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# Native voices on Native science: Mohawk perspectives on the concept, practice, and meaning of a knowledge production system rooted in traditional Native thought

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**NATIVE VOICES ON NATIVE SCIENCE:  
MOHAWK PERSPECTIVES ON THE CONCEPT, PRACTICE,  
AND MEANING OF A KNOWLEDGE PRODUCTION SYSTEM  
ROOTED IN TRADITIONAL NATIVE THOUGHT**

by

**Pamela Johnson**

**Bachelor of Arts, Wilfrid Laurier University, 1990**

**THESIS**

**Submitted to the Department of Psychology  
in partial fulfilment of the requirements  
for the Masters of Arts Degree  
Wilfrid Laurier University  
1996**

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To all the participants of this study who are a testament to the strength of our traditional teachings.

To the ones that came before us who passed the knowledge on.

To my community who must ultimately decide our collective future.

To the faces to come who will carry the knowledge on.

Nye Weh Shonkwaya'tihson

## ABSTRACT

Community psychology is strongly committed to the value of cultural relativity and diversity. Acquiring knowledge regarding cultural differences is essential if community psychology is to realize this value. This paper provides a culture specific perspective on the form and meaning of a knowledge system rooted in traditional Mohawk thought.

The academic literature regarding research on Native people reveals an ethnocentric description of Native reality. My premise is that research in Native communities has been ideologically biased by virtue of the interpretation of Native reality from the perspective of mainstream western scientific assumptions. The ability to obtain culturally relevant knowledge hinges on our ability to understand and come to knowledge in a culturally relevant way. Thus, there is a need for a knowledge production system that is rooted in traditional Native thought.

Utilizing a qualitative and collaborative approach I obtain the perspectives of five people, who are members of the Mohawk Nation who reside in the Six Nation of the Grand River Community, on the concept of a Native science and a knowledge system rooted in traditional Mohawk thought.

The results of the study indicated that there is a high degree of congruity between the generalized Native scientific

concepts and practices with Mohawk specific traditional beliefs and practices. The study illuminates Mohawk specific teachings and how these teachings shape the meaning and practice of a knowledge system rooted in traditional Mohawk thought.



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## INTRODUCTION

In the era of destruction connected with western colonization, indigenous people have experienced the piracy of life sustaining properties. Tangible properties such as our lands and the corresponding resources were expropriated. Intangible properties such as knowledge of the environment, uses of indigenous plants, spirituality, healing practices, and even our genes are in the process of being misappropriated (Rural Advancement Foundation International, 1996). The expropriation and exploitation of Native peoples' properties seemingly has no boundaries. Ward Churchill (1988) provides the following quote by former American Indian Movement leader Russell Means:

What's at issue here is the same old question that Europeans have always posed with regard to American Indians, whether what is ours isn't somehow theirs. And of course they've always answered the question in the affirmative. (p. 2)

The properties that western establishments have not expropriated they dominate. Indigenous peoples' knowledge production systems (IKPS) are a case in point. Control over IKPS has been achieved by the absolute monopoly over "legitimate" knowledge production by the western scientific community which serves the interests of the state and industry (Gaventa, 1993). The suppression of IKPS has been so extensive that today many indigenous people are not aware that

indigenous knowledge production systems exist. A conversation I had with a community member (which is typical of other conversations I have had) illustrates the point. While visiting at her home she asked me, "what is your thesis on?" I replied, "Native science." She pondered for a moment and then asked, "What is that?" I would have been dismayed had it not been for the fact that I had asked myself the same question less than two years ago.

Although I was uncomfortable with Western scientific principles and practices, I could never clearly and comprehensively articulate the reason for this feeling. Ultimately it was my discordant feelings combined with my faith in the ways of Native people that caused me to look for "culturally appropriate" research methods. During the process of researching "culturally appropriate" methods I realized that it was not just the methods that were inappropriate, it was also the assumptions behind the methods. The more I explored the literature on indigenous peoples' knowledge the more confident I became in my intuitions and insights on the matter. It was reaffirming to know that, although I could not articulate Native science in academic rhetoric, at some level within me the knowledge existed.

The specific aim of the thesis is to illuminate a Mohawk of the Six Nation community perspective on: a) traditional Mohawk beliefs and practices as they apply to a knowledge production system and, b) the concept of Native science. The

inquiry consisted of three approaches: a) an integration of literature relevant to the topic of Native science, b) participant perspectives on traditional Mohawk beliefs and practices, and c) participant responses to the concept and practice of Native science.

Note, throughout the text I have used the term Native, Indigenous, Indian and First Nation interchangeably, as all these terms are used in the literature to which I refer. I have used the words Kanyen'kehaka to refer to Mohawk person/people specifically and Onkwehonwe to refer to Indian person/people generally (See Appendix A for complete translations).

I open the thesis with a discussion on my motivation for pursuing the topic of Native science. Then I set the tone of the research by placing it in the context of the Two Row Wampum Treaty. The Two Row Wampum Treaty was made by the Confederacy of the Six Nations (the traditional governing body of Rotinonhsyonni) and the Dutch, French, and British nations (Thomas, 1978). It defines the mutually agreed upon relationship between the two respective Nations. This relationship is based on the principles of mutual respect and non interference.

In the introductory argument I examine the relationship between western colonialistic practices and the systematic invalidation of traditional indigenous knowledge. I present literature that critically evaluates both classical and the

community-based participatory research efforts in Native communities. Then I present a knowledge production system rooted in traditional indigenous knowledge as an alternative to Western science. My premise is that research in Native communities has been ideologically biased by virtue of the interpretation of indigenous reality from the perspective of mainstream western scientific assumptions. As a result, the knowledge obtained about indigenous people through mainstream research efforts has largely been culturally irrelevant, and our ability to obtain culturally relevant knowledge hinges on our ability to understand and come to knowledge in a culturally relevant way. Thus, there is a need for a knowledge production system that is rooted in traditional indigenous thought.

I present the concept of indigenous knowledge production systems by integrating the literature written on the topic by indigenous scholars. Utilizing a qualitative and collaborative approach I obtain the perspectives of five people who are members of the Mohawk Nation that reside in the Six Nation of the Grand River Community on the integrated literature and traditional Mohawk beliefs. The literature regarding the topic falls under the rubric of ethnoscience (Vine Deloria, 1992), Native Science (Pam Colorado, 1988), Traditional Environmental Knowledge (Martha Johnson, 1992), and Native Ways of Knowing (Joe Couture, 1991). While the labels differ the content corresponds, therefore, for the

purpose of consistency and brevity I chose to use the term Native Science throughout the text.

### **Personal Motivation**

All research is grounded in some aspect of personal interest for the researcher. The general motivating factor for my research is personal and collective survival. Survival of indigenous knowledge ensures the survival of indigenous identity and ultimately indigenous people. The specific motivating factors emerge from my membership in various social milieus. Each of the environments in which my identity is embedded distinctively shapes my motivation.

As a member of the global family I am convinced that indigenous knowledge is beneficial to humankind. The spiritual and holistic properties of Indian knowledge offer a way of seeing and relating to the universe that can contribute to a collective vision which can alter the present path of environmental and human destruction. As a member of the Indian community I recognize that we share the common struggle of decolonizing ourselves. Our collective survival is intricately linked with the survival of and control over our tangible and intangible properties. Intangible properties such as traditional ways of knowing are important to our sense of well being. An authentic understanding of Native ways of knowing is necessary if we are to protect ourselves from the effects of western scientific imperialism. As long as we turn

to Western scientific paradigms as a way of understanding our reality and experience, we will not truly have control over our lives. As a Kanyen'kehaka, I understand the significance of a nation-specific consciousness. The dissolution of this consciousness can lead to the ultimate destruction of our culture. Gayle High Pine (1973) states:

We know we need not relinquish individuality for tribal unity--neither must we sacrifice tribalism for inter-tribal solidarity. A bird cannot be simply a "bird" without being of a specific species--so "Indianness" consists of being of a specific culture". (p. 43)

Thus, there is a need for a "science" that reflects the specific beliefs and practices of the Kanyen'kehaka. As a Six Nations community member, I experience and witness the effects of Western intellectual imperialism daily. Community-based leadership such as boards, administrators, educators, and researchers turn to Western scientific practices to understand and describe the issues that affect our lives. Community leadership needs to be conscious of the message that is being conveyed by this practice. I believe that in my role as a community-based researcher I must avoid, or at minimum, publicly acknowledge research practices that do not represent our living heritage. As Gilchrist (1994) states:

Aboriginal researchers who accept uncritically the Western scientific paradigm and overzealously apply

its mandates, in an effort to be considered a legitimate social scientist and who abhors the possibility of being accused of being radical, could cause the greatest damage to Aboriginal communities. (p. 61)

As a Native person engaged in research I am personally and professionally responsible to ensure the integrity of my culture in my work. Last but not least, as a mother I want to be a strong role model for my daughter. As a daughter I want to make my mother proud. Promoting the integrity of our living heritage is one way in which I can meet the task.

#### **The Two Row Wampum Treaty Belt**

*The Onkwehonweh held a special council informing the people that the time had come for the white people and the Onkwehonweh to continue as friends so that all people may walk upon this earth in peace and love one another. Both races understood this kind of friendship and agreed that the day had come to make friendship.*

*The Onkwehoneweh said, "We now have an understanding about our friendship." The whiteman replied, "I will put our friendship in writing." The Onkwehonweh replied, "This is good, but one thing we must remember, paper will not last. We must find a way to make sure that the friendship will be passed on to the next generation." They agreed.*

*The whiteman said, "How is the Onkwehonweh going to*



*describe our friendship?" The Onkwehonweh replied, "We must thank the Creator for all his creations, and greet one another by holding hands to show the Covenant Chain that binds our friendship so that we may walk upon this earth in peace, trust, love and friendship, and we may smoke the sacred tobacco in a pipe which is a symbol of peace."*

*The Whiteman said that he would respect the Onkwehonweh's belief and call him "son." The Onkwehonweh replied, "We respect you, your belief, and what you say. You pronounced yourself as our father and this we do not agree with because the father can tell his son what to do and can punish his son. We suggest that we call each other brother."*

*The whiteman said, "The symbol of this Covenant is a three link chain which binds this agreement made by us, and there is nothing that will come between us to break the links of this chain." The Onkwehonweh replied, "The first link shall stand for friendship, the second will stand for our good minds, and the third link shall mean there will always be peace between us. This is confirmed by us." The Onkwehonweh said, "This friendship shall be everlasting and the younger generation will know and the rising faces from Mother Earth will benefit by our agreement."*

*The whiteman said, "What symbol will you go by?" The Onkwehonweh replied, "When the creator made Mother Earth, man was created to walk upon the Earth to enjoy all nature's fruits, saying that no one will claim Mother Earth except by*

rising faces which are to be born. We will go by these symbols:

As long as the sun shines upon this earth, as long as the water still flows, and as long as the grass grows green at a certain time of the year, that is how long our agreement will stand. Now we have symbolized this agreement and it shall be binding forever, as long as Mother Earth is still in motion. We have finished and we understand what we have confirmed and this is what our generation should know and learn not to forget.

The whiteman said, "I confirm what you have said and this we shall always remember. What we do about our own ways of belief, we shall both respect having our own rights and power." The Onkwehonweh replied, "I have a canoe and you have a vessel with sails and this is what we shall do. I will put in my canoe my belief and laws. In your vessel you shall put your belief and laws. All my people will be in my canoe, your people in your vessel. We shall put these boats in the water and they shall always be parallel, as long as there is Mother Earth, this will be everlasting."

The whiteman said, "What will happen if your people will like to go into my vessel?" The Onkwehonweh replied, "If this happens, then they will have to be guided by your vessel, by your belief and your laws. I don't believe that your people would like to be in my canoe because it is so swift but if it so happens then they will be guided by my canoe. Now the

*whiteman understands this agreement.*

*The whiteman said, "What will happen if any of our people may someday want to have one foot in each of the boats that are parallel?" The Onkwehonweh replied, "If this so happens that my people may wish to have their feet in each of the two boats, there will be a high wind and the boats will separate and the person that has his feet in each of the boats shall fall between the boats, and there is no living soul who will be able to bring them back to the right way given by the Creator but only one - the Creator himself."*

*The Onkwehonweh called the wampum belt "Guswhenta." One of the two paths signifies the whiteman's laws and beliefs, and the other signifies the laws and beliefs of the Onkwehonweh. The white background signifies purity, good minds and peace, and they should not interfere with one another's views.*

*The whiteman said, "I understand. I confirm what you have said, that this will be everlasting as long as there is Mother Earth. We have confirmed this and our generation to come will never forget what we have agreed. Now it is understood that we shall never interfere with one another's belief or laws for generations to come. (Hill, 1990; Thomas, 1978)*

## COLONIALISM AND INVALIDATION OF INDIGENOUS KNOWLEDGE

The Two Row Wampum is a powerful and sagacious message conveyed from "the ones who came before us". It serves as a reminder of the importance of respecting the laws and beliefs of others, and living by the laws and beliefs of your nation. For the Kanyen'kehaka it means following Kanyen'kehaka beliefs and laws. Following Kanyen'kehaka beliefs and practices becomes increasingly hard as we are distanced from the clear strong voice of our people whose knowledge and lifeways were untouched by another worldview. Through assimilation processes, Western institutions have disrupted the generational transference of traditional Onkwehonwe knowledge and ways of knowing. Brian Titley (1986) chronicled the Department of Indian Affairs' developments in Native health, education and welfare between 1880 and 1932. Regarding education, he reports:

The education of Native children in day and residential schools was one of the key elements in Canada's Indian policy from its inception. The destruction of the children's link to their ancestral culture and their assimilation into the dominant society were its main objective. (p. 75)

Native children were forced to participate in what Eber Hampton (1993), describes as schooling for assimilation - "Non Native schools teaching, Non Native content, using Non Native methods, and Non Native personnel, and with Non Native goals"

(p. 269). Today, we have generations of Onkwehonwe whose formal western education experience was primarily aimed at replacing Onkwehonwe knowledge with knowledge rooted in a European worldview.

The mainstream western scientific worldview does not represent reality as the Native person experiences and understands it. As a result, a great deal of conflict, confusion and alienation occurs within the Native person (Hudson, 1989). Kanyen'kehaka scholar, Ed Connors (1992) explains:

The process of acculturation (the change of feelings, actions, beliefs, life styles, thought, that accompany adoption of another cultures ways) began disconnecting our people from our holistic world view and introduced the scientific, linear, reductionistic world view. This change in thought produced a change in lifestyle that disrupted the balanced, healthy lifestyles that our peoples had enjoyed for, at least, hundreds of years. This imbalance was evidenced in the dramatic rise of self destructive behaviours within our communities.

(p. 4)

Antone, Miller and Myers (1986) assert that to improve their quality of life Native people must be able to identify with their own worldview, which is not and cannot be replaced by a substitute identification with a worldview based in

European roots.

During 500 years of colonization practices the Native worldview has been under systematic erosion. Those who struggle to affirm their Native identity are often faced with reappropriating their worldview through bits and pieces of information about Native ways. This arduous process is compounded by the expropriation of Native language which personifies Native knowing; and the western way in which we are indoctrinated to perceive, understand and relate to the world. For many Native people who have suffered the effects of western intellectual imperialism, the process of reappropriation requires a mindful deconstruction of Western perceptions of reality. But it is not enough to simply define ourselves by clarifying what we are not; aligned with this quest Native people must affirm traditional beliefs and laws, and define ways to put them in motion in the "historical now" (Colorado 1988, p. 54).

In accordance with the principle of mutual respect set out in the Two Row Wampum I will not contrast and compare the principles of Western science with Native science. The limitations of the Western scientific paradigm shall be discussed only to illustrate the colonialistic nature of Non Native research paradigms and practices in Native communities. It is not my goal to legitimate Native science by attempting to invalidate Western science. Native science is a complete and valid scholarly discipline which stands on its own merits

(Deloria, 1992).

The topic is examined from an Onkwehonwe perspective. The problems inherent in cross cultural research (Attneave, 1989; Beauvais, 1989; Heath, 1989) affirm my belief in the wisdom of the message given in the Two Row Wampum. This message is that Nations should run parallel to each other rather than "have one foot in each of the boats", as is the case when Western researchers "explore" indigenous affairs. In their investigation of the impact of psychosocial research on Native people, Darou, Hum, and Kurtness (1993) found that studies that compare data from one culture to another are inherently biased. They state:

The subjects in etic research often find the studies obtrusive because their culture appears to be depreciated. The researcher thus needs to make great effort to avoid cultural comparisons. (p. 326)

Etic research smacks of Western intellectual imperialism. As Vine Deloria (1992) explains:

One of the difficulties today in speaking about tribal knowledge is the tendency to suggest that when traditional teachings correspond to the findings or present beliefs of western science, then traditional wisdom is validated. It is comforting to see a reasonable "match" of data and conclusion but why does that correspondence

necessarily validate the tribal insight rather than the other way around? Why do we think that western science is the criterion of truth and accuracy? Why is tribal knowledge described as striving on an ad-hoc basis to rival the information obtained by western science? (p. 15)

Accordingly, the literature referred to throughout this thesis draws largely from articles and books written by Onkwehonwe. I begin at a place of mutual respect for the beliefs and laws of the respective Nations. In the words of Chickasaw scholar, Eber Hampton (1993), "may we accept each other's right to live, to define, to think, and speak" (p. 307).

