The idea of sustainability has become, in this time of branding and mass consumption, a term that often seems lost in the myriad of perspectives for what should be included under its umbrella. In the west, the idea of sustainability is one that often seems principally directed towards what would be called environmental sustainability – where understanding energy consumption, materials, transportation and other ‘quantifiable’ measures are used to evaluate improvements and to define success. But for many other peoples, the idea of sustainability is much larger and often includes sustaining a way of life and all that is included within that.

Over the past three decades I have worked on numerous projects that would fall, in different ways, under the sustainability agenda, including projects with Tibetan communities in northern India, and with Indigenous communities in the Canadian sub-arctic and arctic. In this paper I will be reflecting on cultural sustainability and the inherent connection that, in the eyes of Indigenous peoples, exists between culture and the environment. This will include an exploration into the nature of working within Indigenous communities and the role of the designer in this process. Significantly for this, I will be drawing upon the writings of Indigenous scholars and researchers and the work they have been carrying out on what is being called an ‘Indigenous Research Methodology’ (IRM), noting here that to my knowledge there has not been an equivalent piece of work carried out for professions such as architecture.

I begin with the premise that, when designing for ‘the other’, more often than not there has been more emphasis placed on the artefact than on the process that created it, with the creation of ‘architecture’ being no exception. Yet, within my own experience, I see that not placing greater emphasis on process we often fail to make more lasting and meaningful connections to culture and place. Over time I have learned to foster this perspective through the eyes of both the builder and the designer (I am both) and to use these to understand when both quantitative and qualitative gains are being made.

**Location**

Just as I would start a session working with an Indigenous community, I will begin with ‘location’. "It is our opinion that one of the principles of Aboriginal research methodology is the necessity for the researcher to locate himself or herself. Identifying, at the outset, the location for which the voice of the researcher emanates is an Aboriginal way of ensuring that those who study, write, and participate in knowledge creation are accountable for their own positionality” (Abolson and Willett, 2005, p. 97). Location is a significant feature within Indigenous culture and the process that Indigenous peoples use in the sharing of knowledge. As we might say, in a more
contemporary context, location helps to know where someone is ‘coming from’, that is, to understand the perspectives, values, and experiences that one brings to the table.

As I consider my own ‘location’ it is significant for me to see how my life has been, at least in part, a journey of discovery. I am an architect, builder and researcher. I am also a traveller and adventurer. My spiritual persuasion is that of a Buddhist, including a viewpoint shared with many Indigenous peoples that the inner journey is an essential component in the search for truth and personal discovery. The practical perspective of the designer and builder, and the mystical notion of the Buddhist pilgrim together form significant aspects of my character and the challenges I have faced in my own life and work. I am also a husband and a father. I was born in Ireland and moved to Canada when I was two years old. But unlike my parents, I have no accent, nothing that outwardly places me as an immigrant. As immigrants to Canada in the mid 1950’s, we moved into a dominantly ‘white’ society’ where most people looked and talked like we did, and where the customs of everyday life had a tremendous familiarity. While I grew up on what was ‘unseeded’ Indigenous land (of the Algonkin people) I was taught nothing about the peoples who had been there before white settlers arrived – what had occurred was simply not my responsibility.

All of this, of course, is part of my ‘white privilege’, the benefits that were afforded to me as a white immigrant to Canada in the 1950’s. These benefits were numerous. Economically, my father was afforded many opportunities than he would have had in Ireland. My education was in the language that we spoke at home. Other students all looked like me. The names of streets, communities and other places were not of the Indigenous people of this country, but were from the region of the world from where I came. My challenges as a child were not of someone who had come from a different culture - this culture was all around me.

A Journey Begins

As it was influential on my work across the north, I begin by reflecting on one of the first ‘cultural' projects that I worked on – the design for a Buddhist Nuns Institute in the Tibetan community of Dharamsala, India in the early 90’s. Through this I became aware, when working in very traditional communities, of the need to approach design differently. While I had been to India many times and had spent some months studying Tibetan Buddhism there, my arrival to work on a project necessitated my seeing the community through new eyes – of a new journey of discovery.

