
A Toroidal Representation of Intelligence from a Plains Cree Lens: A Bridge Toward Enlightenment

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ABSTRACT

An indigenous cultural perspective relating to the perceptions, insights, and concepts of human intelligence was revealed through the voices of 13 participating Elders representing nine bands of Plains Cree First Nations in a study located in Saskatchewan, Canada (Frey, 2016). The ideologies of human intelligence have historically been primarily predominated by Western academic research. In general, the ideas of indigenous groups regarding their concepts of intelligence remain much less mainstream, with most research lacking indigenous epistemology, axiology, and indigenous research methodologies (Chilisa, 2012). In an effort to generate a broader more inclusive perspective of human intelligence by introducing Plains Cree concepts, this study utilized an integrated methodology consisting of Western phenomenology and indigenous research methods. The integrated design provided a unique scaffolding that served to enrich both Western academic and indigenous standards (Frey, 2016). Its purpose was and continues to be understanding.

The topic of human intelligence has garnered interest that has waxed and waned over the course of history, producing a variety of theories depending on the era and Zeitgeist of the times. The study of human intelligence, typically viewed from a Western perspective, has evolved from early quantitative/psychometric approaches (Spearman, 1904) toward more qualitative ones such as multiple intelligences (Gardner, 1983, 2006, 2011), emotional intelligence (Goleman, 1995, 2011), and spiritual intelligence (Sisk, 2015). Although significant research has been conducted with indigenous groups on the topic of intelligence (Grigorenko et al, 2004), the research designs have primarily been led by Western approaches. With that in mind, this study employed an integrated methodology to meet the criteria of Western qualitative designs and also to meet the requirements of authentic processes and protocols of indigenous methodology (Frey, 2016). The integration provided enhancement to the credibility and depend-

ability of both approaches. The intent of the study was to produce findings of the highest relevance to the Western academy and at the same time be equally relevant and significant to the community of investigation. Needless to say this union provided many challenges, but also offered a unique platform of cooperation, a bridge as it were, between Western and indigenous science.

The purpose of the study and this composition is understanding. It has its foundation in the discipline of international psychology, using a critical lens and concentrating on cultural integrity. In keeping with indigenous methodology, the aspects of storytelling are mutually incorporated through the experience of the participants and the researcher (Lambert, 2014). The process of incorporating 1,345 statements from participant interviews into the mathematical/geometrical concept of a torus provides a visual representation that illustrates the Plains Cree concepts and unifies them into a singular paradigm of Toroidal Indigenous

Intelligence (TII). Interviews with the 13 participants in the study provided rich dialogue for exploring and sharing their ideas of human intelligence. The involvement of the researcher was also a part of the study as indigenous research dictates (Chilisa, 2012). That story is interwoven and provided partially in the first person so that a full picture of the processes and protocols involved in discovering and relating the findings can be captured and its relevance appreciated from both Western and indigenous perspectives.

The journey leading to and culminating in the findings of this study was a long and often naive process. It involved many years, decades in fact, of assimilating random bits of knowledge, appearing serendipitous on the surface, but ultimately comprehended and appreciated as synchronistic regarding the indigenous peoples of North America. It was born from the depths of emotion and empathy, growing and developing eventually into an intellectual and academic pursuit subsequently culminating in a dissertation for a Ph.D. in International Psychology. It was indeed an evolution of a single life that revealed there is no such thing as singularity, and that all life is a deeply integrated process.

There are no other cultures that so profoundly live by that revelation than do the indigenous communities of the world. As representatives of an indigenous community, the People of the Plains Cree First Nations in Saskatchewan, Canada, most generously, albeit cautiously, allowed the research to take place on their home ground in the historic region known as "The Battlefords". The 13 participants in the study represented nine bands of Plains Cree First Nations. They included: (a) Thunderchild, (b) Ahtahtakoop, (c) Little Pine, (d) Red Pheasant, (e) Beady's, (f) Siksika Blackfoot, (g) Moosomin, (h) Mosquito, and the (i) Sweetgrass. All the participants

were esteemed as respected Elders. There were 8 males and 5 females, ranging in age from 47 to 86 years, representing a collective wisdom of 848 years (Frey, 2016).

The Elders reflected their own special stories and personalities, which were evidenced throughout. They were gracious, articulate, and awe-inspiring, as some of their quotes shared herein illustrate. Their insight, humor, and respect for all things of the earth and the cosmos illuminated a people and a culture of amazing resilience and a way of understanding the human mind and its capacity for intelligence as no others do. Although all the participants were English speakers, to help ensure the clear understanding of questions and responses, as well as to make certain proper protocol was followed, a husband and wife team from the Red Pheasant band served as translators and protocol managers during the interviews. Each participant was given the opportunity to conduct a smudge ceremony, and offered the traditional tobacco and cloth as reciprocity and respect for the sharing of their wisdom before each interview began. Smudging is a ceremonial burning of sage or other vegetation that accompanies prayer to ask the Ancestors for their blessing, and to ensure the integrity of intentions in the procedures (W. Fine Day, personal communication, May 31, 2014).

The cultural and academic integration principles of the study and this article continue to be of note for readers. As a woman from the United States, who is from European heritage, I write from my own limitations of comprehension into another culture. I cannot and would never assume to understand the Plains Cree culture fully as a member of that society. However, the immediate journey from inception to completion of this study, spanning more than three years, allowed me the privilege of some cultural immersion experi-

ences that made it possible for me to comprehend and internalize some of the indigenous perspectives from much more than merely an outsider's perspective.