#### **Appropriation of Knowledge Production**

The Western scientific belief system created the illusion that Western science is THE universal truth with the true methods. As a result, since the invasion of the Americas the science that has studied Native life has been Western science. Even in critical issues such as alcoholism, we Native people have become dependent on a foreign system of thought for answers to the major cause of our destruction. In research we try to use Western glasses, not Native glasses, to see the meaning of problems in our lives and to find solutions.



(Colorado, 1988 p. 60)

The western knowledge production system, Western science, is a product of western perception of and assumptions about reality. Science dominates the Western culture (Knudtson & Suzuki, 1993), such a dominance has been referred to as "scientism", meaning "science's belief in itself, that is the conviction that we can no longer understand science as one form of possible knowledge, but rather must identify knowledge with science" (Gaventa, 1993, p. 29). The appropriation of knowledge production by western institutions, particularly universities, (Heaney, 1993), who deify science (Capra, 1983; Deloria, 1980) have delegitimized and marginalized traditional Onkwehonwe knowledge systems. This is evident in the relatively few people who are cognizant of Native science. Onkwehonwe knowledge and ways of knowing has been discounted by the scientific community as irrelevant (Hoare, Levy, & Robinson, 1993); fun, superstitious, and exotic (Deloria, 1992); and "quaint, primitive, highly subjective thoughts of cultures who have not yet learned to think in the correct scientific manner" (Wangler, 1983, p. 49). Western intellectual imperialistic thought accompanied with assimilation practices and control over socioeconomic means functioned to place the control of research on Native people in the hands of the Western scientific community. As a result, Native people have had no control over the knowledge that has been constructed to describe Native experience and

reality.

### Classical Research On Native People

In spite of the disclaimers of social scientists, most social science, in looking at racial minorities, is oriented according to the dictates of the old theory of cultural evolution which, in its most derogatory interpretation, saw dark-skinned peoples as culturally inferior to whites. (Deloria, 1980, p. 269)

The monopolistic control of Western science over research has created an ethnocentric perception of Onkwehonwe reality. Many Native scholars assert that knowledge obtained through the positivist empiricist or traditional model of social science research has failed to create a meaningful knowledge base for Native people (Chrisjohn, 1989; Deloria, 1980; Gilchrist, 1994; Hampton, 1993; Laframboise & Plake, 1983; Red Horse, Johnson, & Weiner, 1989; St. Denis, 1992; Trimble, 1977). Native scholar, Roland Chrisjohn (1989) states, "to date, data has been generated by mainstream institutional representatives for their own purposes and not for First Nations interests" (p. iii).

Literature that critically evaluates the value of the knowledge produced from the traditional social science research model documents a number of problems. Gilchrist (1994) states, "Unprecedented volumes of research generated

data and theory on Aboriginal people in Canada piles up and yet there is little or no research upon which Aboriginal peoples can build on the movement toward self determination" (p. 51). Other Native scholars express similar concerns regarding the validity and usefulness of research conducted on Native people. Trimble (1977) participated in a review of three topical areas of research on Native people. The topics included educational research, personality research, and adolescent literature. Trimble (1977) summarizes his findings of these reviews by describing the research as ethnocentric, narrow in focus and full of misinterpretation. In their paper "Toward Meeting The Research Needs of American Indians", Theresa LaFramboise and Barbara Plake (1983) describe most research as taking a culturally myopic view, as well as being devoid of findings that are helpful to Native people. Eber Hampton (1993) believes that it is not a shortage of research that obstructs building cultural specific theories, rather it is a lack of research that is valuable from a Native perspective. Vine Deloria (1980) questions the usefulness of all social science research. He states:

While an impressive number of studies are discussed each year, the sum total of their contribution to our understanding of our place in the world is negligible, if it can be discerned at all. (p. 271)

The problem of irrelevant research is amplified by the misuse of research findings. The "fundamentally undemocratic

research relationship" (Walsh-Bowers, 1992, p. 2) inherent in classical research creates the conditions for exploitative research practice. The research relationship is characterized by an unequal distribution of power, in which the researcher is dominant and the "subjects" are subordinate. The researcher maintains control over all aspects of the research, including the dissemination and use of research findings. The researcher may publish reports, make inferences, and propose theories without obtaining direction or consent from the Native community. The result is the publication of misinformation, negative stereotyping, and a subsequent distrust of researchers by Native people (Mihesuah, 1993; Webster & Nabigon, 1992; LaFromboise & Plake, 1983; Trimble, 1977). Trimble (1977) provides an example of research that contributes to negative stereotyping. He states that the research findings on Indian adolescent socialization focuses on negative outcomes such as drug addiction, alcoholism, suicide, and drop outs. He notes that "few studies addressed the positive competent Indian adolescent leaving one with the impression that few Indian adolescents had anything to be positive about" (p. 10). The Barrow Alcohol Study illustrates how lack of community ownership of research can cause harm to the community (Foulks, 1989). The project was initiated to study the causes of alcohol abuse and to evaluate the Inupiat community's alcohol detoxification program. Without community consultation the results of the study were released to the

press. Media coverage of the report included:

(the) *New York Times* press release was headlined *Alcohol Plagues Eskimos*. The Associated Press release said that alcoholism and violence had overtaken Eskimo society after the sudden development of Alaska's North Slope oil fields. The United Press International Wire Service wrote its story under the headline, "Sudden Wealth Sparks Epidemic of Alcoholism" with the subhead, "What We Have Here is a Society of Alcoholics." (Foulks 1989, p. 13)

Foulks (1989) states "the press confirmed the stereotype of the drunken Alaska native, whose traditional culture had been plundered" (p. 13). The Inupiat community was outraged by both the content of the study and the manner in which it had been released. An academic critique of the study revealed a number of conceptual and methodological errors. The professor who conducted the critique stated "the people of Barrow had a right to be angry over the study because the authors spread misleading facts about the community and its people, both locally and nationally..." (Foulks 1989, p. 14).

Researchers who have used Native communities to promote their personal agendas have been another source for distrust by Native communities. Mihesuah (1993) points out that "most researchers study American Indian topics for their own gain, that is, for tenure, promotion, grants marketability, and

prestige" (p. 132). Warry (1990) states that "academic reputations...have been built on the backs of Native subjects and at the political and economic expense of Native communities" (p. 63). In reaction some Native communities have created policies that prohibited the practice of research without some form of local control (Laframboise, 1983; Trimble, 1977, Efrat & Mitchell, 1974). It is my position that Native people should be equally as guarded against the principles that provide the ideological foundation for research practices. Of particular significance are the doctrine of objectivity, the research relationship, and the value free stance of science.

The doctrine of "objectivity" cloaks the Eurocentric nature of scientific inquiry. The belief that there is a universal external reality that can be described without ever mentioning the human observer allows the researcher to filter indigenous experience through a western cultural value system (Gilchrist, 1994). Rothe's (1982) analysis of Indian education research illustrates this point:

When Indian parents are requested to complete pre-defined survey instruments they are expected to complete forced-choice items which reflect a researcher's perspective on educational features which are significant and relevant to the researcher. His point of view presupposes certain forms of education, research and community/cultural

understanding among Indians. The researcher develops a framework and blankets it on a local population which is influenced by unique geographical, cultural/social and linguistic variables. He takes for granted the unique situational context by imposing conventional standards to a culture. (p. 1)

Under the guise of scientific objectivity mainstream social scientists do not question the role that their attitudes and socialization play in their choice of question, data collection, and interpretation of results (Gilchrist, 1994). The ethnocentric nature of their research seems to exist outside of their conscious awareness, like a "scientific blind spot". The research relationship exasperates the problem of ethnocentrism by relegating the voice of the "researched" to a subordinate position. In his examination of the traditional research relationship Walsh-Bowers (1992) summarizes it as follows:

The overall picture of the research relationship in the last 50 years, however, evokes an image of Tarzan and Jane, Lone Ranger and Tonto relations in which the voice of the citizen is virtually silent. (p. 7)

It is not difficult to guess who gets the part of Tonto in the traditional research scenario. Without the voice of Native people, the western researcher is destined to impose

some aspect of their reality on Native experience, which operates under a totally different frame of reference. For example, to understand almost any aspect of Native reality requires a frame of reference which includes the Native experience of forced assimilation and colonialism. However, the supposed value free stance of mainstream science creates the objectification of social knowledge, and by doing so dislocates Native experience.

The value free stance taken by the mainstream western scientific community has promoted the misconception that scientific work is apolitical and ahistorical. This scientific myth has exonerated the researcher from addressing the oppressive sociopolitical historical context which indigenous experience is embedded. Prilleltensky (1994) explains:

...the individual is studied as an asocial and ahistorical being whose life vicissitudes are artificially disconnected from the wider sociopolitical context. Following this ideological reasoning, solutions for human predicaments are to be found almost exclusively within the self, leaving the social order conveniently unaffected.

(p. 34)

A decontextualized picture of Native reality is a desensitized picture. A desensitized picture is an incomplete and inhumane picture. Native communities need to guard



against decontextualized research which objectifies our reality. We are not, and our experience is not an object to be poked at, turned over, measurably observed, or dispassionately discussed. This point brings me back to the statement quoted earlier in the text by Russell Means, "What's at issue here is the same old question...whether what is ours isn't somehow theirs". It appears to me that the mainstream scientific community believes that Native experience is "somehow theirs" to gather, analyze, interpret and publish. Indigenous experience joins the long list of indigenous properties which have been misappropriated.

In summary, classical social science research has generally, pursued answers to questions Native people did not ask; using theoretical constructs and methodological tools Native people did not create; and consequently generating findings and theories Native people do not recognize and can not use. In essence, research regarding Native people has captured little more than an "illusion" of Native experience and reality. Consequently these "approaches to indigenous issues have met with remarkably little success when measured by the ability of that research to substantively strengthen the cultural and economic well-being of the target population" (Hoare et al., 1993, p. 52). Indigenous communities needed a model of research that would shift the balance of power (St. Denis, 1993) and provide a method in which indigenous people could be meaningfully involved in research to which they were

subjected (Park, 1993). "Ideally, the principles that govern participatory research would eliminate many of the concerns voiced regarding the orthodox practice of research" (Jackson, 1993, p. 10).

#### **Community Based Participatory Research With Native People**

Participatory research came about as a result of the critique of classical research (Gilchrist, 1994). Participatory research is premised on the belief that "ordinary people are capable of generating the knowledge necessary to guide their actions" (Castellano-Brant, 1986, p.50). The most obvious difference between participatory and traditional social research is the participation of ordinary people in the community as active members in the research process (Park, 1993). Participatory research requires that:

the community decides how to formulate the problem to be investigated, what information should be sought, what methods should be used, decide what concrete procedures should be taken, how the data should be analyzed, what to do with the findings, and what actions should be taken. (Park, 1993, p.10)

The goal of Native self-determination and its counterpart self government sets the political and social climate for the endorsement of community controlled research (Jackson, 1993). As a result, community based participatory research (CBPR) has

been assuming a growing importance and acceptance in the Native community (Hoare et al., 1993; Jackson, 1993; Webster & Nabigon, 1992; Warry, 1990; St. Denis, 1989; Castellano-Brant, 1986). St. Denis (1989) explains the significance of CBPR for the indigenous community:

...for too long the social research done on Indigenous people has generated theories about the shortcomings of Indigenous people rather than generating knowledge about the inadequacy of the social system in which they must survive. Not enough research has focused on identifying those strengths of Indigenous communities that will ensure cultural and economic survival. It is only common sense that Indigenous communities should be involved in identifying the problems that need to be addressed. (p. 42)

Ideally, CBPR processes allow the indigenous community to regain control over production of knowledge. Control over knowledge production is critical to cultural survival (Hoare et al., 1993). Ideally, CBPR methods would lead to a knowledge base that would more accurately reflect social realities and concerns as indigenous people experience them. The result would be a knowledge base that Native people could extract from to assist them in determining their future (Warry, 1990).

Theoretically, CBPR appears to provide a solution to most of the problems attributable to the orthodox model.

Practically, however, CBPR is vulnerable to the same types of exploitation. In fact, the nature of exploitation, by virtue of the indigenous participation and leadership, makes it more difficult for the indigenous community to discern. In his examination of participatory research and the aboriginal movement in Canada, Jackson (1993) reveals the relationship between aboriginal middle class leadership (managers, administrators, professionals and technicians), CBPR, and maintenance of the status quo. He reports:

Members of the new middle class, working on behalf of the Aboriginal movement through participatory research, related to agents of the state--the funder of the research--who were, in turn members of the same class...To act against the ultimate interests of the state was to endanger the relatively privileged class position they continued to occupy. For this reason, Aboriginal leaders who advocated participatory research were unlikely to push the research process--in methodological, political, or financial terms--to a point where it endangered their membership in the new middle class or the "symbiotic" relationship between this class and the successful operation of the state apparatus. (Jackson, 1993, p.56)

Participatory research under the direction of middle class indigenous leaders has not returned the control over

knowledge production to indigenous communities. Rather, control has remained in the hands of the middle class (who represent the status quo) by virtue of their power over research funding, and their ideological representation advocated by middle class indigenous leaders.

A further difficulty with CBPR is that the transfer of knowledge from the scientist to the ordinary person is "limited to the tools and methods which professional research has created" (Gaventa, 1993, p. 34). Native people may become less dependent on the presence of the scientist, however they remain dependent on Western scientific paradigms. Although the balance of power may be shifted from independent to collaborative research, western thought remains the dominant force in defining why, what, and how knowledge is produced. Gaventa (1993) states:

While the process of reappropriation of dominant knowledge by those who are affected by it is empowering as a strategy, by itself it is limited. While participatory, it is still based upon gaining access to and control over knowledge that has already been codified by others. It is an access to a paradigm which the people had little part in creating. A further strategy evolves as the powerless develop, create, and systematize their own knowledge, and begin to define their own science. (p. 37)

Although there has been a number of successful CBPR efforts in various Native communities (St. Denis, 1989; Webster & Nabigon, 1992), Jackson's (1993) and Gaventa's (1993) research serves to remind us that CBPR is not a corrective panacea to colonialistic practices in research. Gilchrist (1992) states, "in order for Indigenous people to decolonize themselves they must decolonize their knowledge production system" (p. 61). Indigenous people must re-appropriate the knowledge production system that allowed them to survive in harmony for thousands of years. In the words of Joe Couture (1992), "Indigenous knowledge and Indigenous American Indian survival somehow go together" (p. 66).

## NATIVE SCIENCE

Scientific concepts exist in Native traditions. Just because Native people do not use a scientific jargon, is no reason to suggest that the knowledge is lacking. (Alcoze, 1992, p. 15)

The survival of traditional knowledge is critical to Native peoples' collective survival and growth (Couture, 1992; Colorado, 1988; Deloria, 1992; Hoare et al., 1993; Warry, 1980; Webster & Nabigon, 1992). The holistic and spiritually based knowledge procured through generations of insight and experience is the key to understanding our place in the universe. Traditional teachings provide indigenous people with instructions on how to maintain a balanced co-existence with all of creation. It is this knowledge that helped our ancestors survive for thousands of years (George, 1991); and it is this knowledge that will ensure the survival of the "faces to come". Vine Deloria (1993) states, "Today we should make a concerted effort to gather traditional tribal wisdom into a coherent body of knowledge which can be passed on to the next generation of Indians" (p. 14).

The current ecological crisis has stimulated a great deal of interest in traditional indigenous knowledge (Blair, 1995; Johnson, 1992; Knudtson & Suzuki, 1992). Hoare et al., (1993) state:

Knudtson and Suzuki (1992) suggest that traditional knowledge and the correlate spiritualism of

Indigenous people offer greater hope for the resolution of environmental and social problems than all scientific knowledge combined. (p. 48)

Bielawski (1992) states "Traditional knowledge offers a view of the world, aspirations, and an avenue to truth, different from those held by non aboriginal people whose knowledge is based largely on European philosophies" (p. 4). Traditional knowledge is derived from a comprehensive system of knowledge which includes certain metaphysical generalizations regarding reality (ontology), knowledge (epistemology) and value (axiology). An elder has described traditional knowledge as, "a common understanding of what life is about" (Bielawski, 1992 p. 4).

Native science is a contemporary term coined by Oneida scholar, Pam Colorado. It refers to ways of coming to knowledge that are derived from or rooted in traditional knowledge. Inherent in this statement is the assumption that there is a degree to which certain key principles can be "universalized" to represent the many diverse Nations of Native people in North America (Colorado, 1989; Dumont, 1988). However, it is important to recognize that each Nation has distinctive beliefs and practices (Colorado 1988; Deloria, 1992).

An examination of the traditional views of the world held by Native people reveals the key principles which lie at the foundation of Native science. The literature regarding



traditional knowledge reveals certain core principles of an indigenous worldview, that serve as "first principles" in understanding the ultimate nature of existence, reality and experience. The "first principles" include the spiritual and sacred nature of existence, and the holistic nature of reality and experience. Spiritual knowing and holistic understanding shape the purpose, meaning, and practice of Native science.

### Spiritual Knowing

We believe that when the Mystery or God, created the universe he placed his hand on the whole thing, so everything is spiritual. (Mohawk elder, Sakokwenonkwas, 1976, p. 38)

Core to the traditional Native worldview is the primacy of the spiritual and sacred (Beck, Walters, & Francisco, 1977; Colorado, 1988; Couture, 1991; Dumont, 1988; High Pine, 1977; Johnson, 1992; Locust, 1988). In Dumont's (1988) examination of the principle traditional values of Native people, he states that the nature of indigenous vision is that it is "spirit centred". Couture (1991) states that "...the traditional "world" of Native knowledge is a sense-world which is in truth spiritual" (p. 66). In her paper "The Non-Progressive Great Spirit - Traditionalism in the Modern World," Gayle High Pine (1977) states:

A tribal people, among whom the spiritual is the first consideration, constantly tests everything

new and old against its spiritual and social harmony; at its own pace it absorbs into and discards from its spiritual rhythm. (p. 152)

The Creator is essential to our scientific philosophy. Mind, matter, and harmonious interrelationships are the creations of the Creator, who represents the reference point, being the source of natural order and balance. This knowledge gives form to our daily existence. Couture (1991) describes Native spirituality as "earth spirituality" (p. 61) He states "Native awareness and perception is of the spiritual as belonging to this world and not to some beyond. (p. 61). That is, it is a spirituality that is continuously and concretely experienced and expressed through respectful relationship with the natural world.

