conservation or ecological ethic. The second, also closely related to the public policy debate, is a debate within the philosophy of science concerning the aims, methodology and worldview of science itself.

The central objective of the paper, therefore, is a comparison of two different types of approach to the "management" of common property resources. Where the first is suggested by the TEK of the Aboriginal peoples of Canada, and by a minority tradition within the scientific community, the other is consistent with dominant Western techno-economic practices, and with traditional understandings of science. The paper shall suggest that while TEK has more often than not lead to sustainable management of the commons, the techno-economic view has tended towards a short term, profit oriented approach, which often erodes the resource base over a relatively short period of time. Finally, and most importantly, both themes shall be woven together in a discussion of the recent public policy debate over TEK mentioned above, and the manner in which this debate is mirrored in the parallel debate over the nature of the scientific enterprise, and of scientific knowledge.

The paper will be divided into four sections. The first shall begin by defining TEK, and provide a brief discussion of the increasingly political role it has begun to play in the political relationships between First Nations and other levels of government. This shall be followed by a second section which briefly outlines traditional Cree land tenure and resource management practices in the James Bay area, and a discussion of the debate mentioned above, concerning the

nature of Aboriginal management practices. The third section shall then discuss a recent debate over the role of TEK in environmental impact assessment, and of the relationship of this debate to the two contrasting understandings of science mentioned above. Finally, I shall conclude with some observations on where each of the two positions might be expected to lead us, by highlighting their political and economic implications, and the approaches to the management of the commons which they suggest.

The following sections will provide an outline of the argument to be presented in the final conference paper, as well as references to the main sources which I shall be discussing, which shall be developed more fully in the coming weeks.

### 1. Traditional Ecological Knowledge and its Use by Aboriginal Peoples-

Traditional Ecological Knowledge (TEK), though closely related to the concept of Indigenous Knowledge (IK), or the unique, local knowledge of particular Aboriginal peoples (Warren et al 1995), has been defined more specifically as "a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes & Folke 1998:5). Though admittedly, cultural traditions change and evolve over time, as they adapt themselves to changing circumstances, this definition is intended to highlight both cultural continuity and long residence in an area as the basis from which TEK arises. In North America, therefore, it is most commonly applied to the traditional knowledge which Aboriginal peoples possess concerning natural relationships and their own resource harvesting strategies. Implicit within the definition is a contrast with the type of *Western resource management science*, which is based upon Cartesian or Newtonian understandings of science, and employed by both private and public resource management experts, which shall be discussed in more detail below,

This contrast between TEK as a way of knowing, and as a basis for interacting with the land, and Western patterns of management, is often quite explicit in Aboriginal oratory and writings. This section will provide several examples of this contrast from presentations which were made to the Royal Commission on Aboriginal Peoples (RCAP) (RCAP 1997).

Even though many do not use the term TEK itself, the term is becoming popularized quite quickly through several avenues besides academia, such as the Final Report of the RCAP itself. Though few comprehensive studies of TEK have yet been completed, the paper will briefly discuss two such studies: that being undertaken by the Environmental Information Partnership in Ontario, concerning the Moose River Basin, and the recently published study entitled *Voices from the Bay: TEK of Inuit & Cree in the Hudson Bay Bioregion* (1997).

### 2. Cree Land Tenure & Resources Management Practices-

In order to provide background for understanding the discussion of the debate surrounding TEK which follows, this section shall briefly outline traditional systems of land tenure and resource management among the Cree of the James Bay drainage. This area provides a particularly useful example due to the fact that there is not full consensus among anthropologists who have studied the area concerning the question of whether the Cree traditionally had a conservation ethic, or concerning its origins if they admit its existence in the present.

Both Martin (1978) and Brightman (1993) have used an ethnohistorical approach to question whether such an ethic existed in different ways. Where the former argues that epidemics of European disease were blamed upon animals by the Cree, and lead to a "war against the animals" which they carried out through the fur trade, the latter argues that the Cree learned their conservation practices from the Hudson's Bay Company. Studies of Cree resource management

in recent times (Berkes 1998, Feit 1973, Speck 1977, Tanner 1979), however, do reveal several such conservation practices in Cree patterns of hunting, fishing and trapping.

Thus, there are two possibilities. Either such practices have a recent origin, which would allow the usefulness of TEK to be questioned due to the limited time depth upon which such traditions are based, or such practices are truly Aboriginal, in the sense of predating European contact, which is consistent with Cree oral tradition.

### 3. The Politics of TEK in Canadian Society-

This section shall consider the debate over TEK which has arisen within the broader Canadian public, originally beginning with a debate in *Policy Options* concerning the role of TEK in environmental impact assessment. This debate responded to the position of the Government of Canada's Environmental Assessment Panel, which proposed that TEK must be given equal consideration with scientific research in the assessment of a proposed diamond mine in the North West Territories.

On one side of the debate are its instigators (Howard & Widdowson 1996, 1997), who have argued that TEK is unscientific, and should not be made a mandatory part of environmental impact assessments because it is spiritually based, and thus represents an imposition of religion upon the broader Canadian public. On the other side of the debate are academic proponents of TEK (Berkes & Henley 1997, Stevenson 1997, Fenge 1997), who argue in various ways for the importance and value of TEK, and most importantly, suggest that the scientific community may have something to learn from a study of TEK.

As noted, this debate closely mirrors a larger debate within the philosophy of science, concerning the aims, methods and worldview of science itself, particularly as it applies to ecological and resource management issues. On side of this debate are traditional views of science, based upon a mechanistic worldview, and a reductionistic methodology which arose from the works of Descartes and Newton. When applied to resource management, such views tend to commodify nature, and to understand sustainability as a calculation of "maximum sustainable yield." On the other side are recent innovators who argue that society and ecology are linked as parts of a larger, unpredictable, complex system (Holling et al 1998) and that understanding adaptation and sustainability must be based upon an organic worldview, and a different methodology (Bateson 1972, 1979; Bateson & Bateson 1988; Berman 1981; Capra 1982; Merchant 1980).

The point of reviewing these two positions will be to demonstrate two things. Firstly, that the minority view of science, and particularly the methodology proposed by Bateson, have important similarities to TEK, and secondly, that this view has consistently argued, long before TEK had come to be recognized by this term, that there is much to be learned from a study of the alternative resource management practices of Aboriginal peoples.

### 4. Discussion & Conclusions-

This section will consider the social and ecological impacts of each position when considered as policy options, each with implications for resource management and therefore ecology, as well as for patterns of political organization and control of natural resources on the part of both Aboriginal communities and Canadians at large. One option is that proposed by the RCAP (1997), which is largely consistent with the arguments of those who support TEK, and which proposes greater involvement of Aboriginal peoples in resource management planning through the negotiation of co-management agreements with other levels of government.

The other option is to continue with the status quo, and to follow the models of traditional science and traditional resource management practices. This view is well represented by Garrett Hardin's (1968) arguments, which supports the privatization of common property, and the application of traditional capitalist management strategies.

Yet if, as those who support the importance of TEK argue, we must admit both that: 1. Aboriginal and Western peoples have different worldviews which, when enacted in practice, suggest different methods of managing and interacting with the commons, and, 2. that the former practices have tended to be more sustainable, while only the latter have tended to embody the "tragedy" described by Hardin, then his arguments must be reassessed. Indeed, in light of the debates outlined above, and of the contrasting ways of understanding science and resource management discussed, the tragedy in question might be more aptly dubbed "the tragedy of capitalism in the commons."

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