Western science hails objectivity; the indigenous reveres subjectivity. There was a coming together of those two aspects in the study, in this article, and in my life as the lines between researcher and participant became interwoven. I write as two women, the Western academic and the spiritual being known in Cree as *Tcha Tchak Astim Iskewew*, which means Spotted Horse Woman. My Spirit name came to me from a shaman who mentored and educated me in the correct protocol and processes of the Plains Cree culture. The name exemplifies and pays homage to my lifelong love for the Appaloosa horse of the Nez Perce in the American Northwest. It was from my interest and breeding of these exceptional horses that I began to learn the tragic realities of the history of indigenous peoples, which set me on a journey I wasn't even aware of until decades later. From this objective and subjective dual perspective came the integrated purpose and desire to present the rich, robust flavor of the epistemology, axiology, and ontology of the Plains Cree people's vision of human intelligence.

Integrated Methodology

Integrated methodologies used in this study reflect a progressive research approach between mainstream practices and indigenous methods. The Western academic methodology of interpretive phenomenological analysis (IPA; Pietkiewicz & Smith, 2012), and the indigenous method of relational indigenous research paradigm (RIRP; Chilisa, 2012) were chosen as the best vehicles to produce the highest credibility and dependability of findings.

Although Western phenomenology and

indigenous methodology are similar and compatible in many ways, it is inherently evident that they contain areas of fundamental epistemological difference (Kovach, 2012). It should also be noted that the mainstream Western academy has exhibited a resistance to acknowledging the indigenous approaches to research. Likewise, another aspect that cannot be overlooked is the complications implicitly found in a 500-year history of colonization with all its negative influences and residuals (Smith, 2012). However, even with those obstacles to overcome the impetus of this study revolved around the positive qualities involved, with concentration placed on compatible similarities. It was a conscious effort toward bridge-building between colonized and colonizers, indigenous and mainstream. Each plank in the bridge was laid with optimism and hope for closing the gaps of alienation and misunderstanding. This study and the stories of all involved in its making constitute many such planks that contribute to extending the bridge leading to enlightenment.

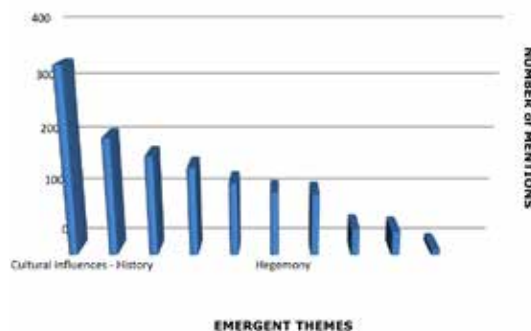
One of the most significant similarities between Western phenomenology and indigenous methodologies is the practice of telling a story. Each story constitutes a thread that is then woven into a single tapestry depicting a collective story. There are multitudes of such tapestries depicting the diversity of human existence decorating our Mother Earth. The weaving of such tapestries are clearly multifaceted and complex creations. Included in each tapestry are elements signifying the importance of place, or more specifically its relationship to those involved. It is also important to include the vitality of the personal relationship between researcher and participants. Adherence to cultural norms, the ability to maintain flexibility, and of course mutual respect and reciprocity are also all of

imminent importance in depicting an accurate and comprehensive view.

What the Elders Said – Arriving at Emergent Themes/Tori

As interview statements were transcribed and read, each of the statements was analyzed for content and placed into similar categories. Each of the ten themes, or tori, is represented according to the number of statements made by participants falling into each category. A name for each one of the ten was assigned that best denoted and summarized the unity of all the statements into a single concept. A total of ten themes or tori emerged and are shown according to frequency of mention in the chart of Figure 1.

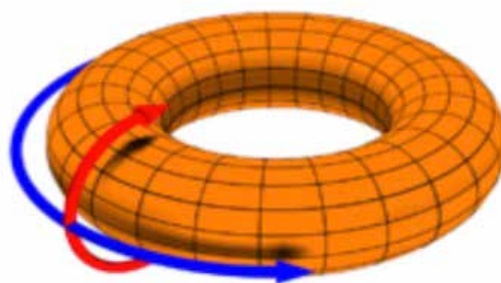
Figure 1: Emergent Themes/Tori



A Toroidal Holistic View

The findings that exemplify the wisdom, resilience, and spirit of the Plains Cree peoples can be visualized by looking at a mathematical/geometrical representation of a torus. When they are combined or woven together they provide an overall view of how the concepts of human intelligence are integrated in one toroidal holistic view, another tapestry as it were, designed and woven by the Plains Cree represented in this study.

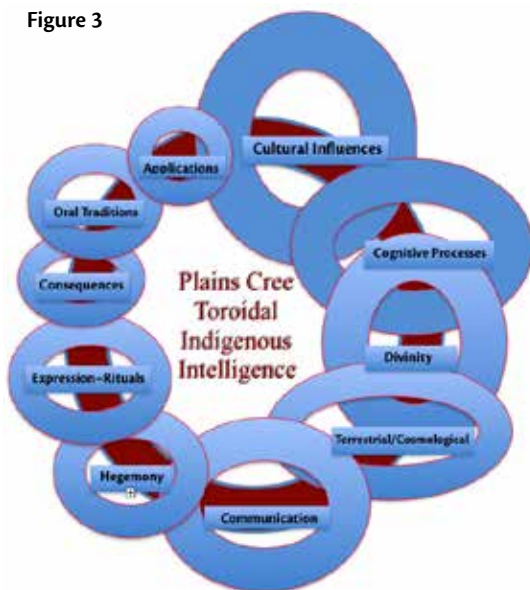
Figure 2. Torus Shape



This figure represents the mathematical/geometrical figure of a torus shape. The red vertical arrow denotes the multiple vertical poloidal segments incorporated into the horizontal toroidal shape shown by the blue arrow. The poloidal segments represent the 1,345 individual statements taken from the interviews of the participants in the study. The blue toroidal concept is an overall categorization of similar or like-meaning statements into individual themes; therefore, each torus represents a key concept of intelligence as expressed by the participants.