Traditional systems of knowledge give credence to the spiritual nature of existence. Spiritual knowledge and experience are integrated in a total way of seeing (Dumont, 1988; Gibbs 1988). Couture (1991) offers insight into the realm of Native human knowing".

The primal "experience" embraces the inner and outerworlds. In Native cognition, these are together and are equally real and functional. The sense world, as well as the spiritual world, each has something to reveal which only each can express. The spiritual and physical are both acknowledged as inseparable, and recognized as

belonging centrally to the sphere of Native human knowing. (p. 59)

Beck, Walter, and Francisco (1992) in their book "The Sacred - Ways of Knowledge, Sources of Life" state:

...sacred ways are felt to be inseparable from the "ordinary." ...knowledge should be searched for along with something else. Science, psychology, and similar disciplines should not be tasks separate from living and of worshipping. (p. 6)

At the core of Native science is a "spiritual knowing". Colorado (1988) states that "one of the tenets of American Indian science is that the search for truth and learning is a spiritual relationship between the individual and the Creator" (p. 56). The Native scientist seeks knowledge not for the sake of knowledge alone but rather in the search for balance, harmony, and peace with all of creation (Colorado, 1988) as the Creator intended.

#### **Holistic Vision**

As far as I know, God never told us Mohawks to separate anything but just look upon everything that he had made as holy and sacred and act accordingly. (Mohawk elder, Sakokwenonkwaw, 1976 p. 38)

Holism is a perception of reality which acknowledges the whole as the context in which the parts exist and function. Ultimately, knowledge is obtained through an understanding of

interrelation, not through an examination of parts as isolated entities. Traditional Native knowing is based on holistic perception. Dumont (1988) describes the Native practice of holistic perception as "Vision". Vision is a unique way in which the Native person sees the world. Through "vision" one "recognizes the interconnectedness of all things and the totality of its interrelatedness" (Dumont, 1988, p. 23).

Traditional Indian knowing requires a nondualistic and inclusive comprehension of reality. Couture (1991) describes traditional Indian knowing as:

a non dualistic process - it transcends the usual opposition between rational knowledge and intuition, spiritual insight and physical behaviour. It is inclusive of all reality. As a process of thinking and perceiving, it is irreducible. Its scope and focus are on what goes together. For example, sense of self-esteem and competence and sense of control over life events are together with sense of internal and external conflict, and over the compelling influences of both Indigenous and dominant society cultures; sense of space and sense of time are together. (p. 57)

The Native mind views multiple levels of reality functioning all at once, not at different levels at discrete times (Alcoze, 1992). Colorado (1988) states that "seeking

truth and coming to knowledge necessitates studying the cycles, relationships and connections between things" (p. 51). Knowledge is produced through a synthesis of contextualized and dynamic experience (Colorado, 1988; Hoare et al., 1993; Johnson, 1992).

Native scientific epistemology necessitates a sensitive and pluridimensional approach. Gathering and interpreting knowledge includes the integration of the internal and external. The personal experience of the researcher - the subjective - is a necessary dynamic of the research process; as the quest for knowledge cannot be separated from spiritual and emotional feelings (Beck et al., 1992). Colorado (1988) states "Native science relies on total involvement of the person with his or her environment. Coming to truth in an Indian way involves spirit, body, mind and relationships" (p. 58).

#### **Gathering Data**

In most tribal traditions, no data is discarded as unimportant or irrelevant. Indians consider their own individual experiences, the accumulated wisdom of the community that has been gathered by previous generations, their dreams, visions and prophecies, and any information received from birds, animals, and plants as data which must be arranged, evaluated and understood as a unified body of knowledge. (Deloria, 1992;15)

The requirement of personal involvement in the research process necessitates a subjective and spiritual acquisition and explanation of knowledge. Couture (1991) states "Reality is experienced by entering deeply into the inner being of the mind, and not by attempting to break through the outer world to a beyond...thus to "know." to "cognize," is experiential, direct knowing (61).

Subjective ways of knowing include: prayer, feelings, dreams, visions, intuition, and meditation (Colorado, 1988; Couture, 1991; Deloria, 1992; George, 1991; Johnson, 1992). Information obtained through the aforementioned processes is integrated with information obtained through any combination or all of the following: dialogue through conversations with elders, respectful interviews with others, observation, cumulative and collective experience, intraspecies communication, and knowledge of the prophecies, and ceremonies (Deloria, 1992; Colorado 1988; Hill and Mohawk, 1989; Johnson, 1992).

Mainstream scientific epistemology has delegitimized the subjective and the spiritual as ways of knowing. As a result, spiritual and subjective processes in gathering and interpreting knowledge have been marginalized. Such processes are difficult, if not impossible to describe in a simple, abstract, objective definition. However, because these practices are essential to Native ways of knowing, a brief discussion outlining the meaning of such practices is

warranted.

Colorado (1988) identifies prayer as the hallmark of Indian science. Through prayer we open ourselves and consequently our work to the will of the Creator. Colorado (1988) states:

In prayerful research, the voice of the people becomes the data: the words create a feeling in the reader and give credence to the findings. This is the normal method by which Native people arrive at consensus, or in this case, confidence in research findings. (p. 54)

Feelings and its correlate intuition (Johnson, 1992) are quintessential to Native knowing (Henry, 1993). Feelings are a medium in which all experience is processed. Colorado (1988) defines feelings as one of the dynamics that drives Native science. She states:

The nature of Native science is that it is qualitative and subjective rather than quantitative and objective. Feelings tell us whether we are prepared for the task, whether the situation is right, whether location is correct and whether there is balance. (p. 53)

Dreams, visions, and meditation each offer a sacred and personal way to knowledge through communication with one's inner knowing and the spiritual realm. Deloria (1992) explains the limited status Western scientists have given such forms of

communication and knowledge.

Dreams and spiritual experience are thought to be illusory or delusive and cannot be made a part of the scientific method of gathering data. At the deepest level of thought in western science, the greatest thinkers rely heavily on intuition, dreams and visions. But this phenomenon is regarded as evidence of the individual genius of the scientists and not as data derived from external sources or drawn from a reservoir of subjective information available to all individuals. (p. 16)

Couture (1991) describes meditation as "the tool or the means which Native mind uses to arrive at "seeing" through experience...the effort of timeless, open, still and concentrated listening to what goes on within, to the root melody of all being, instead of a straining of the intellect." (p. 51). George (1991) shares his understanding of the power of ritual and meditation:

The holy people said that the answers to life are in the second and third levels of our mind, and they spent the majority of their lives trying to reach those levels because it is believed that this is the place where God talks to us. The rituals mentioned earlier-such as singing, dancing, swimming, sweats, meditation, pipe ceremonies, fasting, and long-distance running-are all



activities that bring us to a physical state where it is much easier for us to reach our unconscious and subconscious minds. This, said the holy people, is where God talks to us; where we can dance with our spirit; where we can go into our past, present, and future; where we can be in touch with our loved ones far away. (p. 163)

#### Code of Ethics

The Indigenous mind tends to view wisdom and environmental ethics as discernible in the very structure and organization of the natural world rather than as the lofty product of human reason far removed from nature. (Knudtson & Suzuki, 1992, p. 14)

One of the most important and fundamental aspects of Native science is the ethical or moral code that is interwoven through it (Alcoze, 1992; Colorado, 1988; Johnson, 1992; Knudtson & Suzuki, 1992). It is a spiritually based code of ethics that is derived from a common understanding of our place in the universe. It provides the prime directive for "scientific" inquiry, conduct, and analysis. As Colorado (1988) states, "Those who follow this natural science do so in search of balance, harmony, or peace with all living relations." The scientific process is governed by a spiritually based ethical or moral code which creates Native

scientific laws and standards.

Through adherence to "vision" and spiritual knowing, interactions between the human, natural, and spiritual worlds are governed. Dumont (1988) explains:

From the total vision that was given to Native people and from the spiritual knowing that is at the core of Indigenous life ways and understanding there is engendered in all Native behaviour a profound respect for all of life and a quality of relationship that is spiritual, reciprocal and interpersonal. (p. 27)

The spiritually based code of ethics governs Native scientific activity. This code of ethics is not an external product produced and enforced by humankind. Rather it is the external, interwoven inextricably with the internal. That is, it arises from an internal devotion to balance and harmony, that comes from a genuine understanding of the interrelatedness of all creation and one's place in the world. Colorado (1988) explains the adeptness of the Native scientist in her analogy between the Bear and the scientist. She states:

To the American Indian, Bear, who is the north, represents knowledge, healing and comfort. The Bear is also fierce, his claims are non-negotiable. Western science understands Bear in terms of rigour, reliability and validity.

In the spring, Bear marks his territory on the

tree. Stretching as far as possible, Bear uses his claws to score the tree. Other bears, passing by are challenged to meet this standard. If they cannot reach the mark, they leave the territory. For the Native scientists, the tree is not merely science but science interwoven inseparably with life. We meet the mark or die. Like the Bear passing through, no one watches us, the science relies on the utmost integrity. (p. 51)

#### Interpreting The Data

Interpreting "data", like gathering data is an ethically driven, inclusive, and pluridimensional process. Colorado (1988) states:

Native science, often understood through the imagery of the tree is holistic. Through spiritual processes, it synthesizes information from the mental, physical, social, and cultural/historical realms. (Colorado 1988, p. 50)

Interpreting the information obtained requires a process of relating new knowledge with coexisting knowledge (Colorado, 1988; Deloria, 1992; Johnson 1992). Facts and experience are integrated with personal and collective knowledge in the context of collapsed time, spiritual knowing, and "subjective certainty of understanding" (Johnson, 1992, p. 7). Thus, while data come through subjective experience, their meaning

is not discerned until a sufficient number of corresponding experiences "reveal the pattern of meaning that is occurring" (Deloria, 1992, p. 16).

Native science is a comprehensive knowledge production system. Metaphysical understandings, rooted in traditional Native thought form its principles and drive its practice. Native science, as it has been presented, is an integration of the teachings and insights of Native scholars who are members of various Indian nations.

## RESEARCH CONTRIBUTION

Social research in Native communities continues to be guided by western epistemology, ontology, and axiology. Non Native and Native social scientist alike adhere to the dogma and doctrines of western science when attempting to understand and describe Native experience. This practice is attributable to a number of factors. First, the nature of western academic education, in which "budding" social scientists are indoctrinated in the belief that western science is the royal road to knowledge. Secondly, the socioeconomic and political status attributed to western research initiatives. Lastly, social scientists who conduct research in Native communities may adhere solely to western scientific paradigms due to a lack of a theoretical and practical understanding of Onkwehonwe knowledge and ways of knowing.

Taylor (1992) states, "Research into social issues is inherently tied to social action - in fact the research itself is a form of social action" (p. 5). I believe that research conducted in Native communities must contribute to Native peoples' sense of well being which is inextricably intertwined with their cultural identity (Antone, Miller & Myers, 1986). In this vein, the objective of this thesis is ultimately aimed at increasing awareness of the value and vitality of traditional indigenous thought in coming to knowledge. I believe that this research contributes to the indigenous knowledge base by generating and enriching dialogue on

traditional knowledge and ways of knowing from a Kanyen'kehaka of the Six Nation community perspective. As one participant stated, "It would be a good idea if you could sort out the difference between Western science and our own traditional understandings of the world." As Native scholar Eber Hampton (1993) has pointed out, this type of research is valuable. as we need to generate research that is valuable from a Native perspective and that helps us to build cultural specific theories.

One of the guiding values of community psychology is cultural relativity and diversity (Heller 1984). As Alcalde (1991) states, "This perspective implies that differences among people and communities are not only acceptable but desirable..." (p. 12). Community psychology must promote and have access to research that contributes to an understanding of what the "differences among people and communities are" if this value stance is to be realized. From this perspective the contribution this research makes to the academic literature base is an understanding of a culturally distinct worldview. Namely, an understanding of a traditional Kayen'kehaka worldview, knowledge, and ways of knowing as communicated by Kayen'kehaka people.

If this research is truly to contribute to an understanding of a Kanyen'kehaka worldview it is necessary to clarify the issue of property rights on traditional Kanyen'kehaka knowledge. The traditional Kayen'kehaka

knowledge that has been shared in this thesis does not belong to the individual but rather it belongs to the collective, to be passed down for the life of the community. Western academic procedures require that I personally take ownership, by virtue of placing my name only on the thesis document. Consequently, I feel compelled to denounce the idea of individual ownership. Namely I want to avoid the idea, to borrow the language of Richard Walsh Bowers (1992), that I the "Lone Ranger" aided by my somehow less noteworthy "Tontos" has accomplished some lone heroic deed. The reader should remain aware that the traditional knowledge documented in this thesis does not belong solely to me.

One final note regarding the contribution of this research project. It is my belief that the true contribution or value of this research can only be measured by what it contributes to the life of Indian people and the community. In truth, only time will reveal whether such a contribution has been made.

## METHODOLOGY

The fundamental teachings of our Ancestors emphasize respect in all aspect of our lives and in our interactions with others. If we are to be "true" to our Aboriginalness, then respectful thoughts and action are essential in educational research. (Archibald 1994, p. 2)

I attempted to be "true to my Aboriginalness" by utilizing research methods that are appropriate to discourse (Archibald, 1993 (a); Archibald, 1993(b)) and inquiry processes (Colorado, 1988; Darou, et al., 1993; Hoare et al., 1993; Deloria, 1992; Warry, 1992) acceptable to Native people. The literature regarding research in Native communities and my own subjective certainty directed me to the use of qualitative (Patton, 1990; Reinharz, 1992; Rothe, 1993) and collaborative research methods.

The principles that honour First Nation discourse required the use of an open research design. For example, one of the principles of indigenous peoples is that we are all teachers and we are all learners (Kirkness, 1993). Methods of inquiry should provide the opportunity for discourse which allows the natural course of learning to flow between the involved, as well as allows for the establishment of personal and mutual meaning. Another principle of indigenous people is the primacy of respect. Respectful dialogue requires that we listen to each other without interjecting, while the teller



responds in their own way and until the teller indicates completion of response. The conversation is not controlled by the researcher but rather is mutually directed. The result is an interview that is more like a visit than an interrogation. Accordingly, the research design was based on its appropriateness to First Nation protocol and the research question.

### **Participants**

At a Women and Wellness Conference held in the Six Nations community in 1994. Mohawk midwife, Katsi Cook, offered direction and insight for those seeking traditional knowledge. Based on her personal experience in researching the traditional practice of midwifery, she explained to the roomful of attentive listeners, "You must begin from where you are, start digging in your own communities." This directive fit well with one of the defining features of Native science, namely that "there is no single Native science, each tribe or Nation follows ways specific to a locale" (Colorado, 1988, p. 52). Accordingly, I limited participation in this research project to Kayen'kehaka of the Six Nation of the Grand River Community.

I purposively selected (Patton, 1990) the participants based on (a) an established relationship (b) experiential knowledge, (c) community residency, and (d) nation membership. An established relationship between those involved in the

study was essential for two reasons. First, the primacy of "relationship" (McIvor, 1990; Wilson, 1994; Lewis & Gingerich, 1980) in the indigenous worldview must be respected. Second, due to the exploitative history of research in Native communities many Native people are apprehensive about participating in "academic research". An established relationship between myself and the participants facilitated a confidence in my genuineness, motives, and intentions which ultimately acted to secure their participation in the research project.

The participants each possessed unique experiential based knowledge that enriched discourse on the topic. The participants' knowledge base and experience included: a) two participants who have university graduate degrees; b) two participants who have a grounding in Kayen'kehaka language and traditions; c) one elder who is fluent in Kayen'kehaka language and traditions.

Two participants were selected because of their university experience. I felt that university experience would give them a distinct insight that would allow them to contrast and compare traditional knowledge with an academic perspective. It should be noted that the participants who have been selected particularly for an academic perspective also have the cultural background and experience to discuss traditional knowledge and the Kayen'kehaka language. I selected two participants who have direct experiential

knowledge in the traditional teachings and Kayen'kehaka language. I believe that is important when we are discussing traditional knowledge that we talk with those people who place traditional values and beliefs at the forefront of their lives and apply them in the context of their everyday lives. I purposively selected one Elder, as Elders possess the teachings of "the ones that came before us" and the wisdom of our culture.

It is clear from the section on my personal motivation that I believe that any knowledge production system that attempts to produce information that describes Onkwehonwe reality should be rooted in traditional Onkwehonwe knowledge. However, I did not possess any preconceived ideas as to how the participants would respond to the concepts and practices advocated in Native science or what aspects of traditional knowledge, if any, they would consider relevant to this research. If I had any preconceived idea it was that there would be a range of thoughts and feelings on the matter rather than a survey-like division between like and dislike.

#### **Interview Guide**

The questions on the interview guide (See Appendix B) were designed to stimulate and provide a focus for the conversation during the interview. The first set of questions was designed to address the participant's understanding of traditional Mohawk beliefs and practices. The second set of

questions was designed to obtain the participant's perspective on the generalized concept and practice of Native science. The interview questions were developed as a guide only. The participants were invited to add to or omit any of the questions that were listed.