Being invited to the community to work on the design for a new project I was, like most westerners, motivated by timelines and output. I was anxious to get going on the work. As I met with my original contacts, inquiring several times over a few days about what project I would be working on, I found my inquiries being stepped around by what seemed to be a figurative sleight of hand – on that put any question off to the future. After these mildly anxious tries, I decided that instead of pressing the issue further I would spend my time getting to know the context better. So I began renewing my sense of the community, meeting with lamas, government officials, and shop keepers. I took photographs of life on the street, of building projects, of ceremonies and rituals – taking in what was both a very traditional and contemporary community.
I was to discover that this was not involved in a one way process. While developing a better understanding of the community, the same thing was happening in reverse. It is what I come to call being part of 'the observer and the observed' and was a process through which I began to develop the relationships needed to carry out the project, and through which the project that I was asked to work became clear to others. It is noteworthy here that it was disclosed to me indirectly, through a connection I had met, to a third party that I had not. I came to see this as a process similar to the Indigenous peoples use of 'intermediaries', a practice that allows each participant the opportunity to make a decision on whether and how much to be involved – to develop a relationship or not.

And while I did get to design an important project in the community, it was the process of working within the community, the relationships that were developed and the deeper understanding of my own role and responsibilities where the most important lessons were uncovered.

**Ways of Knowing**

In the early 2000’s I began working as the Northern Housing Researcher at Canada Mortgage and Housing Corporation in Ottawa. Through my first initial research on northern housing in Canada, I was struck by the many layers of failure that seemed to have become almost an inherent part of the process. Poor designs that did little to meet the cultural needs of Indigenous families, were accompanied by energy standards that were sorely inadequate for the severe northern climate and construction techniques that made durability virtually impossible. Significantly in my eyes, this occurred without any involvement of northern peoples themselves - the greatest failing being a process did not seem to be interested in 'northern voices'.

Being motivated by my experience with the design process in India, I began to research ideas on what could be done to improve the design process for working in Indigenous communities in Canada. Drawing upon the work of Indigenous researchers I learned of the widespread distrust for the way that research has been carried out in these communities, about distrust as to how this work was been interpreted, for who was doing the interpreting, and the perception that little value has been delivered to Indigenous communities from this work. I wondered what the design process had to learn from this.

To understand the needs of working within Indigenous communities, it is necessary to develop a deeper understanding of Aboriginal epistemology (ways of knowing) and the inherent differences that exist between western values and those of Indigenous peoples. Cree Scholar Willie Ermine provides many thoughts on what he sees as the great divide that exists between the traditional values of Indigenous people and those of the western culture – and how this has been used by the west to justify the perceived superiority of western thought, and the tremendous levels of oppression and destruction that have been inflicted on the lives, cultures and lands of Indigenous peoples throughout the world (Ermine, 1995, p. 102).
To Ermine, much of this divide is based on two dominant western ideas. The first is the emphasis that is placed on ‘objectivity’ and the standpoint that ‘objectivity’ is the only ‘path to truth’ (Ermine, 1995), and that reality is both quantifiable and measurable, with objectivity considered as the only legitimate path to creating knowledge. It is a perspective that, according virtually all Indigenous researchers whose works I have explored, sees all other viewpoints as being inherently inferior. From an Indigenous perspective however, this has created a fragmented view of the reality and a ‘way of seeing’ that compartmentalises the world, and places insurmountable limitations on perceiving and understanding humankind’s interconnectedness with all other life on the planet. In my own work I too have struggled to address this ‘fragmentary world view’ and the compartmentalizing that comes from it.

As Yuchi Scholar Dr. Daniel Wildcat writes, we are at a time in history where “many humans are awakening to the fact that throughout the world, our cultures in all of their behavioural, material, symbolic, and ideological manifestations were until very recently reflections of the rich ecological diversity of the places on this Earth. It is particularly telling that this awakening is occurring at a time when a critically complicating factor in the survival of our Indigenous cultures is the creation of a culture, one monolithic global consumer culture that makes sense of place - or more properly, natural landscapes - irrelevant in its homogenizing logic” (Wildcat, 2009, P. 38). In contrast, within Indigenous cultures Dr. Wildcat writes of what he calls ‘the nature-culture nexus’, a rich symbolic relationship that recognizes the fundamental connectedness and relatedness of human societies to the natural environment and the other-than-human relatives we interact with daily. It is what I see as the inherent connection that exists between environmental and cultural sustainability where, in addressing issues of cultural decline one is inevitably dealing with issues of environmental degradation and vice versa.

The second dominant idea Ermine raises is the emphasis within the western paradigm on the outer journey as the almost exclusive source of legitimate knowledge and discovery, a viewpoint that stands in great contrast to the Indigenous perspective of developing understanding through the journey of the inner self. As Willie Ermine notes, “it is only through journeys into the metaphysical that we can fully understand the material world” (Ermine, 1995, p. 107). Dreams, ceremonies, storytelling and other methods directed at inner understanding and awareness are all essential components of this - where one’s ontology (way of knowing) and epistemology (way of being) are intertwined and constantly refer back to and influence each other.