To afford a larger, overall visual, Figure 3 (top right) illustrates the integration of each category or individual torus of intelligence into a unified paradigm representing a comprehensive concept and perspective of the Plains Cree perceptions of human intelligence. The larger of the tori shows the theme with the most statements indicating the areas that are most frequently mentioned in the Plains Cree concepts. Each subsequent torus becomes smaller as it indicates fewer related statements. Each torus overlaps the others forming a collection of related tori illustrating the connectivity and interrelatedness of the views of the Plains Cree involved in their concepts of human intelligence.

Figure 3



The diagram depicts a paradigm that is dynamic and resilient. It is an animating representation of the energy encapsulated by the stories, ideas, and beliefs of the participants of the study, the Elders. Each theme/torus is further expanded on, and quotes from participants are included to exemplify the meaning and reinforce the distinct Plains Cree concepts offered in the statements made during interviews.

Cultural Influences / History – 335 Mentions

This torus/theme elicited close to one quarter of the statements made by participants, clearly demonstrating their high regard for their culture, its history, and their current role in it as it relates to the concept of human intelligence. It illuminates the cultural values inherent in the Plains Cree Peoples that are distinctive from the mainstream Euro-western culture such as their concepts of time, gender roles, life-span development, education, and

consideration of elders in the communities (Frey, 2016).

An interesting and significant aspect of statements made by participants in this torus/theme was the considerable elaboration on the roles of Elders in the community. I had assumed that all Elders were held in high esteem, however there was a clear designation made as to which Elders were authentic and which were considered not up to cultural expectations of that role. The fact that there is some separation of “respected and not respected” reflects the importance that is placed on the wisdom and intelligence of Elders. As an addition to this dichotomy there was shared information from the translators/protocol managers of the study that the “fake” elders were never challenged directly, but just allowed to conduct themselves to their own choosing with the understanding that they would merely be ignored or not taken seriously by the community. The following quotes are examples of the way Elders and concepts of intelligence are considered and how they inter-relate. Please note that all participants used pseudonyms of their own choosing for the study. There may also be some slight corrections in language without altering meaning to aid in clarification for the reader.

I guess I look to Elders I've worked with and when I see a very quiet, confident, respectful way of dealing with people . . . I know and been told by some Elders, they are not the ones but are simply a conveyor, a messenger to the Creator. From my experiences it tends to give you comfort in your situation. . . the Elders are more spiritual, and they have lessons, many lessons. (Cree Foot)

There's a lot of fake ceremonial Elders out there. . . And as an individual you

know who's accomplished at certain levels and has respect from you. But we know the true, honest, humble Elders out there. We know who they are; we have a connection to their personal integrity and accomplishments already. We also know the ones that are pretending to represent those things. . . But each community has a process of understanding the true meaningful, respectful, humble Elders that are true to their word and live by their word and are honest in all the things that they do. (Wapiska)

I think what comes to mind immediately is when Elders are passing on information. They often say don't get angry at me because I'm only telling the truth. Passing on information that some of the things I say you might not like, but it's my duty as an Elder to do it. And they would say that Creator has given you a mind to think with. Although you can experience and learn from your surroundings and what you hear, what talk is around, but also with respect to cultural knowledge . . . that has to come from the Elders. And I think I will say right from the outset there are some cultural issues or matters that are in the public domain, everybody can talk about them, but there is a domain of information, sacred cultural information that is not given out, and it's private information. It can only be passed on from the Elder either to their children or their siblings, in the family. Or they could go through an intellectual property acquisition through sacred protocols to gain the information from an Elder that you want to know. Or you can quest for it, in certain ways. Some people quest for it . . . perhaps fasting and the other ways of self-sacrifice usually under the guidance

of an Elder, and support from an Elder. Elders are our teachers. So I guess my perception of intelligence is pretty much that. (Louis)

The aspects of childhood development and education in regard to pedagogy were also a significant portion of the Plains Cree understanding of human intelligence, as these quotes bear out:

We have four stages of life, which is the infant, we start off as a baby, you grow into a teen, and then an adult, and back to an Elder. And we believe that our Elders return to the baby stage at the end of the life cycle on this earth as they prepare for a life in their next phase, which is the spirit world. (Eagle Woman)

So the way we were raised as children by our parents, helps us build our intelligence, and a lot of that old raising was very spiritual in nature, so the spirituality, our high belief in the spirit world, is built on our intelligence. (Knodukwew)

The White Western ideology of education is becoming a concern for us First Nations people. We have to and we want to, push our children and grandchildren to that because it's required now to be able to survive financially in this world. So we have to be able to somehow, and we have been able to manage those, and collaborate those beliefs to understand the Indian intelligence of our spiritual belief system along with the Western belief system. It's a complicated answer. (Little Thunder)

In addition, the concepts of *Indian time* offered a unique understanding of cultural specifics in this theme as seen in the

following statements.

We are governed by prayer, the Medicine Wheel; and the one with that intelligence knows the calculations of when the heavens are open, or he opens them. Then he knows what part of the day it is. That's how come they keep track of the medicine, you know, cause they keep track, counting sticks and stuff, he's keeping track of time, Indian time. (Kantunak)

Some participants spoke to the examples of respect for the cultural processes and protocols along with gender roles and how they relate to intelligence for them. For example, "So when I talk to people if they follow cultural protocols then they have that cultural intelligence." (Chub Chub).