### The Research Process

As I had an existing relationship with each of the participants prior to my research project, I had an opportunity to informally discuss my thesis topic with them. Based on these discussions all of the participants had expressed interest in the topic prior to being asked if they would be interested in participating. After the participants indicated that they would be interested, each participant was given a copy of the thesis proposal. I requested that all of the participants read the proposal, while paying particular attention to the section on Native science. The participants ranged from agreeing to participate immediately to requiring a couple of weeks to confirm their participation in the project. The participants were informed of the nature of their involvement in the project: to offer any suggestions or express any concerns in regard to the research methodology; to participate in a minimum of one interview; to review the transcribed notes of the interview if desired; to review, provide feedback, and give final approval of their personal narrative as well as the community narrative; and to attend

the thesis defense meeting if possible. All of the participants were informed of the timeframe that the project would follow. Two of the participants expressed that they felt that the questions on the questionnaire were, "good questions". One participant offered feedback on the interview guide. He felt that it was important to include a question on how traditional values come into conflict with individuals, families, and communities. Consequently this question was added to the interview guide. The remainder of the participant group did not express any concerns regarding the research process, purpose, or method. All of the participants were informed that they could decide the method of recording (i.e. tape recording, written notes, oral presentation) the interviews. Each of the participants selected the date of the interview based on their availability, as well as the place that they would be comfortable participating in the interview. Prior to the interview, four out of the five participants were given the interview guide to reflect upon. (See the section on Methodological Reflections for a discussion on the other participant)

The interviews took place in various settings (i.e. my home, a park, at restaurants). At the time of the interview, but prior to engaging in dialogue each of the participants was reminded that they were not obligated to answer any question that they were not comfortable responding to. I felt that this was especially important in conducting research with

Native people on traditional knowledge, as traditional knowledge is sometimes guarded as a measure of protection against misappropriation of the knowledge. Further, the participants were advised that they may request that the tape recording cease at any time during the interview. I emphasized that the interview guide was only a guide and they may contribute any information during or after the interview that they felt was relevant. I also reassured the participants that nothing would be included in their personal narrative that they did not approve.

All of the participants, excluding one, participated in one interview. One of the participants participated in two interviews. The interviews ranged from one and half hours to five hours. All of the interviews, except one, were tape recorded and notes were taken. After the participant had indicated that the interview was completed I informed them of the process that would follow and I obtained their direction as to how to proceed. None of the participants expressed a desire to obtain or review a copy of the transcribed notes. All of the participants agreed to review and revise if necessary their personal narrative and the community narrative.

Following the interviews I summarized the original transcript into a personal narrative. I returned the draft narrative to each of the appropriate participants for their reflection and feedback. I met with those participants who

requested to meet with me and discussed over the telephone with the others the changes they felt necessary or to clarify certain aspects of their narrative. Each personal narrative was considered authentic (Lincoln & Guba, 1985) and complete once each of the participants gave final approval for their revised narrative.

After the community narrative was developed it was also returned to each of the participants for their reflection and feedback. I met with the participants who requested to meet with me to recommend changes or clarify certain aspects of the community narrative. The community narrative was considered authentic and complete once all of the participants gave their final approval of the revised community narrative.

### Data Analysis

I utilized a narrative analysis procedure (Polkinghorne, 1988; Cain, 1991; Rappaport, 1993) to interpret the findings. First I completed each of the participants' personal narrative and then I discerned a community narrative based on the five authenticated personal narratives (Rappaport, in press). The personal narratives reveal each individual's perspective on traditional knowledge and Native science. I summarized each of the participants' perspectives by following the order in which their responses occurred during the interview. Although it was impossible to include the entire interview, I have incorporated as many of participants' actual words as

feasible (over my interpretation of their meaning) in an attempt to preserve as much of the original meaning as possible. I also included a brief description of each of the participants at the beginning of each narrative in order to place their perspectives in the context of their lives. The community narrative evolved from my interpretation of the main similarities and dissimilarities found in all the personal narratives.

## **Reflections on Methodological Issues**

### **The Inquiry Process**

I attempted to keep the inquiry process as respectful of the principles of First Nation discourse as possible. Therefore, I had originally designed the inquiry process to approximate the natural and fluid processes that are embodied in informal conversation. I originally intended to engage in a series of in-depth, unstructured interviews. The dialogue was to be guided by two main themes: 1) the participants' thoughts, feelings, and opinions regarding Native scientific philosophy and methods; and 2) the participants' understanding of traditional knowledge as it applies to the concept Native science.

During the course of my first interview an interesting revelation surfaced that altered the inquiry process for the remaining interviews. The interview was conducted on a completely oral basis (see narrative #1 - Flora for details).



The dialogue followed a listening, reflecting, and responding process between the participant and myself. There was clearly a reciprocity in our conversation in which we shared and reflected upon each other's feelings and perspectives. After the interview was completed I took the rest of the day to reflect on what had occurred during that interview. Drawing solely from my memory I wrote the interview synopsis the following day. I gave the draft narrative to Flora for her feedback. She unconditionally approved the narrative.

As a result of this first interview I was faced with two insights. First, I realized how powerful the oral tradition is in terms of transforming information into knowledge. When I was forced to rely on memory alone I found that what I recalled the clearest were those things that evoked a personal chord of meaning. Second, I realized that this method of dialogue created an environment in which we were both able to benefit from the principles of First Nations discourse (i.e. allowing the natural course of learning to flow between those involved and the establishment of personal and mutual meaning). However, after I thought about how the contents of Flora's narrative reflected my research question, I became concerned. Although the information was deeply meaningful to me personally, I knew it did not provide the kind of detail that would be required to fulfil the academic requirements. I realized that I would have to create an interview questionnaire guide, if I were to obtain knowledge that

directly "hit" my research "target". That is, I would have to steer the conversation in order to reach my research goal. I purposely use the terminology "hit" and "target" because I feel that it accurately reflects the "strategic" method that I was about to employ. I used the interview guide in the remainder of the interviews. Once I began to use the questionnaire in the interviews the dynamics of the interview changed. The natural process that had occurred in the first interview was obstructed. The participants restricted their dialogue to responses to the interview questions. I became a passive listener and recorder as opposed to a person in dialogue. Further, I felt that once I introduced the questionnaire the conversation became controlled by the questionnaire which is ultimately being controlled by the researcher. I had to resign myself to the fact that the last four interviews were more like an interview than a visit. On the other hand the interviews in which I utilized the questionnaire provided more detailed information specific to the thesis topic. It seemed that changing the inquiry process also changed the interview from a person centred focus to an information centred focus. Further, I felt that in introducing the questionnaire I had seriously limited the participants opportunity to tell their own story in their own way.

#### **The Role of Relationship**

Another point regarding methodology that became

abundantly clear was the role that relationship played. I believe that this research would have not been possible without the "researcher's" direct contact on a personal relationship and friendship level with the participants. There is no doubt that our pre-established relationship and my roots in the community facilitated a sense of confidence in my genuineness, motives, and intentions. As the elder that participated in this study told me, "I know you, I know your mother, and thats why I'll help you." Further I believe that the participants embraced my efforts because of our common purpose. That is, we are each in our own way trying to contribute to the betterment of our people. The fact that the participants participated at all and entrusted me with their perspectives and knowledge is a great honour and an immense responsibility.

#### **Data Analysis Procedure**

In terms of data analysis, I experienced a great deal of frustration in "summarizing" or as I viewed it limiting the participants' stories. In summarizing their perspectives I felt that I was constantly trying to squeeze a soft and billowy cloud into a small hard jewellery box. Although I made every effort to capture their perspective and they did approve their narratives, I continued to resent the fact that I could not allow the people to speak for themselves, in their own words and in their own way. There was a constant struggle to maintain a balance between information that contextualized

their perspective and information that specifically addressed the interview questions. I felt that in omitting some parts of the participants' narratives that I was offering only partial knowledge. In essence, because of the limitations of my data analysis method I am concerned that what has been revealed is largely what I the researcher considered to be important enough to report within the confines of the acceptable number of pages allowed in a thesis document.

#### **The Researcher Role**

It was a difficult to cast myself in the role of academic researcher in my community, particularly, in light of the negative baggage that academic research carries within Native communities. I often felt awkward and alienated, particularly when the interviews took on the formality introduced with the interview guide. I experienced an uncomfortable split in my identity between academic researcher and Native person in community. I don't believe that I was ever truly able to unite the two roles. My only solace lay in my motivation and intentions and the participants uncritical acceptance of my roles.

## **ETHICAL CONSIDERATIONS**

In carrying out research in a Native community I was especially attentive to ethical considerations, due to the exploitative history of research. I was constantly concerned with ensuring that the research process or the information obtained would not cause harm to the participant, our personal relationship, our community, and our culture. The factors that I considered as risks and the measures I took to guard against such risks are discussed below.

### **Confidentiality**

The issue of confidentiality was not of any particular concern for the participants. All of the participants had originally given me permission to use their real names in the thesis document. However, I recommended that, as a measure of protecting their privacy as well as to protect their understanding and perspectives on traditional knowledge from coming under attack from those that may disagree with their perspective, I would like to replace their real names with a fictitious one. Further, I omitted any personal information that might reveal their identity from the narratives. It was upon my recommendation that they allowed me to use fictitious names in the thesis document.

### **The Participants' Emotional Experience**

The thesis topic acknowledges the oppressive conditions

under which Native people live. I am aware that some Native people have not yet fully realized the nature and extent of the losses that we have suffered and the magnitude of the sociopolitical forces that act to oppress our experience as Native people. Even when the Native person has come to recognize the nature and extent of our losses, the topic can remain emotionally painful. As a human being, a Native person and a researcher, I purposely remained sensitive to the participants' experience during the project. I placed the participants' feelings before the goal of the thesis. That is, I acknowledged that the participants' feelings were of the utmost importance and I was prepared to conclude the interview at any time the participant or I felt necessary. I was prepared to engage in an informal sharing of our mutual feelings as Native people, as a way of acknowledging the validity of the feelings expressed. I also attempted to keep the interview focused on our cultural strengths, the living heritage we continue to enjoy, and the time of renewed strength for our people as foretold in our prophecies.

### **The Potential for Exploitation**

Research to a great extent has had a bad reputation within Native communities. Researchers have been known to enter the community, collect information about our culture, and publish this information without community input. This pattern has led to the publication of partial and inaccurate

research. In addition, currently there are a number of Non Native and Native people who discuss "traditional Native knowledge" without the traditional teachings or personal lifestyle to validate the knowledge they claim to possess. This problem has led to a commercialization and exploitation of our traditional knowledge. It is essential that any information regarding traditional knowledge be validated by the participants to ensure the authenticity of the knowledge. Further, there are some issues that might be relevant to the topic of Native science that are inappropriate to present in the thesis document (i.e. ceremonial practices), as this would be an exploitation of the sacred nature of such practices. I respected the views of each of the participants as well as my own views by stopping the tape recording and note taking when such topics arose. Any information that was shared that was of this nature was not included in the thesis document. Ultimately, the participants' control over what was recorded and printed in their personal and community narrative, coupled with our mutual commitment to the protection of the integrity of our culture, community, and personal relationship, acted to ensure that neither the experience of the participant nor our traditional knowledge was exploited.

#### **The Potential For Over-Generalizing the Findings**

There is a potential risk for the readers of the thesis document to attempt to generalize the findings to all Mohawk

people or to assume that the findings provide a conclusive definition of a "Mohawk science". Native people have long objected to being treated or presented in a generalized or "Pan-Indian" fashion. Unqualified generalizations have caused a misrepresentation of Indian reality and experience as distinct nations and as individuals. Over-generalizing the findings of this research is dangerous because there are a number of Mohawk communities as well as individuals that may hold a very different perspective on the topic. Unwarranted generalizations obstruct access to knowledge and practices that accurately reflect a particular nation, locale, or individual. I addressed this issue by stressing in the thesis document the limitations of the findings of this research project. I have also stressed the fact that it is not the aim of this project to provide a generalized or definitive account of a Mohawk knowledge production system. Rather, the project is intended to illuminate the particular understanding and perspectives of five Mohawk Nation members who reside in the Six Nation of the Grand River community.



**THE NARRATIVES**

1. **NARRATOR:** Flora is a member of the Mohawk Nation who was raised and currently lives on the Six Nation of the Grand River Territory. She is very active in the community as a volunteer and activist. Through dance, story-telling, and sharing she attempts to break down stereotypes and promote cross-cultural understanding and awareness. Flora places traditional teachings and values at the centre of her life. She stated during our interview "I never say that I am a traditional Indian, I just try to do it, live it."

**SYNOPSIS:** We grab a couple of coffees and head off for our early morning walk. A cool breeze drifts across our faces as we jump out of the van and begin our hike. Surrounded by trees and bird songs you can feel and smell wellness and life. As we walk up the trail to our destination she tells me that she has heard it said that this trail was made by our ancestors. The trail takes on a new meaning for me as I imagine what it was like when most of our travel was made on trails like this one. For a moment I am saddened as I am reminded of the losses, but I am comforted in the realization that the trail still exists and so do the Indians who are walking on it this morning.

We walk until we reach our destination point. We look up at the large hill we are about to climb, silently wish each other the best of luck and begin to climb. Once we reach the top of the hill we stop for a moment and absorb the beauty of

this place. The trees stretch out as far as your eyes can see, except for the view directly to our right where you get a glimpse of houses and hydro wires. We talk about various personal and community issues as we settle in and prepare ourselves for the "interview". Flora reads over the passage I have written about Native science as I fumble around for my tape recorder. As she is reading I realize that my tape recorder is not working. I begin to feel a little anxious as I explain to Flora why the recording is so important. I ramble on about protecting the "validity" of the "data" by transcribing word for word what she has said. She looks at me with a mixture of compassion and curiosity written on her face. I go on to talk about the need to use quotes in the thesis as a way of validating the research "findings". By this time I realize that the tape recorder is not going to work regardless of how desperately I wanted it to, so I begin to rummage around through my bag for a pen. I am struck by the sudden realization that I left the pen in the van. Here we are in the middle of the woods with no tape recorder and no pen! My mind races through my options, should I go and get new batteries? should I go and get the pen? should I reschedule the interview? I know her time is limited with family responsibilities and upcoming academic responsibilities. I just didn't have the heart to ask her to reschedule the interview. I also knew that I couldn't ask her to wait as I ran back to the van to get the pen, because it

would take up most of our scheduled time. Flora looks a little amused as she says, "well. why don't we just do the interview without notes or tape recording?" I realize how ridiculous I am sounding as I explain to her the reasons why we just can't have a conversation. I ramble on about not trusting my memory and the need to be able to compare interview notes with the other interviews to get a community narrative, etc. With the same look of compassion and curiosity she says, "I tell you what, we can do the interview today and if you still feel the need we can do it again and you can tape record it." Feeling grateful. I agreed. A strange paradox emerged as I realized that here I am writing about Native science and feeling scared to death to rely on one of our oldest and most trusted methods of knowledge transference, the oral tradition.

We talked about the rarity of the situation, the tape recorder not working, not having a pen, being in the middle of the woods, and the topic we were about to discuss. We both acknowledged that all of this had happened for a reason and that I must be open to the message. I felt a surge of confidence as I accepted that I was intended to conduct the interview without any written or electronic recording. We both acknowledged that the time and place was right for the interview. Flora explained that conducting the interview in the oral tradition would allow me to remember what is important to me and what I am willing to accept at this time.

She said, "you will learn what you need to learn personally to develop." She said, "Real knowledge comes from integrating what you hear into your own experience. This is the difference between real knowledge and information." We talked about how Western research is concerned with obtaining "data" or information rather than real knowledge. Silence fell upon us as we absorbed all that had happened and prepared our thoughts for what was about to occur.

When I sensed that the time was right to go on, I asked, "Well, Flora, what do you think?" She pondered for a while and then pointed out that it is all "just common sense." "We have to think with our head and our hearts." She pointed out that what she knows she learned by listening to elders. She shared what she had learned from Thom Alcoze who explained that, when we are together we all share molecules, so in one way we become one with each other and influence each other. She related this idea to the "circle" and its symbolic message of interrelationship. She stated that, although it sounds hokey because of the way that this concept has been commercialized, the teaching is true. We talked for a while about the setting we were in and how it affected our interview. We talked about the trees and the birds and agreed that this setting helped to clear our mind so that we could speak openly. Again we entered a moment of silence.

Flora explained how the research I am conducted is painful because I am after the core of what we are and this

has been what the white people have been trying to destroy all this time. She said "they tried to kill our spirit, but they couldn't because we are still practising our ways." On the other hand, she explained "what you are doing is part of healing", because we are giving credence to our own teachings and knowledge. She talked about what she learned from Tom Porter who said that we had everything we needed in our bundle. In our bundle is all the knowledge that we needed to survive and be healthy. She said that our teachings, medicines and ceremonies which are in our bundle could answer all of our problems.

