

Traditional Ecological Knowledge

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When I was invited to write this article on Aboriginal “Traditional Ecological Knowledge” (TEK, otherwise known as “Indigenous knowledge”), I found myself thinking that the opportunity and timing were ideal. As an Anishnabe woman and professor of geography and Aboriginal studies, the topic has occupied my attention daily, on both professional and personal levels, for much of my life. TEK, moreover, is a field that, in recent years, has expanded rapidly and is becoming ever more central to resource management activities aimed at achieving the long-term sustainability of our planet.

To begin, then, I will follow Anishnabe tradition by situating myself in relation to this topic and introducing readers to the perspective I hold.

I grew up in a First Nation community in northern Ontario. For much of that time, we had no electricity or running water, and my family depended heavily upon their direct relationship with the land and water to survive (they still do in many ways). Long before I learned anything about TEK as a scholarly concept, I was learning its central principles, ethics, and values informally, simply as a part of growing up. I have been fortunate to have had people in my family and community who have worked hard—and sometimes in secret—to keep our traditions alive. No one called the principles by which we lived TEK—and they probably would have been amused if the idea had been presented to them. A far cry from the somewhat idealized descriptions bandied about in academic discussions, actually living and learning TEK was not at all glamorous—mostly just hard work.

Later, as a student and then professor, my approach to and understanding of TEK developed into something entirely different. I now teach a course on “Indigenous TEK” and I incorporate its principles into my other courses as well. I am also an environmental professional, often employed by Aboriginal organizations in Ontario. Thus, it is a routine part of my work to educate people about, and create awareness of, TEK and its importance for environmental sustainability.

What, then, is TEK? Well, depending on whom you ask, you will get a different response. Some Aboriginal scholars, such as Marie Battiste (Micmaq) and James Henderson (Cherokee), argue that it cannot and should not be defined as definitions of TEK vary from Nation to Nation and from individual to individual; reducing this diversity to more universal definitions, it is believed, is a first step in the Eurocentric process of separating TEK from its intended context. Others point out that TEK has been defined largely by non-Aboriginal academics, and that Aboriginal perspectives are conspicuously absent in the literature (a situation that is changing, slowly). Some practitioners, like Henry Lickers (Seneca from Six Nations of the Grand River and Director of Environment for the Mohawks of Akwesasne), reject the term altogether and substitute their own. A growing trend, then, is for Aboriginal people to generate their own definitions, and to use TEK as a label only in certain situations.

In *All Our Relations: Native Struggles for Land and Life* (1999), Anishnabe environmental activist Winona LaDuke, for example, refers to “Minobimaatisiwin,” which means “the good life” and which involves concepts of revival, rebirth, and renewal. Existing in spite of colossal injustices, both past and present, Minobimaatisiwin, which comes from the Creator, is the “lifeway” that has sustained, and will continue to sustain, Anishnabe nations. A critical point in LaDuke’s book is that, in order to understand Minobimaatisiwin, and in order for the Aboriginal knowledge inherent in this way of life to have any real meaning, you must live it: if you are not living “the good life,” you are not learning or practising TEK.

Despite ongoing debate over its definition, TEK continues to gain importance in considerations of environmental sustainability. In 1987, the World Commission on Environment and Development released *Our Common Future* (a.k.a. the Brundtland Report, after the Commission’s Chair, former Norwegian Prime Minister Gro Harlem Brundtland). This landmark document, which was toted around like a bible by environmental studies students for years afterwards, not only introduced the concept of “sustainable development” to mainstream discourse, but also provided international recognition of the potentially vital contribution to be made by Aboriginal people to the resolution of global environmental issues. This seems straightforward enough now, but back then it represented a significant shift in the discourse on Indigenous peoples and the environment—from the representation of Indigenous peoples as problems to be solved and/or victims to be rescued, to the positive contribution that they can make to global sustainability by virtue of their millennia of experience in living sustainably on the land.

Five years later, at the United Nations Conference on Environment and Development (the Earth Summit in Rio de Janeiro), the legally-binding Convention on Biodiversity (CBD) was signed. The CBD reiterated the critical role of Indigenous people and their knowledge for achieving sustainable environmental and resource management. This notion has been reinforced in numerous venues since then, including in public arenas, where journals, such as the *American Indian Quarterly* (28[3/4]: 2004), have devoted entire issues to the topic.