When we were born a woman we were born with a lot of things that we need to be prepared for. Because a woman was gifted and blessed to give birth to life. and responsibility to take care of that life. The male person was also equally gifted with many talents, and many ways of knowing and protecting. He was the provider, the protector, the King. And whether you like it or not the big responsibility of giving birth to life and responsibility to take care of that little life, you have a team member to share that same responsibility. (Kokum)

The deep-rooted history of "The Battle-fords" as a geographic area where battles were fought, won and lost, clearly play a vital role as part of the relationship of place that the participants have embraced and assimilated into their existence. They are the people born from a turbulent transitional period in time and history in the late 17th century. Their

way of life as centuries of a hunting culture was very rapidly altered and they found themselves, despite resistance and opposition, ultimately unable to overcome the tidal wave that engulfed their existence. The change from freedom to wards of the state, and from hunting to agriculture was no doubt humiliating and terrifying (Radison, 2013). But also despite efforts to annihilate a race of people as the colonization swept across the Great Plains, the stalwart Cree managed to survive the pestilence, war, and oppression. Their progeny live today as proof of that resilience and tenacity in keeping their culture alive. There is no doubt why this theme of Cultural Influences and History have such an abundant and significant impact on their perceptions of human intelligence.

Cognitive Processes – 211 Mentions

This theme/torus has the second highest number of mentions, 211, not quite as many as the first torus revealed, but nonetheless a significant amount. It clearly speaks to the high value participants place on the thinking processes regarding human intelligence. It revolves around the basic ideas of how people think, their capacity for thinking, and how that is conveyed through language. It is essential to make note that there is no exact word for the English word "intelligence" as Western concepts understand it found in the Cree language. The closest it comes is articulated by the following quote: "There's a word, you know, for intelligence. *Eenesewin* is intelligence, but it encompasses the two you know, the spiritual intelligence and the human experience of intelligence" (Louis). It is also necessary to recognize that different bands of the Plains Cree may not all hold the exact same understanding, and that cognitive processes involved in the term "intelligence" may

have variations accordingly as exemplified by the following quote:

Intelligence is a measure of your knowledge within your familiar surroundings, and that's simply all that is. And it's different for the Cree, it's different for the Blackfoot, it's different for the Assiniboine, it's different for the Sioux, it's different for the Navajo, you know, we all have our own level of intelligence within our surrounding. (Cree Foot)

A common aspect of the Western ideas involved in intelligence is the way it is structured into different levels, or categories of abilities. Most people in Western cultures in general are familiar with how intelligence is measured by certain types of psychometric tests that place people in specific categories or levels of intellectual ability, i.e. the Stanford Binet and Weschler I.Q. tests (Spates, 2012). The Plains Cree participants have a much different perspective as the following statements bear out:

In regards to our measure of intelligence, when an infant is born, the umbilical cord they call it . . . a sacred part of the body that the grandmothers would prepare their granddaughters who were giving birth to not lose that and to keep it. After the infant is born the grandmothers take that infant and hold that infant here, a newborn for the first time, and the infant can communicate with the grandparents on what gifts that child is going to have, and that grandmother knows right away, she will prophesize . . . oh my you are going to be good at this, and good at that. (Little Thunder)

More so in the spiritual aspect than the regular day-to-day life kind of intelli-

gence. But that intelligence is because they have a better understanding of spirituality and therefore their intelligence level is more visible than a person who never pursues that part of life. (Louis)

For me growing up the way I did, and having come this far in life, I don't believe there's a hierarchy to knowledge. Hierarchy of intelligence in people, we are all intelligent in our own way, and we're equal to each other, not at a hierarchy at all. (Josephine)

The concept of humor is related to the ways the participants think about intelligence. The strategy of thinking that produces humor includes wit and irony, and is very specifically related to the culture...for example what people in the United States may find humorous depends on their own cultural norms, and people in other countries or even within the same country but from different areas may not "get the joke". These quotes are very helpful in understanding the Plains Cree appreciation of humor and how it relates to intelligence. I can also state from my personal experience and acquaintances with the Cree that I found them to have a very lively, vivid, and joyful expression of humor.

I was looking at those Elders, men sitting there. I started thinking how much power, and how much spirituality, and how much wealth of, just they looked so powerful sitting there, but they were sitting in different forms, they sat different, they looked different, but I could just sense the power and the spirituality, and the way they were talking to each other, and they had a sense of humor. (Gwajin)

The intelligence I guess is based on the

amount of knowledge that a person has, but the type of knowledge and how they use that knowledge too, and it could be knowledge that's related to telling jokes . . . they come in at the right time to tell a joke to relieve the stress if there's stress happening or things like that, that intelligence is recognized as a gift. (Chub Chub)

My late Uncle once told me that there's a perception before the coming of the White man that all First Nations individuals understood all of the spirituality, but that's not true he says. Only about maybe as a guess, about ten percent really understood the spirituality that was handed down. The rest were just Indians (laughter). (Louis)

Of course, cognitive processes are comprised of many other qualities including: decision making, comprehension, logic and reasoning, and speed of thought. The following quotes lend insight to the way the Plains Cree incorporate those concepts into their views of human intelligence:

"They know how to get out of a problem, or a multitask or problem-solver is what I base my intelligence on, somebody that can come make ways, understand ways, and figure things out very quickly" (Eight). "To speak English more fluently and more clearly. Not only to just to be able to repeat words but to be able to understand them and apply them" (Chub Chub). "[Cree] People that are intelligent, the way I recognize them, is an individual who knows how to think things out. Someone who thinks before he talks or speaks" (Eight).