I asked Flora "Is there anything about Native science, as it is written in the thesis proposal, that you are not comfortable with." She said she was uncomfortable with the word "spirituality." She didn't really understand what was meant by this word. She felt that the concept of spirituality was being exploited by Non-Native and Native people. She told a story of how she was approached by an Indian man who said he had went to longhouse but it wasn't very spiritual. She told him, well "I guess that is because we are humans and when we become spirits we will act more spiritual." She said, this man must have thought there was going to be some mystical experience going to happen to him. She shared another experience that she had when another man approached her and asked her, "were you there when the peoples feet levitated". She felt that this was another example of the exploitation of

our spirituality. I shared with her the words of Rolling Thunder who said, "Quit worrying about your damn personal experience and just be grateful." We talked about our ceremonies and how they are really about collectively expressing gratitude in ways that help to remind us of our relationship to and responsibility for the natural order. We discussed how our people are all at different levels of healing, and that sometimes in that healing people search solely for "spirituality" or "spiritual experiences" while forgetting the other aspects of our humanness, like the physical. We discussed how the concept of "spirituality" has been sensationalized, marketed, and exploited by Non Native and Native people. Furthermore, this exploitation obstructs knowledge of the real meaning and place of spirituality in our lives, particularly for some of our youth who are searching for such understanding. In a later conversation Flora told me that "some things of a spiritual nature are not meant to be talked about," it is a private matter not meant to be a public exhibition.

We talked about our collective or community responsibility and how this is based on common sense. In order for us all to get along we must share the resources and hardships so that everyone is looked after and feels good. If this does not happen ill feelings emerge and infighting begins. Flora talked about community members who talk about traditional values and then return to their big expensive

homes. She said, "this looks like jealousy to talk about this but it can only be jealousy if you consider a big expensive home as desirable. Rather than jealousy, it is disappointment."

Near the end of the three hours that we spent on the hill, Flora stood up and cleared a small area of the ground. She picked up a stick, sat on the ground, and began to draw circles within circles on the ground. I sat down beside her as she explained, the first circle is the fetus, in the second circle is the mother, in the third circle is the family, in the fourth circle is the extended family, in the fifth circle is the clan, in the sixth circle is the nation, in the seventh circle is the circle of nations, in the eighth circle is the earth. She said you can extend this out to include the sun, the moon, the universe, and the creator. She said, "Our job is to protect and nurture each of the circles, this is Native science."

As we are finishing the discussion, we can hear the voices of people as they walk down the trail toward us. Shortly afterwards, two bicyclists who rode up behind us appear on the hill with us. Silently, we acknowledge that the interview is completed. We change our topic of discussion to lighter matters, stand up, dust off our clothes and take another look around before we begin to walk back toward the trail. As we walk down the hill we both know that what we just experienced has been good and laughter follows easily.



2. **NARRATOR:** Rahnenwehs is a member of the Mohawk Nation and currently resides on the Six Nations Grand River Territory. He has travelled extensively across the globe and held various careers in his lifetime. Rahnenwehs actively seeks to follow the traditional values and practices passed down to us from our ancestors in his everyday life. He has studied and is very concerned about the preservation of the Mohawk language.

**SYNOPSIS:** At the heart of Rahnenwehs's perspective is the belief that the essential knowledge that one needs to live as Kanyen'kehaka has already been provided. This knowledge is found in the spiritually derived values that evolved from the original instructions that the Creator gave to the first human beings. These instructions provide the values that will help us to, "remain sane" and, "survive as a Nation" and they should be the, "forces that dictate our lives".

I believe we have an obligation, a sacred obligation that goes back to the beginning of time when Shonkwaya'tihson, the Creator, created us, the Onkwehonwe, the first human beings. He instructed us to respect all living things and all the works of his creation. We were instructed to give Him our thanks on an ongoing basis. We were instructed to live our lives with an attitude of gratitude for all the works of creation. We are to live on a co-equal basis with all of His works. We were all

created by the same maker and therefore we are no better or worse than anything else here. That means we have no right to dominate any other species. In dealing with each other as human beings, we are to conduct ourselves as equals. No one can impose their will on someone else. We also have the obligation to conduct ourselves with a good mind, with a spirit of peace and harmony amongst ourselves. Peace and harmony are to be the governing principles of all of our affairs. This means we have to come to one mind, as a community of people with the overriding principle that we are to govern ourselves so that peace, well-being and harmony of the community was the most important thing. As individuals you were allowed to do your own thing, but you couldn't disrupt the people. You couldn't cause dissension or disharmony within the community and that is another reason why, going back to the beginning of time, that we as a people have had a collective attitude. That is why we don't project ill feelings towards one another. If you have something negative to say about somebody, you don't say it. You keep it within yourself because that can easily cause hurt feelings, create disharmony and cause a breach of the peace. So the more we keep these negative feelings to ourselves

and be grateful for what we have and the teachings we've been given, then we can maintain the social harmony within the circle. These are traditional Mohawk values, Iroquois values. These are the kind of attitudes and behaviours that should govern our affairs today. Another contract the Creator made with the first human beings was the ceremonies that we have to perform at all the appropriate times. That's another obligation we have had since the first day we drew breath.

He believes that western influences have obstructed the ability to live according to traditional values. He feels that "we have come to be surrounded by another society and have incorporated their values." He believes that some individuals have adopted the habit of being "argumentative, confrontational, and disruptive". He feels that this acquired behaviour has replaced the skill of "harmonizing." He believes that as a consequence we don't use a, "good mind" the way we were intended.

[the good mind is] a mind that is to the greatest degree possible ruled by the principle values we were given at the time of creation - peace and harmony.

He believes that community-based agencies "usurp or supplant the activities that families and clans were responsible for." He feels that "this is making it impossible

for people who want to live up to clan responsibilities."

He believes that according to traditional values the knowledge that we need has already been given to us by the Creator. Once you know these things there is little need to search for any other knowledge.

The Creator has set the whole thing in motion in giving us those values. It is up to us to carry it on.

He stated that the knowledge that provides the foundation for all other learning and that is important for us to know is "who you are and how we came to be here."

In my way of looking at things, if we have the knowledge of who we are and how we came to be here, then we don't need to do any research. It's all been done for us, it's laid out. It's so simple and straightforward.

He emphasized the need to have knowledge of Creation. He believes that once you understand Creation, it is important to understand the clan system, the Peacemaker and how He came to establish the league of peace, and our history. Other knowledge that he considered important included knowledge that would allow us to live in harmony with all living things. He listed the following topics: how to live on the land, how to grow our own food, how to get fish and game without causing harm to the environment, knowledge of the medicines and medicine plants, and knowledge of the four sacred ceremonies.

Rahmenwehs explained that from a learning perspective, traditional ways of obtaining knowledge include the "3 L"

model and the oral tradition. He explained that the "3 L" model involves looking, listening and learning. It is a slow approach to learning when compared with the modern approach where you can teach a large number of people in a short amount of time. He explained that the traditional approach was "much more personal - learning was customized to the individual's needs.

Rahnenwehs considered the oral tradition an important source of knowledge. The oral tradition requires a personal approach to obtaining knowledge. That is, "the information you get is restricted to just the people you talk to or the people that they might have talked to." Further, the knowledge obtained was personal in the sense that the information you obtained was perhaps less global but more in depth and relevant to your experience and environment.

Rahnenwehs began his comments about Native science by talking about hypocrisy in the academic community.

There are Native academics who complain about white people who write about Native realities, thought and philosophy because it will help them to get tenure or to get promoted or to get published or to generally advance themselves in the academic community. But what is unsaid is these Native academics themselves are doing the same thing -- writing about Native realities, thought and philosophy -- for the same reason.

He pointed out the discrepancy between theorizing on

Indian realities and experience in the academic forum and actually living in the Indian community and practising traditional values on a daily basis.

The Indian academics you talk about are in the academic game just as much as the white people they complain about are. They're involved in the game of using and exploiting someone else's thoughts for their own interests. That is entirely part of the academic game. It is not part of human reality. It is not part of living in a community, practising Native values on a day-to-day basis.

He felt that the term "Native science" was an oxymoron "like jumbo shrimp and military intelligence." He felt that the conception of science as a quantifiable and observable pursuit of knowledge makes the term meaningless in the sense that it does not, "capture" the nature of Native ways of knowing.

In ordinary English, the word science has a very narrow definition. It isn't anywhere as near as broad as what is being talked about in the paper. Science is science. But in this paper, we are not talking about a science that is quantifiable by observed data. To me science means mathematics, biology, chemistry. That's why I'm troubled by the term science, Western science is at odds with our people, so I have an objection to the term Native science because it is too limited, too narrow. To use the term "science" as a way of describing our ways

of knowing seems to be a way of establishing oneself professionally in the academic forum or a way of packaging Native ways of knowing so that it is perceived as legitimate in the Western world's eyes.

The term Native science..it's this artificial construct that has been created by our bureaucrats or perhaps by our academics to get themselves a little leg up on the world...this Native science, is just a me-too attitude. Now the Juno awards have a native music category. It's part of this whole me-too, me-too, look-at-me attitude. It's like we just dressed up Western science a bit, gave it this Native veneer and called it ours.

He believes that we should use a Mohawk word if we are to capture the concept of Native ways of knowing -- *to niyoht tsi yonkwateryentare nene naho'tenhson teyonkwanikonhra'tsherayen* can be translated as, "how we know the things we have in our minds." He felt that the concept of a "Native science" would be hard to accept as long as the term science was used. "because the word science doesn't have anything to do with any of the things that are important to me. It's all values."

He believes that, "our understanding of who we are and where we came from is a spiritual understanding first and foremost." He explained that our spiritual understanding comes from the instructions we were given in the beginning and it is grounded in an "attitude of gratitude." He believes that the Creator gave us the instruction on how to live in

harmony and peace and with a good mind, and that if you are not using a good mind, you can not learn or obtain knowledge properly.

He was uncomfortable with the term "holism" because it sounded too "yuppy" however he believes that it does apply to our perception of the world.

Our teachings about our understanding of the world cannot be compartmentalized. Our teachings are not divisible but interrelated. We don't go to church one hour on Sunday or vote once every four years. Our religion can not be defined or compartmentalized like Christianity. To teach our understanding of the world in this way is to give the belief that these are entities within themselves. that this is where science ends and philosophy begins. That's old hat, everybody knows that, don't they?

He felt that the idea that "those who follow this natural science do so in search of balance, harmony, or peace with all living relations" was questionable. He explained that it was questionable, because it is not clear why anyone would have to search for balance, harmony, or peace with all living relations if they are living according to the instructions given to us by the Creator at the beginning of time.

We are not engaged in any pursuit of knowledge and we don't have to go searching for balance, harmony or peace because we already have it. If you're at peace and in



balance, you don't have to go looking for it.

He believes that one should be involved personally in order to come to truth and this requires spirit, body, mind, and relationships. He also affirmed that prayers, feelings, dreams, intuition, prophecies and meditation are all valid ways of coming to knowledge. He felt that dreams are particularly significant for Mohawk people. He did not recognize vision-seeking, however, as an activity belonging to traditional Mohawk practices. He also was unclear as to what role the ceremonies would play in coming to knowledge. He explained that it was unclear, because the primary reason for ceremonies was not as an educational tool but rather as a way of fulfilling our obligation. Rahnenwehs declined going into any further detail on any of these activities.

He felt that the thesis project could be meaningful, if it could contribute to the discernment of Western values from traditional Mohawk values as they are applied in our community. However, he explained how this would be a complex task given the diversity of thought and beliefs at Grand River.

It would be a good idea if you could sort out the difference between Western science and our own traditional understandings of the world. It would be a good idea if we could somehow straighten out what is theirs and what is ours.

Participation in this research project was motivated by

a respect for relational processes. He stated during the interview that "If someone other than a friend had approached me with this I wouldn't have cooperated." Further, he felt that if the project had been generalized and not specifically related to Mohawk thinking and practices, he would not have participated.

3. **NARRATOR:** Ken is a member of the Mohawk Nation, Turtle clan and resides in the Six Nation of the Grand River Community. He has had a great deal of experience in the Western academic university setting both as a student and teacher. He describes his experience of living in his community and attending university as "jumping back and forth between those two boats". This experience has provided him with insight into the vast differences between institutional values which he believes "translates into the scientific world" and Rotinohsyonni philosophy and values.

**SYNOPSIS:** Ken begins his narration by explaining that, although he views himself as being "very much a part of a group with a distinct Nation", he tends to see things from a "Six Nation perspective". He goes on to question the meaning of the term "traditional".

I think predominantly Mohawks tend to be Anglican to this day or at least Christian people. It's had a lot of influence on the history of Six Nations for at least the last two hundred years. So it's hard you know - what is traditional? I think if there is such a thing as traditional values, first and foremost it's respect for others and a reciprocity in helping out other people. I think a lot of that is embedded in the Great Law.

He believes that the Great Law imparts traditional

values that "go way back before you can remember." He believes that these are values, "that we can still try to live by today." He explained how The Great Law was given to the Rotinohsyonni from a "spiritual figure" known as the Peacemaker. He explained that The Great Law outlined "a way of carrying on as a people and as nations" which is in essence a "spiritual way of being".

It gave us the concept of the good mind and peace, power, and righteousness. The idea that the human mind is capable of so many things. The idea that the human mind can talk and discuss and doesn't have to resort to violence in order to settle affairs and the idea that peace is a far better state of being than warfare.

He regards the "good mind" as an important part of our "traditional way of being". He believes that to achieve and maintain a "good mind" requires constant effort.

I believe a good mind is free of jealousy, a good mind is wanting to help others, be generous, helpful, kind, respectful, take care of yourself, to put others first but also take care of yourself. Its all balance, its always something you have to work at.

He also mentioned the Kariwio (also known as the Code of Handsome Lake) as another spiritually derived code of living. He described the origin and purpose of The Great Law and the

Kariwiio.

At one time life was simpler and all you really needed was to acknowledge Shonkwaya'tihson for what he has provided, and as war began and nations formed there was a need for the Great Law. After that fell apart (following the American Revolution), that's when the Kariwiio came in to play, because Handsome Lake put forth another code of living I suppose. that needed to be added to Great Law and was a code of conduct in another time of great strife.

He feels that to honour traditional Mohawk beliefs and practices our pursuits to obtain knowledge should be governed by "respect", "a word that's maybe overused but undervalued." He explained how processes advocated in the Great Law and the Thanksgiving Address provided direction on coming to knowledge in a respectful way. He believes these processes include respectful dialogue and reflection.

The power of words is far greater than warfare, like Shakespeare "the pen is mightier then the sword". But our people took that one step further. It's [the oral tradition] an alive kind of immediate response between the speaker and the listener. That's in the Thanksgiving Address, the idea that you sit, you listen and you think, you reflect, and you do all that simultaneously.

He believes that "traditional knowledge and values" are important knowledge to obtain. He believes that this knowledge can help us to live in peace with each other and care for our surroundings. He feels, that although some people regard the teachings as "old ancient beliefs," they are still valid and we must continue to respect them.

We have to keep in mind and not ever for one minute think that we are above or beyond our ancestors in some way. It worked for them it will work for us. I think that will keep us strong because without all of that stuff, the language, the songs, the ceremonies, who are we?

He believes that as individuals we have become victims of individualism. We have become individuals who "are always concerned about what is in it for me." He pointed out that the "conflicts and tensions" that arise within the Six Nations community are largely a result of differing perspectives on "what is good for the community." He sees the core conflict as the need for progress versus the need to maintain traditional values, beliefs, and practices. He believes that in the midst of all of the community dissension, assimilation practices, and encroachment it is important to maintain our living heritage.

He agreed that the spiritual and sacred play a role in coming to knowledge. He views the Creator as the source of our existence and of our traditional teachings. He believes

that it is this understanding that provides "a sense of spiritual connection." He asserts that to a great extent Rotinonhsyonni spirituality was experienced and expressed through a thankfulness for what we have been given. He pointed out the effect that Western influences such as the concept of "progress and materialism" have had on the traditional practice of being "thankful for what you get."

From our teachings, Shonkwaya'tihson put us here to be happy and enjoy life with all its ups and downs. But he made things pretty all around us and gave us everything we need. He just wants us to be thankful, and the core of our teachings is that thankfulness. You don't ask for a bigger this, a better that. I think a lot of us have a hard time, myself included, to understand that.

He emphatically agrees that "the holistic nature of things is seen by Native people as important." He believes that humankind does not understand the repercussions of their actions when they attempt to alter the work of the Creator.

Shonkwaya'tihson put things where they are for a reason. The animals don't have a complaint with that, but it's always man who wants to make things better, bigger, knock things down, without understanding repercussions.

He referred to the Thanksgiving Address as one of the traditional ways in which the Rotinonhsyonni acknowledge with

gratitude their relationship with all of creation.

The Thanksgiving Address holds the idea that you're just happy for what is there and everybody's doing their job, the sun comes up, the rains come, the plants come up, and the medicines are there. They are all doing what they are supposed to do.

He felt very strongly about the need for the total involvement of the person with his or her environment. He felt that it "relates back to the concept of interconnectedness and the way we see things."

Segregation of sciences to our people isn't quite where it's at, ours is more closely related. We don't have experts the way they have experts. Our experts are people who are concerned with the well-being of their own people. When you say total involvement with his or her environment, I see if you have the gift of healing people you'll stay with your community, cause you were given that gift for free. It's your duty to stay with your people. That spirit, body, mind, and relationships all go hand in hand.

He explained how western science isolates areas of study and as a result it does not have an "inkling of what it has to do with something else on the earth." He contrasted the compartmentalization of scientific disciplines with how Native people understand things as "intertwined." He provided a



number of examples to illustrate his point, such as how the lunar cycles dictate planting. He believes that it is critical to acknowledge the interconnectedness or relationship of things.

Someone told me when they were bringing all this stuff back to earth from the moon, they shouldn't be doing that, cause the way we see it that stuff was put out there for a reason by the Creator. Its not to be brought back here.

He agreed that processes such as prayers, dreams, visions, intuition, prophecies, ceremonies, meditation are valid ways of coming to knowledge. He believes that "there are many things at work that we can't see or begin to understand." He thinks that it is important to "acknowledge that power" by being "cognizant" of things like "signs, dreams, visions and all that stuff."