Canada also has responded to the challenges brought forth by both the Brundtland report and the CBD and is attempting to incorporate TEK into various environmental decision-making processes, such as a growing body of Canadian environmental legislation that includes the *Canadian Environmental Assessment Act*, the *Canadian Environmental Protection Act*, and the *Species at Risk Act*. The field of TEK, thus, is well on its way to becoming firmly entrenched in the theory and practice of environmental management in Canada, particularly in the North, where it is already part of routine public policy. TEK is viewed now as presenting viable alternatives to the status quo, which is seen to have caused today’s environmental problems in the first place. Realizing the limits of its own systems and, in turn, recognizing the potential value of Indigenous knowledge for addressing global environmental concerns is a significant step for Western society, and one that is certainly still not all-pervasive. Nonetheless, many environmental professionals believe that science and technology, at least on their own, cannot extricate us from our current crises. Other approaches are desperately needed and, thus, it is perhaps only logical that TEK has come to be viewed as a current, relevant, and viable system for understanding the situation and providing a basis from which to work toward solutions.

These days, anyone who is truly interested in sustainable development should also be interested in TEK.

Anishnabe Perspectives on the Environment and TEK

Just as there is global diversity in culture, so is there diversity in TEK, according to cultural group, local tradition, landscape, and social values. To understand Anishnabe perspectives on the environment, you must start with the Anishnabe Aboriginal Creation and Re-Creation stories, which, as stories that inform us of our beginnings, provide the conceptual frameworks for an Indigenous understanding of our relationship to our environment. Like TEK, these stories have different versions that vary with the storyteller or with local cultural traditions.

The Anishnabe Re-Creation story, which reinforces principles of harmony and respect, is particularly striking. It is my favourite and I am moved every time I hear or even read it. In the version re-told by Anishnabe storyteller Basil Johnston, there has been a great flood and most of life on Earth has perished, with the exception of birds and water creatures. Sky-woman survives and comes to rest on the back of a great turtle. She asks the water creatures to bring her soil from the bottom of the waters, so that she may use it to make new land. The water animals (the beaver, the marten, the loon) all try to help her and fail. Finally, the muskrat volunteers, much to the scorn of the other water creatures. Though ridiculed, muskrat, the most humble of the water creatures, is determined to help. So he dives down, while the animals and sky-woman wait.

They waited for the muskrat to emerge as empty-handed as they had done. Time passed. Smiles turned to worried frowns. The small hope that each had nurtured for the success of the muskrat turned into despair. When the waiting creatures had given up, the muskrat floated to the surface more dead than alive, but he clutched in his paws a small morsel of soil. Where the great had failed, the small succeeded. (*Ojibway Heritage*, 1976)

The muskrat succeeds. While in some versions of the Re-Creation story he dies, in others he is revived. There are many values and lessons to be learned from this story, but one of the most compelling is that all of Creation is important, all must be respected. If we lose or disrespect even the tiniest and seemingly most insignificant being, our own survival becomes threatened. This idea that “everything is connected to everything else” (sometimes referred to as “Commoner’s Law”) is now recognized as a fundamental tenet of modern Western ecology. It is not a new principle to the Anishnabe people.

In the Creation stories, instructions are given by the Creator on how to relate appropriately with all creatures. In the Aboriginal world view, such knowledge comes from many sources, including Creation itself. Many stories and teachings are obtained from animals, plants, the moon, the stars, water, wind, and the spirit world. Knowledge is also gained through visions, ceremonies, prayers, intuitions, dreams, and personal experience. Trent University Professor Emeritus Marlene Brant Castellano (Mohawk) has identified three categories of sources for Aboriginal knowledge acquisition: traditional knowledge (passed on from generation to generation); empirical knowledge (gained from observation); and revealed knowledge (acquired through spiritual means and regarded as a gift). Traditionally, Aboriginal people in Canada understood

their relationship with Creation and assumed the responsibilities given to them by the Creator. The relationship with Creation and its beings was meant to be maintained and enhanced, and the knowledge required for this to occur was passed on for generations and over thousands of years. The responsibilities that one assumed were part of ensuring the continuation of Creation—what academics, scientists, and environmentalists might today call “sustainability.”

While people did (and do) share knowledge and while such knowledge changes over time, there are often very specific rules that govern this process of knowledge acquisition and transmission. It has never been a trivial matter. In contemporary times, however, the rules around knowledge acquisition and sharing have changed, and it has become necessary to protect our knowledge.

Indigenous Rights, Environmental Futures

Much of the current discourse on Indigenous knowledge refers to its disappearance. It is true that, as Elders pass on, as Aboriginal people lose access to land and the land itself is degraded, as Indigenous populations dwindle due to disease, war, relocation, and government assimilation policies, the ability to practice Indigenous knowledge diminishes. However, if one chooses to understand TEK or Indigenous knowledge from an Indigenous point of view, such as that described by the concept of “Minobimaatisiwin,” then there is always hope. Our world view encompasses the idea that we are co-creators, transforming ourselves and re-creating ourselves as needed in order to meet our challenges. As LaDuke states, if we focus on Minobimaatisiwin, if we live it, then we will be living in a cycle of sustainability and ensuring our future as Indigenous people.