Historically speaking, from the white settlers/colonizers point of view, the indigenous people they encountered were believed to be "ignorant savages", devoid of any intelligence (Muntone, 2012), a premise that persisted well into the era of the residential schools of the mid-20th century (Hanson, 2009b). The idea that they could engage in cognitive processes was dismissed. This belief may seem nonsensical in the early 21st century, but even so some of the prejudice and discrimination continue in many ways in the neo-colonial culture that continues to marginalize the indigenous peoples of First Nations (Battiste, 2010). The theme/torus of cognitive processes belies such a prejudicial tenet and gives credence to the Plains Cree people's ability to not only engage in higher cognitive functions, but also to their own recognition of its importance in comprehending the human intellectual process.

Divinity – 179 Mentions

This theme/torus was based in 179 statements relating to the participant's expressions of the way spirituality, the idea of a Creator or Higher Power, and prayer relate to their ideas of human intelligence. The following quotes express the substantial and profound impact that the participants attribute to such matters:

I think they are one and the same, intelligence and spirituality. Maybe I can do the spirituality when I was talking about each animal having their own spiritual caretaker I guess . . . like the Buffalo, there's a Buffalo spirit that oversees all the Buffalo, there's a Buffalo Spirit Guide that protects and oversees . . . there's different types of Spirits like that for each animal from what I've been taught and believe and in religion as well. I think all religion is the same, we all believe in one Creator, we

all believe in one higher power and we all pray in the same manner. Other than that there is small differences in practice and small differences in our concept of heaven or even to talk about a place like hell., There's differences there but generally I see it as being all the same and we believe in angels as well, and in the Bible it talks about the angels right from Genesis right through like in Cree. What I was taught is that we have angels that we call (Cree word) and they are our spiritual guides that come to us in our time of need for certain things. So intelligence is being able to identify that spiritual essence in your life and that spiritual gift of knowledge to be able to use that spirituality and be able to learn and understand the use of that spirituality in your daily life. (Chub Chub)

And there's the other form of intelligence that is more spiritual, and that's what I have said earlier . . . that is pretty guarded information. And I have to draw a line somewhere, where I have to try to determine what information I can give you is of the public domain, and what information is sacred. I appreciate that you are giving me a cigarette, that gives me a little bit of freedom, but not totally. Why is that? First of all, the Elders say what we know, the intelligence arrived from spiritual sources has been going on for tens of thousands of years. (Louis)

I think we got do our prayer first before we do anything with us Indian people. That's what we do, first thing in the morning when we wake up you smudge and then you pray for what you going to do that day. And that is what I usually do, smudge and pray in the morning,

and then my day's really good after that. (Little Thunder)

Well every being on this earth has a spirit, even a rock. So obviously on a day-to-day life you know you see grass, you see trees, you see dirt, you see sky and clouds and nature around you. You know many days go by without really thinking about the spiritual aspect of those beings. It's usually brought to the attention at these prayer ceremonies. And Elders will give you the importance and significance of the spirit community in relation to various beings . . . There are certain protocols when you pray, even the direction you face. Ideally you take opportunity to go to the prayer lodges, prayer assemblies, but you can pray anywhere, anytime. (Louis)

The theme/torus of Divinity is one that appears deeply embedded in all areas of the participant's daily existence and is expressly tied to their ideas of human intelligence. The fact that prayer through the ceremonial rite of smudging was included in the process of the interviews for the study spoke clearly to the participant's routine practices in demonstration of their deeply held spirituality and belief in a higher power. It appears to be a prevalent belief held by them that human intelligence is a special gift given to mankind from outside humanity itself.

Terrestrial and Cosmological – 159 Mentions

At first glance this theme/torus may seem to be made up of two separate things, our planet earth and the universe exterior to it. However, careful reflection and analysis of the 159 statements involved brought me to the conclusion that they were inextricably intertwined into one unified concept...the

earth, and its existence and place in the grand unfathomable cosmos are one and the same. To discuss that concept, the aspects of the natural environment, the metaphysical and sacred information, hidden knowledge, and the medicine wheel, are all taken into consideration, developing into a profoundly holistic and compelling perspective of human intelligence. The following quotes are excellent examples of the extent to which the participants expressed these somewhat ethereal concepts in relation to human intelligence. To start with, the idea of the natural environment is most succinctly expressed by this brief statement: "Nature is the classroom" (Chub Chub). More extensive quotes epitomize the way the Plains Cree feel about this aspect of human intelligence:

There is an interconnection between the land, the people, and the environment we live in and it's all rooted in surviving as a people . . . We live off the land which is dependent on seasons, we know when to plant, we know when to harvest, we know when animals are plentiful, we know when to hunt them when not to hunt them, when not to eat them, so it's a matter of co-existing. . . it's an all-encompassing co-existence. What I would say is our environment influences our intelligence. (Cree Foot)

Well I live off the land, and if you're caught in a blizzard you've only got 20 minutes to live so you have to know what you're doing. Even if your matches are wet you've got to know how to make a fire with no matches. And, there is prophesies of what's coming, we got to prepare for it but nobody's prepared for it. (Kantunak)

The environment [is] going crazy. We don't have any more people, maybe here

and there that'll bless Mother Earth in ceremony. Either they got killed off, or shunned off. You have to go find them way out in the bush. These people that know the ceremony, sacred ceremony, to bless Mother Earth. And songs. (Kantunak)

Everything in the universe is related. Fire, water, wind, earth are the main key elements to sustain life. We have four seasons, that life just kind of evolves over, and there are reasons for the four seasons, for renewal of growth and stuff like that, resting, you know there's a whole process and each is tied to the other. (Eagle Women)