He felt that the recognition of a Native science was "validating" to the wisdom held in our culture and "long overdue." He felt the term Native science was "oxymoronic", but this was not problematic, because at least the gravity of traditional knowledge was finally being recognized.

It is about time that our culture is recognized as being anything but simplistic and pagan or whatever it is they've been calling it for years and years and years.

He considered it important that there are Native people

writing in the academic arena, because "we need people who can talk about these things and explain who we are and how we understand things." He pointed out that while our knowledge could be considered scientific to some extent, it is more "humanistic," that is, "Indian people care about people as opposed to numbers and analysis."

I've never thought of Native things as being scientific. Like I said earlier it doesn't take much to realize that it is true though. It's just that we approach things as being put down by the Creator and we don't question those things too much. When I think of science I think of hard sciences mostly the idea that you have to dissect, its numbers, its so cold and impersonal.

Although he was not uncomfortable with any of the concepts and practices advocated in the thesis on Native science he was uncomfortable with the idea that the knowledge would be expropriated.

What is uncomfortable is the idea that white people will eventually take it over. They'll make a lot of money and take it away from Native people and communities. That could be a problem. But that's been going on since they first came over.

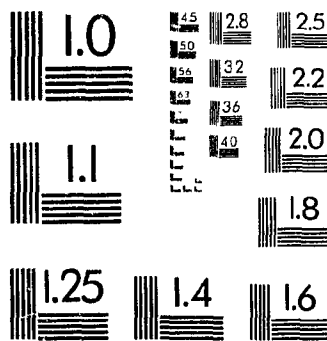
He stated that it is valuable to "understand what we had and what we still have and not always think the white system way of doing things is better." He felt that traditional

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knowledge should be "reaffirmed and re-evaluated." He believes that this recognition will begin to reverse "whats been drilled into us "namely that traditional beliefs and practices "were somehow backwards." He firmly believes that it would be useful to have a knowledge production system that "would be more user friendly to our own people. something that is ours."

**4. NARRATOR:** Emily is a member of the Mohawk Nation and resides in the Six Nation community. She has received a graduate degree in the social sciences. She has had a great deal of experience in academic settings as both a student and teacher. She has also had a great deal of experience in conducting research within the Six Nation community.

**SYNOPSIS:** Emily begins her discussion by explaining the difficulty she has in saying that her perspective is "just Mohawk." She points out that she "sees us more as Six Nations" and that she is more comfortable with addressing the questions "from a perspective of Iroquois." She goes on to list four values she perceives as traditional; a collective identity, sharing with each other, caring about ourselves and others, and spirituality. She described collective identity as a valuing of "who we are today, where we came from, what we've survived, and where we plan to go." She emphasized the idea that spirituality is different than religion. She believes that spirituality is the "value that seems to pull all those other values together with the Creator." When I asked her to explain this concept further she said, "Spirituality is the glue that connects us with all our relations and it gives us purpose." She believes that these values "should be guidance" in all aspects of our life, including our work. "They should help us in our decision making, guide our minds, guide our relationship, guidance in

everything".

She believes that to obtain knowledge in way that honours traditional Mohawk beliefs and practices we should draw on our traditional teachings.

The sources of our knowledge are our teachings, the Great Law, the Karihwiyo, the Thanksgiving Address, our songs, our dances, our stories and our language.

She asserted that we "have to search out and discover where these sources of knowledge are." She identified sources such as elders, people in general, children, animals, and culturally meaningful compositions such as wampum belts and stories. She explained how knowledge of the creation story was meaningful to her.

Until I heard our story of creation I had no idea what was important to me. I was lost and now I know that those are a big part of who we are. It is clear as night and day to me. I wish I had known them earlier.

She believes that we should couch our pursuits to obtain knowledge in humility and regard ourselves as "students" everyday who "want to learn from anything and anyone". Emily distinguished knowledge that is important to obtain from knowledge that is important to produce. She believes that all knowledge is important to obtain.

Everything is important, everything that helps us

to survive. everything that helps us to share, care, and grow spiritually.

She believes that it is important to produce knowledge that will ensure that traditional knowledge and values are passed on to "the faces yet to come" in order that we may "continue to live by them and be guided by them today and in the future".

If we can produce knowledge or an understanding of those teachings in a way that makes sense to our kids today and encourages them to keep that going for the future. That's what I would consider as valuable knowledge to produce and it would be based on Mohawk values.

Emily believes that traditional values are not the source of conflict, but rather it is the individual's interpretation of how that value fits within a contemporary lifestyle that creates a conflict. She explained that she is teaching her children to be computer literate as well as to appreciate and respect nature and to have a "good mind." She believes it is the rigid division between traditional values and contemporary lifestyles that cause conflict. At this point in our conversation Emily points out that having the good mind is also a Mohawk value. She described the good mind as "a state of being" where:

I feel good, I feel one, I feel like I'm in the right place at the right time. I'm grateful for

everything that's in my life.

She believes that the good mind encompasses all of the values she mentioned earlier in the narrative.

I would say good mind and spirituality are almost like twins. A lot of these things we talk about them like they are separate but they are connected. I wish I had a language that could express this better. I feel like the language were speaking just doesn't cut it.

Emily believes that the Creator plays a strong role in coming to knowledge. She believes that all the teachings, The Great Law, Karihwiyo, the Thanksgiving Address were "Creator sent."

So I think that the role the Creator plays is that He is the reference point for which we can understand these spiritual and holistic teachings.

She describes the spiritual and sacred as "energies that carry our teachings and stories through," in order that we can feel them in a "spiritual way." She shared how she came to understand "ethics" or "right and wrong" from the Creation story.

That's why I really believe it is good for our kids to hear the stories of creation and our stories of the origins of good and evil.

She strongly believes that a holistic vision of reality is important. She feels that "you have to see the whole thing



to have a good mind."

So I think that role of holistic vision is really important for us because if we are going to be able to make decisions based on a good mind, then I think we got to have a big vision, a big picture in place first so we can see where it fits.

She believes that it is important to teach the children holistically as this frame of reference is conducive to having a good mind.

I think to teach just in fragments is such a disservice. We're really robbing our kids by doing this. I know we have to teach them systematically, but unless we head towards a bigger vision, I feel that we are not doing a good job of teaching them that good mind.

Emily agreed that the directive of Native science honours traditional Mohawk thought and teachings, because it is congruent with our traditional teachings, which tell us "how to be with one another, and how to have a good mind."

I think it does honour traditional Mohawk thought or teachings, because that's what the Great Law and all those teachings address, and those narratives are the basis of our ethics, that is our code of ethics.

Emily agreed that coming to truth requires the total involvement of the person with his/her environment and with

all aspects of self. She explained that this is part of holistic vision to understand that you can not compartmentalize your experience. Further, the involvement of the spiritual provides a natural form of guidance on how it is we are to conduct ourselves. Emily was particularly pleased with the acceptance of prayers, feelings, dreams, visions, intuition, prophecies, ceremonies, and meditation as ways of coming to knowledge. She provided examples of how "readings," "dreams," and "prophecies" have helped her to understand her own life. In one of the examples she described how knowledge of the prophecies prepared her to face hardships that "came to pass."

Had I not had knowledge of those prophecies I doubt that I would have been very understanding. I would have felt a lot more lost. I think they gave me direction and gave me strength to draw on, and they surely helped me to make sense out of a world that was changing so fast.

She was uncomfortable with the word "employed" in terms of utilizing the aforementioned processes, as ways of coming to knowledge. She believes that these processes are "lived" rather than "employed."

I believe that the living concept of knowledge is something that is practised every second of your life, not just your waking life either, even at an unconscious level.

Emily expressed enthusiastic and grievous feelings regarding the concept and practice of Native science. On one hand, she felt that there is "a lot of power in the concept of Native science."

I feel there's a lot of strength for our people just knowing that we have a way of knowing that is ours, that is part of us and who we are.

On the other hand, she felt a deep sense of grief regarding the absence of such teachings in school, as well as the loss of knowledge that has occurred as a result of colonization. She explained that the feelings of loss were followed by feelings of rage and helplessness. She added that the English language does not seem to be able to capture many of these feelings. She believes that it was the traditional teachings that kept her from acting on these feelings.

I wish I would have learned this in school as a child. I feel ripped off I guess...If I could really get a grounding of what our science was like, I mean just this taste of it. The holistic and spiritual nature of it makes me hungry for what we must have had... see that's where the grieving comes in, how much we have lost.

She felt "good" about the passage that was written on Native science. She was "happy" that the inclusive nature of our knowing was presented, but at the same time she "appreciated being able to "break it down and understand the

parts."

I was really appreciating and enjoying being able to take it apart and saying, yea, that fits, that's part of it. That was a nice feeling and very rewarding because now that I have read it I can't unknow it.

Emily was not uncomfortable with anything regarding the concept and practice of Native science.

This is to be shared and cared for and I think the knowledge has such a spiritual component to it it can only help. So I have no hesitation of anything regarding the concept or the practice.

What she was uncomfortable with was the potential for exploitation.

I think it is exploitable, because wherever there is a demand people will supply it, and that's the whole nature of capitalism, wherever there's a need we will market it and we'll make money, we'll exploit it.

Emily believes that a knowledge production system that values our beliefs is needed. She believes that Western science is based on Western values and beliefs, and that our beliefs and values are "so opposite." She felt that once this is understood it is easier to recognize that we need to have a knowledge production system that is "consistent with our concepts, our context, our values and respects the

spirituality and sacredness of knowledge."

Yea, we need it, it doesn't exist, I mean it exists  
but we haven't acknowledged it.

**NARRATOR:** Iontia'takehnha:on is a member of the Mohawk Nation and resides on the Six Nation of the Grand River Community. She is a fluent Mohawk speaker and is a knowledge holder of our traditional beliefs and practices. She continues to practice what has been passed on to her from her elders and shares this knowledge in an attempt to help others.

**SYNOPSIS:** Iontia'takehnha:on begins her narration by informing me that she believes it is the right time to take our understanding of the universe. "out there." She goes on to point out the limitations of human knowledge regarding the future. She asked me, "what time it was?" I replied, "ten o'clock." She asked me, "Can you tell me what ten o'clock will bring?" Struck by the lesson that she was trying to convey I replied, "no." She stated, "that's how impotent we are to our existence." She explained that this is the reason why we are never supposed to predict. She explained, "because a lot of that is up to us, its not up to anybody it is up to us." She expressed a curiosity as to why I decided to do research on Native science. She advised me to, "watch there must be a reason, cause they always told me there is always a reason for something to happen."

I asked her about our traditional values. She explained that as a collective we don't practice our values any more. She went on to explain that the science that I was talking about was developed for us a long time ago. She stated that

it had to do with the way that we saw the universe.

We know how it works. we know the sun what he is for. we say that in the longhouse every time we have the ceremony. it says that right in the Thanksgiving speech and yet there are people who will say to us, "oh that's voodoo." Its not voodoo, its a real good way to see.

She went on to explain the relationship we have with the sun and the consequence of failing to recognize and respect that.

The sun is so important. He is the one that's going to grow this plant life. That to us is like our older brother. See he does that for us, he is our protector. Look it now, we have this ozone layer they call it. and see there is a thing that they are breaking through. We don't leave well enough alone I guess is what they call it.

She emphasized the need to continue to honour, respect, and protect the Thanksgiving Speech and our ceremonies. She explained that as long as we continue to do that, "nothing is going to happen to us." I asked her how the Great Law fit into our worldview. She stated that, "the Great Law was something that was sent from heaven." She explained the instructions that are conveyed in the Great Law.

What it says is that we are supposed to help each other. we're supposed to be kind and there is no harsh words, and whenever we see a conflict we go

there and we never take sides.

She went on to talk about how and why The Code of Handsome Lake came to be.

In the 1700's, when they knew the white man was going to come here they knew there was going to be all these bars, we were going to change the way we were dressed, even our eating habits, everything was going to change. It was a time that we had to have Handsome Lake.

She stated, "that Great Law became an earthly thing, it came to be earthly because it turned to politics." She stated, "we still have the protection (of the spiritual teachings in the Great Law) but we have to have that good mind." She went on to discuss how the concept of the good mind is misunderstood. She gave a number of examples describing the process of coming to one mind. One of the examples she gave included the collective process that occurs when we send our message of gratitude to Shonkwaya'tihson during the Thanksgiving Speech. She asked me what my favourite flower was. I replied, "lilacs." She explained:

So you put your lilac in. I put my roses in there. Somebody puts their daffodils and somebody else and we're one mind now and we send it up. That is what that (one mind) is. But people all think we all got to think roses - no it's not. See how misled we are today.



I asked her if being of one mind was the same as the good mind. She stated:

Yes exactly, because who am I to say you're wrong if your going to say lilacs are your favourite. That's not my call, the Creator is the one that we answer to. If he says, that's great you didn't forget the lilacs, you didn't forget the rose, that's good. All I am is the messenger to send it up to him, that's all.

She provided another example of the power of the good mind which emphasized the importance of recognizing a greater power.

Say we are doing the birthing centre for instance. If we all do it together, if we all have these good thoughts, we won't have those people hemorrhaging. We won't have cause - why don't we get that through our head that there is a greater power here.

She explained that in our worldview everything is alive and everything has a purpose. She quoted Chief Dan George who said, "the white man thinks that everything is dead." She explained that this is the fundamental difference between the way that we see the world and the way that the white man sees the world.

I asked her how it was that we came to understand something or how we obtained knowledge. She explained:

I guess it's those stages that they taught us years

ago. That is why we are always supposed to watch our children, because there is a time and place when that child is going to take it up. Say we talk about something that is more natural to us. Would you eat when you're not hungry? Well, you only eat when you're hungry and the same thing I think with this knowledge - it's the same thing. Like a child will give you a sign that now is the time that they are ready and they will sit down and they will take it in.

She drew on an example of this kind of learning from her childhood to explain the concept further. She reflected on the time when she and her brother were ready to learn how to make bread and wash floors. She explained that her grandmother recognized the signs and caught that moment to teach them.

That's how we learned and we paid attention because we were the ones that wanted to learn how to make that bread. We were the ones [narrator and brother] wanted to learn how to wash that floor. So they [grandparents] knew the signs. The same with this here, I believe you showed signs when you were interested.

I asked if this was how adults learned as well. She believed that it was, and went on to explain by describing how a chief, clan mother, and faith keeper were chosen.

When they were adults they watched for those signs - that they were good workers, they had a kind heart, they used kind words, and they showed leadership. That's why they were chosen.

I asked her what she considered to be valuable knowledge for us to have. She explained that we have become "judgmental" and we have lost the word "Ken:tenron." She felt that any English translation was not adequate to explain its meaning. She provided an example to help me understand the meaning of "Ken:tenron."

Say you don't have enough jam for your children, well then I had a whole bunch, and I'd say, hey I can spare this. Here I will share mine with you so that you have some too, like me. But we don't have that any more. Even if you got enough, no way, I'm not sharing that with you. It's all mine now. But we weren't like that a long time ago. We always seen if somebody didn't have. So it balanced itself all back out.

She stated, "that's what we lived with was balance and that's your science right there." I asked her if Ken:tenron is an understanding of our mutual responsibility to look after each other. She said, "right, that's a good way to put that." She believes that we must try to incorporate this understanding within ourselves and "love one another" the way we were intended to. She stated that this is what is stressed in

every one of our teachings - The Thanksgiving Speech, The Great Law, and The Good Word.

We discussed how the mind is a blending of the head and the heart. She provided an example of the connection between thinking and feeling. She explained that when we say we are sorry if it doesn't hurt, then it is coming from the head only and it doesn't mean anything. She emphasized the need, "to talk from the heart."

You have to talk from the heart, you can't talk from this paper [pointing to my interview guide]. You got to talk from here [heart]. As long as you talk from here [head] you will never resolve all the problems...

She talked about the need to use our senses to experience the wonders of creation. She explained that, once you have truly experienced this you can be appreciative of everything and your mind will begin to open up.

You got to start using your eyes - see with your eyes. Use your hearing - what do you hear. What would happen if you never heard another bird - think about it. What would you do if there was no more sun - think about it.

She talked about the process that Handsome Lake went through when he moved from alcoholism towards wellness. She explained that it started when he was lying down on his sick bed and he looked up through the smoke hole and seen the

clouds and the sun coming through. This experience started to open his mind up as he wondered how this happened. Then he started to hear the birds and they sounded so beautiful it made him feel good. She stated, "then it started entering his mind how beautiful that really was and that is how he started the other way." At this point she stated:

There's your science, we always saw it but we didn't have to go to that extreme to go to that moon to find out what the heck was on there. We had a different way of appreciating.

I asked her about the role that the spiritual and sacred plays in our science. She explained the connection by describing the process involved in obtaining medicine.

Does that (Western) medicine know who it is going to help? When you take that pill it's a nothing. I guess that's why it does nothing too. But see ours, its alive and we have to offer it [tobacco] because we are sincere. That's why we have this tobacco because we are sincere in what we are going to do. We are not just going to pick it to let it go sit on a shelf some place and let it die there. We are going to take it and use it. That is why this plant will give its life for you to get better. It is an exchange. The way we believe is that the Creator put them on earth for a reason. That is why we burn tobacco to tell the Creator

that we remember and appreciate. It's like taking its power and fixing whatever is wrong with your body. Where that pill all it does when it gets inside, [it says] "okay I'm supposed to do this what else am I supposed to do?" So it jumps over here and does something else. It doesn't know its direction, where our medicine knows its direction.