The future of TEK, ultimately, is related to the entrenchment of Indigenous rights. Indigenous knowledge cannot be separated meaningfully from the people who hold it. This means that, in order to protect TEK, the people themselves and their ways of life must be protected.

There has been much discussion about the best way to protect Indigenous knowledge. This is a sensitive topic for Aboriginal and non-Aboriginal people alike. The focus to date has been on documenting the knowledge of Aboriginal people before they disappear. Perhaps, however, this is not especially helpful. Perhaps energies should be better spent helping Aboriginal people to realize self-determination by protecting their rights, so they do not disappear after all.

I, nevertheless, remain hopeful that we have a future. I would not remain in the Indigenous knowledge field if I did not believe in my future as an Anishnabe person or in my ability to raise my children as Anishnabe. One source of my hope is the continual inspiration I receive from the youth of our communities. In spite of the struggles involved, they are learning Indigenous knowledge. They are learning about relationships with Creation.

For the past four years, I have been invited to participate in the North Shore Tribal Council’s Aboriginal Youth Environment Forum, which involves seven First Nation communities located along the north shore of Lake Huron. Generally, I am asked to talk about Anishnabe people and TEK, and when I do, I do not give my usual academic talks; instead, I tell them a story, a Creation story, the story I have related above. Even these teenagers seem to love listening to a story. Then I ask them, “What does this story tell you?” and “What do you think our ancestors

wanted us to know from this story?” As the participants volunteer their perspectives, principles such as respect, reciprocity, responsibility, sharing, and meeting obligations emerge.

This past summer, however, one student gave a different answer. He felt that the main message was sacrifice: sacrifice on the part of the muskrat to offer his life to ensure that Creation would continue. In all the forums in which I had previously imparted the Creation story, I had never received this response. Of course, it seemed obvious once he shared it.

This experience reinforced in me the notion that I have as much to learn from youth as they, hopefully, do from me. Learning TEK is not a linear process from teacher to youth, or from Elders to youth. It is in fact a circular process: we have much to learn from each other. Traditionally, knowledge was shared in rather ordinary ways, at any occasion which brought people together, whether it was to feast, dance, sing, celebrate, or grieve. TEK thus is not about a secret ceremony, hidden from the view of outsiders, but is shared by the whole of Creation. Specifically when discussing the knowledge of people, we can indeed say that it includes Elders who are recognized for their life wisdom, patience, and knowledge. TEK, though, can come from every member of the community, including children and youths. There is no simple linear transference of knowledge.

Another particularly inspiring experience involves the beautiful canoe which now hangs from the ceiling at U of T's First Nations House. It was donated by Aboriginal students who attend Pelican Falls High School on Lac Seul First Nation in northwestern Ontario. You cannot miss this breathtaking sight once you've followed the painted salmon up the stairs to First Nations House. Proudly displayed in this sanctuary for Aboriginal students at the university, the canoe is surrounded by the dodems (clan symbols) and the seven grandfathers. The canoe was made as part of a grade 10 science project during the 2004-05 school year. The course, "Traditional Technology," combined the disciplines of Native studies, language, environmental studies, geography, and design technology. The students learned traditional ways in which Anishnabe people made and used this type of canoe. They sustainably harvested the birch bark and other materials, collectively contributing over 200 hours of work to create the finished product. The Wiigwass Chiimaan (Birch Bark Canoe) Reception, held in September 2005, was offered to show respect for the gift received from the students and teachers. It was a way of recognizing as well the TEK which led to its creation. The event proved to be an inspirational celebration of how Indigenous knowledge can be integrated into the educational curriculum in creative and respectful ways.

I was honoured to be asked to provide some comments at the ceremony to pay tribute to the students and teachers who had contributed. I was struck by how deeply I was moved, and how wonderful it is that the youth are assuming leadership roles in such endeavours. It was quite humbling, actually, as the youth I addressed possessed skills and knowledge about which I can only talk and write. When it was my turn to speak, I talked about how inspiring it was to see the results of such creativity in the application of our knowledge. By participating in such an activity, the youth are living Minobimaatisiwin, learning its principles and sharing their knowledge. We at the University of Toronto (which officially recognized the canoe as an endowment to the university) can learn from these students in many ways, including how to integrate Indigenous knowledge into science and environmental studies curricula. On another

level, I talked about how the work of the youth gives me hope: hope that the cycle of Minobimmatisiiwin will continue, and hope that, in the great minds and great future of this university, the awareness that we have much to learn from the communities we serve, including a group of high school students from northwestern Ontario, will continue to grow. Certainly it is the case for me that my true inspiration as a scholar at this university comes from our youth, our communities, and our hope for the future. To my mind, Indigenous knowledge can only increase in importance in this cycle of knowledge sharing, for the benefit of us all.