I think intelligence is to respect nature, because you can be intelligent, and a very gifted old man, but if you have no respect for nature you're not complete, that's the way I look at it, that's the way intelligence, it's got to complete you. (Gwajin)

What we're doing now is gathering herbs and telling them what Mother Earth has, and again there is a protocol in gathering herbs as well, and showing them and for me that's the Plains Cree perception retaining intelligence is to continue these cultural camps where the youth are taught the proper ways of doing stuff. (Wapiska)

I was praying this morning . . . and I was praying, feeling very sad for the animals in that fire. The birds, the baby birds, you know. Those were created ahead of us. But man, man the "intelligent" one destroys everything. You know man destroys everything not honoring the gift of life, not respecting the ways. (Kokum)

*That Eagle that flies shows us equality.
When it spreads its wings, how many feet
across...they're not one behind the other
one, they're both equal. We have a teacher,
Mother Earth, and why do we call her
Mother Earth? (Kokum)*

*And perhaps if a person is lucky he might
get a vision, where certain intelligence is
passed on to him, or his mind opens up
for a particular understanding of sacred
information. And a person can and
quest and quest and nothing will happen
(laughter)... that is not a guarantee if you
gonna quest but some people still do it.
(Louis)*

The time I spent in the Battleford's region among some of the First Nations Peoples raised my own awareness of the fragility and interconnectedness of every single thing on this small planet spinning around in a huge, indefinable, perhaps even infinite universe. The manner in which the Cree respect all things, even the "non-living" ones such as the earth and rocks made me pause to consider what it means to be "living". The concept of our planet as a living breathing entity with rights and needs of its own is one that bears consideration, and demonstrates an environmental intelligence. Would that it not be confined to First Nations is a deep held hope for the continued survival of all humankind. We of non-indigenous cultures do seriously need to take heed of this model and component of their concept of intelligence.

Demonstrative/Declarative Communication – 131 Mentions

This theme/torus, with 131 mentions, focuses on how the Plains Cree express themselves in word and deed, and how those

expressions may reflect human intelligence. It covers such things as how people are observed to behave, how they articulate their ideas, and also includes interpersonal relationships. It is the opposite of the concepts articulating cognitive processes, which are solely mental activities. An interesting quote from Sternberg (1990), "Thus, intelligence begins not inside the head, but in the relations between people" (p. 243), speaks in particular to the strong sense of relationship held by the Cree.

Physical actions are behaviors that express thoughts outwardly. The following quotes speak to the participant's ideas on how the "outside" reflects the "inside". Gwajin stated, "Always one of the most powerful things to me, that come to me when I look at intelligence, or when I see somebody, it's how they move, it's how they handle it," and Grandfather mentioned that "you can pick out those that are really intelligent according to the way they behave themselves, and how they treat other people; that's intelligence—not knowing, not getting 100% every time you take an exam."

Other areas covered in this theme/tori include the ability to listen, how someone uses language, how experienced a person is and what role models are followed. It also includes emotional and kinesthetic processing, as well as expressing empathy and caring for others. Some examples are seen in the following quotes:

*We observe them, their body language and
if they're cordial, they shake your hand,
there are certain ways of introducing
yourself to people and some of the things
that you start talking about with an individual
brings forth that intelligence and understanding
what their intelligence is.
. . . See in my culture, in how I was raised
in Cree, listening to the language and
learning the language and understanding*

the language and how it reflected my life and my association with people around me. (Chub Chub)

An individual who is very intelligent for me is the one that has compassion, who has empathy, that's the word I was looking for, and to be able to recognize the human being as a human being, that there's different forms of character in that individual. To me that guy's intelligent. (Eight)

The ideas expressed in this theme are directly related to what people can perceive empirically through the senses. They are the things that define certain traits in people that may be viewed as examples of intelligence. It depicts the concrete rather than some of the more abstract understanding of how Plains Cree view human intelligence. I found it an interesting balance between some of the other more esoteric, or metaphysical concepts involved with spirituality. It is a great example of the holistic, overlapping qualities involved in their overall concept of human intelligence.

Hegemony – 115 Mentions

This theme/torus includes 115 mentions. It addresses the effects of colonization on Plains Cree peoples. The topic of how the colonizers forced education on the indigenous people is reflected to a great extent in their self-assessments. Many participant's statements reveal the deeply inflicted wounds and disruption to their culture that came from the residential school experiences. For example, Louis stated, "A lot of that flow of intelligence has been tragically interrupted by the Indian Residential School system." There was also a response to the loss of their lands and way of life...dominance and hegemony left its mark as shown from these quotes:

Well first of all I guess, intelligence is a measure of knowledge of your surroundings, and that measure of intelligence I think varies with each group of people, and I will make two distinctions, I will make the distinction that the newcomers or the settlers are the people that came with the idea of taking over our lands, and I will call ourselves the indigenous or original inhabitants. (Cree Foot)

I think when you come to the settler's societies they brought with that a different concept, and that still exists today. The concept is one of, instead of co-existing, it's one of dominance. Dominance over land, dominance over animals, dominance over plants, dominance over each other on racial lines. Colonizing a group of people that's more dominant than you to go and take their lands. (Cree Foot)

I guess one of the things that I go back to is when we think about our treaty. I have two concepts of that: one because of intelligence I'm mad at the old people for selling all my land for one thing. . . I thought that was pretty dumb. But second when I go back and understand how they perceived the worldview at that time of when our land, our territories that we gave for what we have to today . . . when I was travelling here and I looked at all the land, the fertile land that we gave up. But going back to then they had no choice. (Eight)

So intelligence is important for primarily, I guess, survival. . . That's why we've survived, that's why our culture has survived in spite of Christians, in spite of missionaries, Residential Schools, scooping kids, you know, adoptions from the 1960s, that big scoop where they were just picking up

kids. These kids were denied the intelligence they were supposed to have had and would have gained had they stayed in their own communities. So a lot of damage, and yet we still survive. (Louis)

Other statements spoke to how Western belief systems, and the process of testing for and measuring intelligence affected the Cree. Also included were the ways in which the Cree continue to co-exist and function within the larger mainstream culture.