She stressed the importance of Indian names and how we must keep our names sacred within. She explained how our individual Indian names provide our connection to everything. She referred to, "our connection with everything," as, "our spirituality." She explained that everything has its own name, including the medicines. She repeated the importance of knowing the names in our own language. She explained that, "because we know it's name we know the power that it has." She stated,

That is what our science is - everything is connected - everything has its place. That's why the language can't die.

I asked her if in our search for knowledge we should be ultimately motivated by the search for balance and harmony. She stressed the importance of understanding the concept of right time and right place.

There is a time and place when you do things. You don't go do it any ole time. Again there is that time and place - everything is like that. The same

with the medicine. There is that time and place you can pick these medicines. Its like us - you now, because you are a young woman now you could learn about it, but there are only certain times that you could go and pick. Me, I could go there pretty well every time it's the right time.

She stated that, "we can't just do as we like." She explained that our conduct is governed by our teachings. She referred to the Great Law as an understanding of, "right and wrong" or our code of ethics. However, she pointed out that although the Great Law provides our code of ethics there is nothing in the Great Law that says you have to do it. She explained that if it is to work you must carry the law within yourself.

I asked her if the Thanksgiving Address was a spiritually sent prayer. She explained that it was left to us at the very beginning of Creation as a way for us to continue to understand and acknowledge Creation. I asked her about the role of dreams, meditation, and visions in coming to knowledge. She stated, "those visions you are talking about, that is a gift to some people. We don't all have that." She went on to explain the ability that we all have to use the two powers on earth to find the balance between good and evil.

See there are two powers here on earth. You know that from the Creation story. Well, the white man says we got a left and right brain, but to us we

have these two powers. So when a thought comes into your head right away the Creator's helper will say, "maybe you should give it some thought, I wonder is it a good thought" - like think about it. The other guy is saying, "oh no, don't think about it. If you think about it you'll ruin the whole idea, you'll ruin the whole surprise, just do it." And so that is what we have.

I explained to her that I had heard that we were people of dreams. She explained that a long time ago we used to be able to analyze certain dreams but today. "we no longer see before." Today we see the meaning of our dreams after the dream has manifested itself. In addressing this loss of knowledge she stressed that. "we got to hurry up or we are going to lose even more."

I asked her if there was anything that she was uncomfortable with regarding the concept of Native science. She stated, "there are some things that we need to hang on to ourselves and we need to learn ourselves," but generally, "I think they need to understand. Even if it's a white person reading it, I think they need to understand - because they are even more lost than we are." We concluded the interview with her explanation as to why this thesis might be helpful.

The more they might read it the more we might actually understand and respect one another. I know there is going to be some that will read it



and say that's hog wash, but then again it's like I said when I was over there [a workshop]. There was like 20 of them and I actually caught one man who was actually interested in what I was saying. So he will always remember that and maybe one day he will be walking along and will say, "hey that works." Maybe that's the way your book will work. Somebody will read it and say, "hey come to think about it", and all of a sudden say, "that's true."

## COMMUNITY NARRATIVE

The community narrative is a synopsis of the main similarities and dissimilarities found in the five personal narratives. The community narrative is divided into two main topic areas: a) traditional Kanyen'kehaka beliefs and practices and. b) perspectives on the concepts and practice of Native science.

**Synopsis:** The Rotinonhsyonni understanding of the world or natural order and instructions on how to live in it were given by Shonkwaya'tihson. These instructions or teachings are spiritually derived and therefore sacred. Our thoughts and behaviours regardless of what activity we are pursuing ideally are to be governed by these spiritually derived instructions. Traditional teachings such as The Creation Story, The Thanksgiving Address, The Great Law, and The Good Message (note that some participants did not mention The Good Message) provide the foundation from which traditional Kanyen'kehaka values are derived.

Although the values are expressed in various ways there are three core values that encompass the different perspectives. These spiritually derived values include The Good Mind, our mutual responsibility to look after one another, and a sense of reverence and gratitude. The first value is the Good Mind, although given various definitions, can generally be thought of as a mind that constantly attempts to be governed by peace and harmony. The term "constantly

attempts" is purposively used as it is traditionally understood that there are two powers on earth - good and evil. Human beings constantly strive to realize the good. Acting on the instruction of "the good mind" ensures that our relationships with all of creation are governed by our respect and appreciation for one another. Our mutual responsibility to look after one another is the second value. This value refers to our relational responsibilities with all of creation. Acting on this value ensures that resources are distributed in terms of need and that balance is maintained. In essence it ensures that everyone is looked after and has good feelings. The third value is a sense of reverence and gratitude. This value can be understood as a state of mind that evolves from a continuous acknowledgement of and appreciation for all that Shonkwaya'tihson has given. Acting on this value creates a sense of humility that allows one to accept creation and the interrelationships as they exist. This conception also leads to the understanding that everything has a purpose, reason, time, and place.

The traditional way of obtaining knowledge flows from the spiritually derived instructions. That is, knowledge was acquired at the right time and place. Our pursuits to acquire knowledge were governed by a sense of respect and humility. There was a time in each individual's life when they were ready to receive knowledge that was relevant to the individual's stage of development. So knowledge was offered

or it was intrinsically revealed from prior experience when the person was ready to receive it. Acting with "The Good Mind" created the internal and external environment in which knowledge could be acquired in a proper and complete way.

Knowledge that supports our traditional understanding of the world was considered valuable. That is, knowledge contributes to our understanding of how to live in peace and harmony with all of creation. One participant stressed that all the knowledge that we possessed prior to European settlement is important to acquire. Traditional knowledge already exists so it was not a matter of producing it but of acquiring it. It was also considered important to know how to pass traditional knowledge on to the "coming faces."

Eurowestern influences have had a great impact on our ability to live according to our traditional worldview. European-based ideologies (i.e. rugged individualism and capitalism) and behaviours (i.e. argumentative and judgmental), which were forced upon us either violently or subtly, conflict with and obstruct the comprehensive practice of traditional values. This conflict affects us as individuals, families, extended families, clans, as a community, and Nation.

While the concept of a Native science was generally a welcomed idea there was a range of rationales for this reception. The majority of the participants felt that the recognition of Native science is a validation of traditional

Indian thoughts and practices. This validation was viewed by some as a source of empowerment for Indian people. One participant felt that it was not the recognition of Native ways of knowing as a science that was important but rather the discernment of Rotinonhsyonni ways of knowing and Western scientific ways of knowing that was valuable. The elder who participated in this project felt that the recognition of Native science was important not only because it was empowering to Indian people but because it could also help others.

Generally all of the participants felt that there was congruity between the concepts and practices advocated in Native science and traditional Kanyen'kehaka beliefs and practices. Traditional Kanyen'kehaka teachings such as the Creation Story, The Thanksgiving Address, The Great Law, and some participants included The Good Message, personify the spiritual nature of existence and the inter-relationship or holistic vision of Creation.

There was a general agreement that the directive of Native science, that is, "those who follow this natural science do so in search of balance, harmony or peace with all living relations" is congruent with the traditional Kanyen'kehaka teachings. However, one participant questioned the need to "search" for balance, harmony, or peace. He pointed out that, if we are following the instructions given in the traditional teachings we should already be in a state

of balance, harmony, and peace. Therefore, it should not be a matter of searching but rather maintaining. The participating elder stated that, while it is true that following our traditional instructions will allow us to maintain balance, we must also recognize "that is how it used to be but now we are searching it back out." Further, one participant emphasized the need to recognize that the concept of "living relations" includes the ones that came before us as well as the faces yet to come.

There was a general agreement that there is a need for the total involvement of the person with his or her environment, and that coming to truth in an Indian way involves spirit, body, mind and relationships. This concept related back to the understanding of interconnectedness. That is, nothing exists or can be responsibly understood in isolation. In understanding this concept one acknowledges that regardless of the activity in which one is immersed, the person carries all that he/she is with him or her. Consequently all that a person experiences flows through all that he/she is and all that a person is flows through all that he/she experiences.

Generally all of the participants agreed that prayers, feelings, dreams, visions, intuition, prophecies, ceremonies and meditation are valid ways of coming to knowledge. There were, however, a number of clarifications offered regarding these processes. One of the participants was uncomfortabl

with the idea of "employing" these processes. It was felt that we experience such processes as a natural part of life rather than as a part of strategic method to obtain knowledge. While no one disagreed that vision seeking was a valid way of coming to knowledge, there was some question regarding whether this was a practice rooted in traditional Kanyen'kehaka practices. Further, a distinction was made between seeking visions and having visions. Seeking visions was generally thought to be an activity that was deliberately sought, whereas having visions was considered to be something that occurred without deliberate attempt. Moreover, it was generally thought that the ability to have visions was not a skill that everyone had but rather a gift that only certain people were given. In terms of foretelling the future the participating elder stated that we must always remember our personal responsibility, that is, "you are the one that can alter the road of anything." It was generally agreed that Kanyen'kehaka people placed a great deal of significance on their dreams. The participating elder stated that although dream analysis was traditionally practised much of that knowledge has been lost.

There were a number of concerns expressed regarding the concept of Native science. One of them was in regard to the application of the term "science" on Native ways of knowing. Some participants felt that this term was too limited in meaning to accurately reflect the inclusive nature of Native

ways of knowing. The thought that created the greatest discomfort regarding the concept and practice of a Native science was the possibility of exploitation and expropriation of this knowledge. There were concerns expressed regarding the exploitation of our spirituality. That is, the spiritual nature of our knowledge would be sensationalized and commercialized. A sensationalization of our spirituality occurs when it is separated from the context in which it is embedded, which is daily life. Once it is dislocated from daily life, practices and experiences of a spiritual nature are magnified to the point where the "spiritual practices or experiences" are viewed as ends in themselves rather than as parts of a broader responsibility and process. This type of exploitation is detrimental first and foremost, because it defaces the sacred nature of such knowledge, and secondly because it may mislead those people who are genuinely seeking to understand the place of spirituality in their life. While the participating elder recognized the potential for exploitation she pointed out that "the language holds our connection to everything," which is our spirituality. She believes that the true meaning of our spirituality will remain with us through our language. There was a concern that traditional knowledge would be expropriated from Native people and the community. It was feared that through capitalistic practices the knowledge that was freely given to us by Shonkwaya'tihson would be packaged and sold.



## REFLECTIONS

In this section of the thesis I shall discuss my overall reflections on the research experience. First, I provide an overview of a knowledge system rooted in traditional Kanyen'kehaka beliefs and practices. Second, I discuss some concerns regarding the practice and concepts in Native science. Third, I share some of what I have come to understand personally as a result of the research experience and as a Kanyen'kehaka with social scientific training.

Before we begin a discussion on a traditional Kanyen'kehaka knowledge system, there are three considerations that must be expressed. First, it is important to keep a generalized discussion on what has been illuminated in this study in proper context. The reader must remain aware of the fact that the following discussion is not intended to delineate a meta theory that applies to all Kanyen'kehaka at all times and at all places. The following discussion is based on traditional Kanyen'kehaka teachings as viewed by six people, the participants and myself. These views may not reflect the perspectives of other Kanyen'kehaka who have adopted other belief systems or who have a different perspective on our traditional teachings. Living under the suffocating forces of colonialism for over five hundred years has acted to detach some Kanyen'kehaka's connection or desire to be connected to traditional Kanyen'kehaka beliefs and practices. To begin to understand Onkwehonwe reality one must

acknowledge the varying levels of awareness and adherence to traditional teachings. Further, I would like to clarify that although I have attempted to base my reflections on what I have learned through my research, ultimately the thoughts that are expressed in this section of my thesis are based on my interpretation of what has been shared. To show respect, as Eber Hampton (1993) states for "each person's right to live, to define, to think and speak for themselves" (p. 307) the aforementioned limitations of my discussion should be kept in mind.

Second, the Six Nation community consists of six nations: Cayuga, Oneida, Onondaga, Seneca, Tuscarora, and Mohawk Nations. Originally we were five nations, Cayuga, Oneida, Onondaga, Seneca, and Mohawk. These five nations were known as the Rotinonhsyonni. The traditional teachings that are discussed in this thesis were given to the Rotinonhsyonni. Although I have expressed the traditional teachings from a Kanyen'kehaka perspective, as one participant pointed out, "we are all in this together."

Third, I have not provided an indepth description of the traditional teachings or practices that are referred to through out this text (i.e. The Creation, The Thanksgiving Address, The Great Law, The Karihwiyo, and The Ceremonies). It is not necessary for the reader to have an indepth account of our traditional teachings to understand that these are traditional Kanyen'kehaka teachings which are believed to be

the ultimate reality and provide direction and meaning in our lives. As the participating elder stated during our interview, "there are some things that we need to hang on to ourselves and we need to learn ourselves." Accordingly, I have limited discussion on traditional teachings to what the participants and I felt was appropriate to share in the academic forum at this time.

#### **Traditional Kayen'kehaka Knowledge System**

I begin my reflections on the topic of Native science by sharing one of the experiences that I had during the course of my research. This experience provides insight into the dilemma of capturing the essence of Onkwehonweh ways of knowing on paper. Throughout the course of my research I experienced a constant intellectual strain to capture what I understood emotionally, intuitively, and spiritually on paper. I expressed my dilemma to one of the participants. She explained that I was struggling, because I was trying to capture something that is seven dimensional on a one-dimensional plane. She explained that the true nature of our knowledge can not be captured on a one-dimensional plane such as the written word. Our knowledge and ways of knowing are fluid and dynamic; in essence, they are alive and must be experienced as such to be properly understood. Further, presenting our knowledge and ways of knowing from an intellectual and rational stance strips their holistic nature

and the knowledge becomes "tasteless." As Gayle Highpine (1973) states, "The word does not contain the existence of what it refers to --the word is like a glass which focuses. I point it to something and you look through it to see what I am pointing to" (p.153). I encourage the reader, as he or she attempts to understand traditional Kanyen'kehaka knowledge and ways of knowing, to consider the aforementioned limitations.

Generally we can propose that there is a high degree of congruity between the concepts and practices described in the section on Native science with traditional Kanyen'kehaka beliefs and practices. However, as Colorado (1988) states, "there is no single Native science, each tribe or Nation follows ways specific to a locale" (p. 52). That is, traditional Kanyen'kehaka ontology and axiology shape traditional Kanyen'kehaka epistemology. The Kanyen'kehaka of the Six Nations of the Grand River Community, who participated in this study, drew on their traditional teachings as the source of knowledge and ways of knowing. In the following section I discuss the form and meaning of a "knowledge production system" rooted in traditional Kanyen'kehaka beliefs and practices. Please note that from this point in the text I will refer to "traditional Kanyen'kehaka" as "Kanyen'kehaka" only.

Gavente (1993) suggests that as a strategy to reappropriate the knowledge production system the "powerless develop, create and systematize their own knowledge, and begin

to define their own science. (p. 37)." If a knowledge production system is to reflect Kanyen'kehaka beliefs and practices it must be acknowledged that our "science" was developed for us by Shonkwaya'tihson and is embodied in our traditional teachings. It is not a matter of developing or creating a science, but rather a matter of acknowledging, appreciating, and practising what we have already been given.

The traditional teachings impart a spiritually derived value base that is ubiquitous. Coming to culturally relevant knowledge in a culturally relevant way requires that our thoughts and actions be governed by the traditional spiritual derived values or code of ethics. The code of ethics is derived from traditional teachings such as The Creation, The Thanksgiving Address, The Great Law, and some believe the Karihwiyo. According to our code of ethics we are to approach the universe, and consequently knowledge about the universe, with a good mind, an understanding of our mutual responsibility to look after one another, and a sense of reverence and gratitude.

It is important to recognize the difference between information and knowledge in the Kanyen'kehaka worldview. Kanyen'kehaka epistemology focuses on the acquisition of knowledge as opposed to the production of information. Knowledge is what information becomes once it has been integrated into personal meaning. Integrating information into personal meaning requires that information goes through a

process of subjective involvement and subjective certainty of understanding.

Kanyen'kehaka teachings emphasize three core values: the good mind, relational responsibility, and sense of reverence and gratitude (appreciation). I will discuss each principle as it applies to Kanyen'kehaka ways of knowing. Although I discuss each principle as though it is a separate entity, in Kanyen'kehaka thought these principles exist in a synchronized manner.

A Kanyen'kehaka perspective on how knowledge is to be acquired emphasises the personal development and involvement of the one acquiring knowledge. As Colorado (1988) states, "the nature of indigenous science is that it is qualitative and subjective rather than quantitative and objective" (p. 53). It is the individual's personal location that prepares her or him to acquire knowledge rather than a procurement of research skills. To use western academic language, the state of mind of the "scientist" is the single most important "method." As Colorado (1988) states regarding the "Native scientist", "Like the Bear passing through, no one watches, the science relies on the utmost integrity" (p. 51). From a Kanyen'kehaka perspective it is being in the state of "the good mind" that prepares one to acquire knowledge properly. That is, it is the mental, emotional and spiritual state of the person that prepares her or him to acquire knowledge. Further, it is essential that one possess a spiritual

understanding of the universe and his or her place in it. A spiritual understanding grounds and balances one mentally, emotionally, and physically. To process information into knowledge it must ultimately be synthesized in a spiritual context.

Kanyen'kehaka teachings emphasize the importance of a experiencing life with a sense of reverence and appreciation. The participating elder explained that Creation was understood through a sense of subjective appreciation rather than "objective" exploration. Through the five senses, sight, sound, taste, smell, and touch, we were able to appreciate the wonders of Creation. Experiencing Creation in this gentle way created a sense of appreciation for and understanding of everything as it exists. As one participant stated,

From our teachings, Shonkwaya'tihson put us here to be happy and enjoy life with all its up and downs. But he made things pretty all around us and gave us everything we need. He just wants us to be thankful, and the core of our teachings is that thankfulness. You don't ask for a bigger this, a better that.