Well I just want to emphasize again the issue of IQ which in the settler world or non-indigenous world is intelligence measured by testing, and I suppose school-based testing is again a measure of specific surroundings, and I think unless there's a change in that whole curriculum, which starts incorporating more of our concepts of our way of life. When tests start recognizing that these are important, we may continue to not do as well, you know, in testing as them the settler's kids. (Cree Foot)

I guess contact has evolved us into a situation now where our traditional intelligence no longer applies, that makes us dysfunctional, that's why in European standards we need life skills. Because with our traditional intelligence we got to a place where that's become almost like redundant because now we have to live . . . in the situation we were in, now we're transformed to a different environment, where a lot of our learning skills have become not really applicable. But also in this transformation, our ways of collecting intelligence, our ways of providing intelligence to the people that are collecting intelligence, that world is now completely different and it's

separated from our spirituality. That's why we are confused. (Gwajin)

But, today we are living in a really more like technological world and there's things we have to be able to adapt to. (Little Thunder)

I believe that the Europeans that came and colonized us, came with the belief that they could influence our way of life, and I think that was a very wrong assumption. (Cree Foot)

Now it's getting different because contact altered it a lot, and how our life is transformed here, how our traditional intelligence might no longer be here, and that makes us weaker. To connect with the Creator the traditional way, that's another issue we're dealing with. Language is one of them, that really disconnects us from the Creator, because we're no longer amongst, we are kind of living with the Western world, just like no different from other animals. Like gophers, they live amongst the cement here. (Gwajin)

. . . like in our histories as Cree people we have to adapt to all the environments you know, year after year, and an influx of Western societies coming in and contaminating our ways, poisoning us with alcohol and deceitfulness and disease, and assimilating us with their Residential Schools, and we had to think of innovative ways to withstand that constant, you know, change to survive (Eight)

When a drum is sounded, it calls us home, back to our own [Cree] ways. (Eagle Woman)

How the Plains Cree have coped with and survived the ravages of colonization and hegemonic circumstances indicate the amazing resilience and strength of self-identity that prevails despite all the attempts to assimilate them, which of course can be a polite euphemism for annihilation – the ramifications of which are all evident in how they perceive their own intellectuality.

Systems of Expression (Rituals) – 112 Mentions

This theme/torus had 112 mentions. It covers the use of ceremonies and rituals, the importance of following proper protocol, and balance and awareness in one's life. The first quotes represent how ceremony is considered in relation to intelligence.

Our sincere belief in the Creator is our driving force to understanding the challenges that we are faced with, that we always try to accomplish them through ceremonies. Ceremonies are a bookmark of how knowledgeable you are in terms of understanding the differences in them and also your earning a certain amount of knowledge and intelligence as you are going along. (Little Thunder)

. . . like the Medicine Wheel, the Sun Dance, and Sweat Lodge, these are the types of rituals that we practice, to be forgiven for our wrongs and to be able to exist on Mother Earth with the benefits we get from Mother Earth and intelligence would be one of those aspects. To be granted an intelligence to be able to conduct these types of ceremonies, that's one type of intelligence. (Chub Chub)

Protocols are guidelines for conducting business or managing an event. Their

importance is depicted in the following quotes: for example, "there are certain protocols when you pray, even the direction you face." (Louis)

Especially protocol, you know there's certain ways, certain protocol, you have to follow in order to retain all this knowledge . . . say like when we have a feast, there's a certain protocol you have to follow. (Wapiska)

Smudging is a ritual and is spoken about here as well as how balance between all the systems of expression are integrated:

"So balance for me was part of the intelligence that they had, balance with nature, balance with their lives." (Eight)

That's what we do, first thing in the morning when we wake up you smudge and then you pray for what you are going to do that day. And that is what I usually do is smudge and pray in the morning, and then my days really good after that. (Little Thunder)

Being aware of the use of ceremonies and rituals is a metacognitive process related to intelligence and is addressed astutely in this explanatory statement:

Reminds me of one thing. I don't know if anyone specifically talked about it but building intelligence when like you talked about a newborn . . . the Moss Bag. How we used the Moss Bag to wrap newborns and babies into, and it was to create, to build their own intelligence by creating an awareness of their surroundings. They used their senses to learn different things while they were babies, like sense

of sound, hearing voices, different sounds in nature and all that kind of stuff. That was used at the very beginning of a child's life, everybody's life. That's how they built their [Cree word]. . . it was making them use their senses to build those up, which would build on their intelligence in the future. (Louis, via the Interpreter)

The use of rituals and ceremonies appear to be very important ways for the Cree to exhibit their beliefs and values and seem to have great influence on their understanding of human intelligence. It provides a framework of processes and protocols that give balance and guidelines for living according to their cultural dictates and norms, reflecting their consideration of intelligence.