It is not sensing as an isolated physical activity that creates appreciation. It is sensing in connection with the knowledge that Shonkwaya'tihson has provided these gifts that develops a sense of appreciation. So it is not only what you sense but how you make sense of it. This perspective follows

Joe Couture's (1991) assertion that "the traditional world of Native knowledge is a sense-world that is in truth spiritual" (p. 66). Experiencing life with a sense of reverence and appreciation leads to an understanding that everything has a purpose, reason, time, and place.

Kanyen'kehaka teachings emphasize the importance of relational responsibility. Acting on this understanding necessitates that we maintain balance in our relationships. In Kanyen'kehaka thought, external and internal processes are not taught as being separate. As Joe Couture (1991) asserts, traditional Indian knowing is nondualistic and inclusive. The individual balanced the acquisition of individual growth and well being with collective growth and well being. The traditional value of our mutual responsibility to look after one another represents this understanding. The process of "coming to one mind" illustrates the process of balancing the thoughts and feelings of individuals with collective action and well being. Further, balance was maintained in the interrelationship of the individual, the collective, Creation and the Creator. This relationship is referred to in all of our teachings and is illustrated in our ceremonies. The participating elder provides an example that illustrates a recognition of the relationship between individual well being, collective well being, plant beings (creation), and the Creator:

That is why this plant will give its life for you



to get better. It is an exchange. The way we believe is that the Creator put them on earth for a reason. That is why we burn tobacco to tell the Creator that we remember and appreciate.

Kanyen'kehaka thought recognized the interconnectedness of all things, the totality of its interrelatedness (Dumont, 1988) and their responsibility to acknowledge, appreciate and live in harmonious relationships (balance).

In summary, a knowledge system rooted in Kanyen'kehaka beliefs and practices is based on the spiritually derived traditional teachings and is formed by the code of ethics imparted in these teachings. Focus is placed on the acquisition of knowledge as opposed to the production of information. The acquisition of knowledge focuses on subjective maturation as opposed to the development of a generic knowledge base. Knowledge that should be acquired is knowledge that contributes to a personal and collective sense of balance, harmony, and peace with Creation and the Creator. Knowledge should be acquired at the right time and place, with an understanding that everything in the universe has a purpose and reason for being exactly as it is, and with an understanding of relational responsibilities.

#### **Concerns Regarding Native Scientific Concepts and Practices**

In the section on Native science I have presented subjective ways of knowing in compartments such as prayer,

feelings, dreams, visions, intuition, and meditation. This manner of presenting Kanyen'kehaka ways of knowing may be misleading. During the course of my research I spoke with some fluent Kanyen'kehaka speakers to determine whether the English words, prayer, meditation, intuition, and/or visions, could be translated in Kanyen'kehaka. One of the people that I spoke to explained that he did not believe that these concepts existed in Kanyen'kehaka (language) as the Western world understands them. He explained that we had what he described as a "sixth sense." While I am limited by the language I use and my own understanding, the sixth sense can be crudely understood as a state of mind that we traditionally possessed where all of these ways of knowing occurred spontaneously and concurrently. As Thom Alcoze (1992) has pointed out, the Native mind views multiple levels of reality functioning all at once not at different levels at discrete times. Further, it must be emphasized that subjective ways of knowing can not be "employed" to gather knowledge as western science employs methods to gather information. For example, we can not approach someone who is known in the community to be gifted with the ability to dream, to gather "data" through his dreams about some abstract, isolated aspect of social scientific interest. Subjective ways of knowing follow the principles of right time and place and are grounded in personal and collective meaning.

There are a number of concerns regarding the terminology

used in this thesis. Gilchrist (1992) states "in order for indigenous people to decolonize themselves they must decolonize their knowledge production system" (p. 61). I believe part of a decolonization process includes decolonizing the language. Western academic terms, such as, producing knowledge, gathering and interpreting data, and science, are cases in point. Western scientific terminology may be helpful in terms of "pointing the glass toward something", however, the application of Western scientific terminology to Kanyen'kehaka ways of knowing may obstruct proper and complete understanding.

The notion of "producing" knowledge may be misleading. From a Kanyen'kehaka perspective the knowledge that we need to live according to our worldview has already been "produced." Therefore, the language used to describe a knowledge system rooted in Kanyen'kehaka beliefs should reflect an acquisition as opposed to a production of knowledge.

Western scientific terms such as "gathering and interpreting the data" objectify what is understood from a Kanyen'kehaka perspective as a subjective process. Terminology that suggests that knowledge can be obtained through an objective process is misleading. Creation and its interrelationships can not be responsibly understood or experienced without recognizing the personal and holistic nature of existence.

I stated at the beginning of this thesis that I

intentionally selected Pam Colorado's (1988) label "Native science" to describe traditional Onkwehonwe knowledge and ways of knowing. It has become evident that the use of this label is misleading. Kanyen'kehaka knowledge and ways of knowing is not a science as many people understand science. Science is popularly understood as "a systematic knowledge of the physical and material world" (The Random House College Dictionary, 1975). The holistic nature of Kanyen'kehaka knowledge defies this limitation on knowledge. A Kanyen'kehaka knowledge system is synonomous with life and living. Labelling our knowledge and ways of knowing under the rubric of "science" may not create the proper context for holistic understanding. Even though Pam Colorado (1988) has used the label, "Native science" to describe Native ways of knowing, she does so with the recognition that our "science is interwoven inseparably with life" (p. 51).

Ultimately our knowledge and ways of knowing must be expressed in Kanyen'kehaka (language), if it is truly to reflect traditional Kanyen'kehaka thought. However, due to assimilation practices (e.g., residential schooling and contemporary education practices where English is the teaching language), Kanyen'kehaka (language) is not presently comprehensively used or understood amongst Kanyen'kehaka. At present there are dedicated Kanyen'kehaka who are working at a great disadvantage, in terms of resources, to ensure the survival of Kanyen'kehaka (language). In the interim, and at

minimum, we should use English language that most closely approximates the true meaning of Kanyen'kehaka knowledge and ways of knowing. This directive requires that we make a great effort to use language that reflects the natural, subjective, spiritual, and relational nature of Kanyen'kehaka knowledge and ways of knowing.

### Closing Reflections

I shall reflect on the overall research project and experience from a traditional perspective. That is, from a Kanyen'kehaka perspective I draw on the principles of right time and place, and with the understanding that everything that happens has a purpose and reason for happening exactly the way it did. In terms of acquiring knowledge regarding this research experience, the task is to reflect on and draw from my experience at the time and place it is meaningful to me, as I walk through life. Learning will occur in a gentle and holistic way, as opposed to what Joe Couture (1991) describes as a "straining of the intellect" to understand experience.

With that acknowledgement I share with the reader what I understand at this time and place regarding the overall research project and experience. In terms of methodology, I believe that it is important to emphasize a rich interrelational process, even if it means it will be at the expense of forfeiting detailed information. The acquisition of knowledge

should take precedence over obtaining information, if we are to honour Kanyen'kehaka ways of knowing and discourse principles.

In terms of future research efforts I believe that it would be empowering and invaluable to facilitate multiple community discussion groups in which the old people and the fluent Kayen'kehaka speakers (who can be one and the same) can share their knowledge and be enriched by the perspectives of others. As the elder who participated in this study stated, "we got to hurry up or we are going to lose even more." I also believe it is essential to understand the concepts and practices advocated in Native science from the perspective of Kanyen'kehaka (language). This understanding will reveal a more accurate depiction of Kanyen'kehaka knowledge and ways of knowing. Further, I believe this "re-search" must be conducted by Onkwehonwe people and that it does not necessarily have to fall within the domain of western academic research and institutions.

This research has once again confirmed my believe in the wisdom encapsulated in the Two Row Wampum Treaty. It is evident that Kayen'kehaka epistemology is distinct from Western scientific epistemology. Kayen'kehaka epistemology is constructed from the spiritual derived values given in the traditional teachings. The nature of it is that it is spiritual, personal, and inclusive. Western social scientific epistemology is constructed from human values. The nature of

it is that it is secular, depersonalized, and compartmentalized. It is clear that there is a conflict between the two epistemological views. I have spent a great deal of time and energy attempting to find a compromise between the two views. To date, I have not been able to discern one. Gayle Highpine (1973) states:

...we seem to think that we must protect the Old Ways, rather than allowing the Old Ways to protect us...Yet, when totally trusted, the Old Ways make us invulnerable...We must not only develop the application of the Old Ways to the "modern world", but also understand the modern world in the context of the Old Ways. (p. 149)

If the Kanyen'kehaka are "to allow the Old Ways to protect us," first we must have an awareness of and faith in our traditional knowledge. Second, we must not compromise our cultural integrity in an effort to find ways to "develop the application of the Old Ways to the modern world." In terms of Kayen'kehaka epistemology we must avoid the temptation to, as one participant stated, "place a Native veneer" on western scientific thought and then claim it as ours. We must also avoid the temptation to compartmentalize our knowledge and ways of knowing to fit the confines of Western social scientific thought and institutions. This type of compromise will ultimately cause confusion in and at the expense of Kanyen'kehaka knowledge and identity. Ideally, a Kanyen'kehaka

knowledge system must be understood in its own way (living) and in the proper context (life). Although the "road back to the future" (Sakokwenonkwasi, 1976) is difficult and requires great personal determination, it is the road we must take if Kanyen'kehaka are to live according to the instructions given to us by Shonkwaya'tihson.

If Onkwehonwe people are to reappropriate their knowledge system and acquire culturally relevant knowledge, the academic community must harness the urge to explore Onkwehonwe reality from the perspective of western scientific assumptions. Community psychologist Rod Watts (1992) states regarding a psychology of human diversity, "We must institutionalize new perspectives, work for equity, and build linkages between perspectives - without striving for hegemony" (p. 128). From this perspective, the social scientific community can assist Native people in "working for equity" by refocusing the energy and resources that have been spent on exploring to supporting Onkwehonwe people as they attempt to "reinstitutionalize" their epistemological understanding in their communities. "Reinstitutionalizing" traditional epistemology will not be an easy task given the effects of assimilation and colonialistic intellectual imperialism on Onkwehonwe people. However, if Onkwehonwe knowledge and consequently people are to survive it is critical that we remain relentless in our efforts.

I agree that we must build linkages between perspectives without striving for hegemony and I would add, without



demanding homogeny. Anishnawbe elder, Art Solomon (1990) states:

My truth does not invalidate your truth and your truth does not invalidate mine (p. 178).

This statement implies that it is possible to co-exist with different worldviews. The fact that differences exist between mainstream scientific epistemology and traditional indigenous epistemology is not inherently problematic. The problem arises when one society's epistemological understandings are forced on, or assumed to be appropriate for another society. Kanyen'kehaka view themselves as distinct from Canadian society. Building linkages is a matter of adhering to the principles expressed in the Two Row Wampum Treaty. That is, by respecting and not interfering in the laws and beliefs of other Nations. Although we may learn from each other, it is not necessary, in terms of living in peace and harmony, to be homogenous. As the participating elder explained, being of one mind does not mean that we all have to think exactly the same thing.

I recognize that there are many Non Native people in the academic community who do not agree with mainstream scientific assumptions on knowledge and are diligently working to create a holistic science (Capra, 1983). In Kanyen'kehaka traditional teachings it is said that Shonkwaya'tihson gave all people their own original instructions. It is the task of each Nation to determine what those instructions are and how

they will apply them in the context of their lives. Therefore I have intentionally limited the scope of my paper to Onkwehonwe epistemology and the application of the findings of this research to Kanyen'kehaka epistemology.

In closing, it is critical that we acknowledge the responsibility that comes with sharing and receiving knowledge (Blair, 1995). As part of my responsibility for sharing the knowledge I have continuously tried to create a context in which the knowledge could be responsibly understood. As a final effort at contextualizing the knowledge that has been shared in this thesis I am compelled to ensure that the reader is aware of the following critical issues. First, while traditional knowledge still exists, the survival of such knowledge is seriously endangered, as a result of the oppressive sociopolitical conditions Onkwehonwe live under. This is evident in the few people who are fluent in the Kanyen'kehaka language. As Joe Couture (1992) states, "Indigenous knowledge and Indigenous American Indian survival somehow go together" (p. 66). In this regard, I hope the reader will develop a sense of responsibility to contribute to the political will that can act to create a social environment which supports Onkwehonweh people as they strive to live according to their traditional worldview. Second, I urge that the reader develop a sense of responsibility for the use of the knowledge that is shared in this document. It is often the case that, when Onkwehonwe knowledge is brought to the

academic forum, the knowledge is taken but the people to whom it belongs are forgotten. I ask that those who read this thesis do not expropriate the knowledge that belongs to Rotinonhsyonni from Rotinonhsyonni and our communities. Rather, I urge the reader to develop a sense of responsibility to live according to the principles expressed in the Two Row Wampum Treaty Belt.

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**APPENDIX A**

**Mohawk Terms**

## MOHAWK LANGUAGE TERMS

Iontia'takehnha:on - someone who helped me

\*Kanyen'kehaka is pronounced "ga-nyoon'geh'HAH-ga" and is commonly translated as "Mohawk." It literally means "people of the flinty ground." The word "Mohawk" stems from an Algonquin word meaning "cannibal." At Six Nations it is used to describe the "Mohawk" people and language.

\*Karihwiyo is pronounced "ga-ree-Wee-yo." It literally means "the good business" and is popularly known as "the good word" or "the good message." It is also called the Code of Handsome Lake and refers to the message preached by the Seneca prophet of the same name, a message he is said to have received in a series of visions at the end of the 1700s.

\*Onkwehonwe is pronounced "ohn-gway-HOHN-way" and its literal translation is "real/first/original people." It is used as the equivalent of "Indian" or "native/aboriginal person." It can refer to an individual or a group of native people.

Rahnenwehs - he is tall

\*Rotinonhsyonni literally means "they make the house" and is pronounced "ro-dee-no-SHOW-nee." It can refer to the political institution known as "the Confederacy" or to the people of the Confederacy, "the Iroquois."

\*Shonkwaya'tihson is pronounced "sohn-gwa-yah-dee-sohn" and is commonly translated as "the Creator." It literally means "He has finished making our bodies." The term comes from the creation story when Shonkwaya'tihson, then known as the Right-Handed Twin, created the Onkwehonwe from a handful of clay. Shonkwaya'tihson is also referred to in English as the Master of Life.

\*All terms marked with an asterisk are borrowed, with permission from the author, Brian Maracle (1996).



**APPENDIX B**  
Interview Guide

## **INTERVIEW GUIDE**

The aforementioned questions have been designed to stimulate and provide a focus for our conversation during our interview. The first set of questions are designed to address your understanding of traditional Mohawk beliefs and practices. The second set of questions are designed to obtain your perspective on the generalized concept and practice of a Native science. Please feel free to add to or omit any of the following guiding questions.

### **Perspectives on Traditional Mohawk Beliefs and Practices**

1. What are traditional Mohawk values as you understand them?  
Where did these values come from?
2. What role if any, should traditional Mohawk values play in our daily lives? and work?
3. How should one go about trying to obtain knowledge, in a way that honours traditional Mohawk beliefs and practices?
4. According to traditional Mohawk values, what knowledge is considered valuable to obtain and/or produce?
5. In what ways do traditional values come into conflict with the actions of the individual? family? community?

### **Perspectives on the Concept and Practice of Native Science.**

1. How do you feel about the concept of a Native science?
2. What do you think about the passage written on Native science?

3. Native scientific thought is grounded in two core principles. That there is a spiritual and sacred nature of existence and that Native thought includes a holistic vision of reality.

In regard to the spiritual and sacred nature of existence, I quote "The creator is essential to our scientific philosophy. Mind, matter, and harmonious interrelationships are the creations of the Creator, who represents the reference point, being the source of natural order and balance"

- a) In your understanding, what role do you believe the Creator has in traditional Mohawk ways of coming to knowledge?
- b) What role if any do you see the spiritual and sacred playing in Mohawk ways of coming to knowledge?

In regard to holistic vision, I quote "holistic vision is a unique way in which the Native person sees the world. Through vision one recognizes the interconnectedness of all things and the totality of its interrelatedness?"

- a) What role if any do you see holism or holistic vision of reality playing in traditional Mohawk ways of knowing?

4. Native scientific activity is governed by a spiritually based ethical or moral code of conduct. I quote "those who follow this natural science do so in search of balance, harmony, or peace with all living relations"

- a) In your understanding does this directive honour traditional Mohawk thought or teachings?
5. Native science requires that the scientist becomes personally involved in the research. I quote "Native science relies on total involvement of the person with his or her environment. Coming to truth in an Indian way involves spirit, body, mind and relationships."
- a) Do you agree that traditional Mohawk perspectives on coming to truth requires that the person seeking knowledge involve spiritual, physically, mental, and relational processes? Please elaborate on your perspective.
6. Native science lists prayers, feelings, dreams, visions, intuition, prophecies, ceremonies and meditation as personal ways of coming to knowledge.
- a) Do you believe any or all of these activities are valid ways of coming to knowledge?
- b) In your understanding, did Mohawks traditionally employ any or all of these activities as ways of coming to knowledge? Please elaborate on your understanding.
7. Is there anything that you are uncomfortable with regarding the concept or practice of a "Native science"?
8. Do you feel it is valuable to us as Native people to prescribe a knowledge production model rooted in traditional Indian beliefs? Please elaborate on your

**perspective.**

- 9. How do you feel about participating in this research project?**