Results/Outcomes/Consequences – 48 Mentions

This theme/torus has a frequency of 48 mentions. It expounds on the way the Cree connect survival and their ideas of self-identity to human intelligence as demonstrated by the following quotes:

To me intelligence is survival; it's the concept of knowing exactly where you're at, at that place, and what you need. In our culture, in our way, I heard talk about how there were millions and millions of people in North America. And we all died off, the population dwindled. It was only the people that were very lucky to survive that, that we are here today . . . for me that is intelligence. (Eight)

We respect the natural laws and then we use that intelligence that's given to us to be able to walk through life with that intelligence that's given to us for our survival. (Chub Chub)

. . . intelligence of knowing who you are, where you came from, who you are as a person, your identity, your self-identity. (Eagle Woman)

This theme/torus opens a window to view how the Plains Cree Peoples use their intelligence to overcome negative, demeaning judgments of them and invest instead on the positive energy that comes from their cultural beliefs and values. In essence, it shows how their perception of intelligence leads to how they think of themselves as individuals and as a group.

Oral Traditions – 44 Mentions

The theme/torus of oral traditions had 44 mentions. It includes mythology, storytelling, and symbolism. It also highlights the difference between Western values of the written word juxtaposed to the indigenous values of the spoken word. It was interesting that the term mythology met with some resistance from many of the participants that they seemed to interpret as disrespectful of their beliefs. There is no direct Cree term for mythology, but storytelling, maintaining oral traditions, and using symbols to maintain tribal knowledge was clearly articulated. These quotes are a great example of those feelings:

"Yeah, mythology and symbolism were for children, for them to grow and develop spiritually, not for adults" (Kantunak).

There's really no Cree word for mythology. Again, I think it's a function of the English language, because it that a word our Elders use or would they say (Cree) . . . what is something that is given to us from creator, it's something that's given to us from above . . . the overall concept

of spirituality would override the concept of mythology because I think that's more and more encompassing way of looking at who we are and where we exist.
(Cree Foot)

Another very cogent part of this theme/torus was the actual use of stories in answering interview questions as witnessed from these quotes:

I got my Indian traditional intelligence from my grandmother and from who she had heard it from, that's, I consider maybe around early 1800s. I heard some things from and through generations, and so as far as information and passing it on it's fairly accurate, and that's how I see us, that way. We were intelligent--it's what you do with it, how you live with it, and how you carry out your life with it.
(Gwajin)

To me when I used to hear those Elders telling us those stories, what each character did, I've picked up a lot of information from there to reinforce my life on earth, and to reinforce the connection to the Creator. That's [what] those stories meant to me. And also, what they symbolize like, okay, [Cree word], to me he's not a trickster, [but] people call him trickster. [Cree word], it's a Spirit, something that is extreme; he's that kind of a character, because what I hear about those stories, he did a lot of things to survive, which were out of a[n] extraordinary way he did it. He had powers and he symbolizes things, but that was his way of life. (Gwajin)

Just as a personal observation and commentary on oral traditions, I must add that the ability to maintain accurate information and

hand it down over generations is an amazing feat. It requires a high degree of memorization and an ability to relate them in ways that are relevant to new generations. The value of knowledge keepers in indigenous societies is immeasurable.

Applications – 11 Mentions

This last theme/torus refers to how intelligence may be utilized and what advantages or disadvantages may result within the Plains Cree culture. With only 11 mentions it may seem to indicate a lack of importance. However, the way an individual navigates through the myriad of challenges in life is an example of intelligence in motion. It includes situational influences, motivations, observations, and risk taking. This makes sense because intelligence is reflected in the manner in which it is applied to one's life (W. Fine Day, personal communication, May 27, 2014). Gwajin added to this point in his interview when he said, "Yeah, intelligence when you, when I say it completes you, it makes up your life, and it also guides you, and it also motivates you." More quotes support such premises:

So the intelligence itself it's not a measure of degree or . . . it's not how big your brain is or . . . it's not measured by possessions or how much money in your pocket or any of those factors, it's situational to how that person is able to use intelligence to help certain people, their family, brothers and sisters or different types of situations in the community. (Chub Chub)

Intelligence is an understanding or knowing, it's not that one word intelligence, in the Cree language, it's a lot of words. But that's the main thing--it's understanding and knowing, that's the word intelligence.



Medicine Wheel at Sliding Hill on Sweetgrass Reserve, May 2014

(photo submitted by the author)

For the cultural values of the Cree, that's what really, I wouldn't know how to say this, that's what really motivates the Cree people in doing what is right, and understanding what is right and what is wrong. (Grandfather)

Risk-taking could be part of it, because how else can you learn something that brings you intelligence if you don't take a risk of trying certain things, and you learn from those things of taking that risk. That's another form of intelligence. (Chub Chub)

This last theme/torus was an excellent venue for visualizing the every-day uses of the

Cree perceptions of intelligence. Although it was not high in mentions it nonetheless exemplified the connection between concepts of intelligence and their actual functionality.

Reminiscent Thoughts and Gratitude

The Plains Cree people I have had the honor of becoming acquainted with personally through this study, have displayed and shared a genuine sense of enlightenment on the topic of human intelligence. The lack of an exactly translatable word in their language equal to the English word "intelligence" makes it an even more amazing display of their ability to create cross-cultural paradigms enabling mutual understanding. As an academic researcher from another culture I am immensely grateful

for the generosity of the participants and all people in the Battleford communities, both indigenous and mainstream.

Particularly significant to me, is the personal and spiritual connections made with Mother Earth on the beautiful sweetgrass. The power of the medicine wheel is a tangible energy. I am charged with that energy, with the bravery, resilience, and intelligence of the Plains Cree people, and with the legacy of the Ancestors. Their stories have become part of my story. ■

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This article may be cited as:

Frey, J. (2017). A Toroidal Representation of Intelligence From a Plains Cree Lens: A Bridge Toward Enlightenment. *Fourth World Journal*, 16(1). pp. 11-30

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