**The Northern Design Process**

In his book ‘Making: Anthropology, Archaeology, Art and Architecture’, anthropologist and culture scholar Tim Ingold wrote, “It has, of course, long been the conceit of the architectural profession that all the creative work that goes into the fashioning of a building is concentrated in the process of design, and that the subsequent phase of construction adds up to little more than its realization in the proverbial ‘bricks and mortar’ of the built environment” (Ingold, p 47). As a designer who has worked with Indigenous communities I would suggest that this statement, while legitimate in holding the architectural profession to account, does not consider how a design process developed to incorporate a wide range of perspectives has the potential to do exactly the opposite. I will share an example of what this means.
As an essential part of carrying out housing design projects in the Canadian north, I have facilitated a number of design ‘charrettes’ or integrated design workshops in Indigenous communities. These have been valuable and revealing events where community members have shared perspectives on housing designs and policies and their own housing needs. While each of the charrettes provided valuable perspectives, one of the most significant viewpoints shared has been the importance of relationships in the design of housing and communities in the Canadian sub-arctic and arctic.

From my own perspective there are three fundamental relationships that are essential to recognize - the relationships of the extended family or clan; of the clan within the larger community; and of the community to the land itself. While each are significant, the relationship with the land – a deep spiritual connection to place - is the one that the western mind seems to have the greatest difficulty in truly understanding. As the Tlicho people of the Northwest Territories in Canada state quite simply but profoundly, ‘the land is our home, our home is the land’. Understanding that words like these are not enough the Dene, as part of their land claims negotiations in the Northwest Territories, developed a map of all their traditional hunting and trapping routes across the territory - demonstrating that theirs was not an empty unused land, but a place that has been traversed, understood and utilized by the Dene for millennium. While the lines placed on the map to assist those who measure, for the community value lies in the stories that accompany each line (Figure 1).

![Figure 1: Dene Hunting and Trapping Routes of the Northwest Territories (Renwick, 2010)](image-url)

**Knowledge and Storytelling**
Opaskwayak Cree Scholar and Researcher Shawn Wilson notes that while western research methodologies see knowledge as 'individual in nature', “this is vastly different from the Indigenous paradigm where knowledge is seen as belonging to the cosmos of which we are a part and where researchers are only the interpreters of this knowledge” (Wilson, 2008, P. 38). Further to this is the Indigenous perspective that true knowledge is gained through experience. In writing about the Dene communities in northern Canada, Researcher Jean Guy Goulet notes that while true knowledge arises from experience, it is essential that this is understood within the larger cultural context. "To state that true knowledge of the Dene way is firsthand knowledge should not detract our attention, however, from the fact that personal experience is informed by a rich tradition of stories about powerful individuals and animals. ... stories that legitimate the individual pursuit of knowledge" (Goulet, 1998, p. 29).

Shawn Wilson adds to this by highlighting that stories are an essential method for knowledge transfer as stories provide guidance while allowing the receiver of the knowledge the power to interpret the stories in their own way. "Stories in the oral traditions have served some important functions for Native people: The historical and mythological stories provide moral guidelines by which one should live. They teach the young and remind the old what behaviour is appropriate and inappropriate in our cultures; they provide a sense of identity and belonging, situating community members within their lineage and establishing their relationship to the rest of the natural world” (Wilson, A., 1998, P. 24) Story-telling is about relationships. “The ethic in place is that it is not right to interfere with another's actions or thought process - that would allow them to be accountable to their own relationships." (Wilson, 2008, p. 133).

Knowledge is also hierarchical. The knowledge bearer has responsibilities as the carrier of knowledge, of how and when certain knowledge should be shared and depending on the importance of the information being transmitted, when someone has 'earned the right' to also be carrier of this knowledge.

Relating directly to knowledge and storytelling is ‘listening’- in many ways the method that one uses to effectively work in Indigenous communities. While this may in some ways seem obvious, its importance cannot be over emphasized. Listening is complimented with observation – with a keen eye set to learning from the circumstances that are presented on a day to day basis.

**Relationships and Relationality**

All aspects of life in Indigenous communities are based on relationships, with the view that through relationships the active process through which knowledge sharing occurs. As Hawaiian Indigenous Scholar Manulani Aluli Meyer writes, “An Indigenous world view thus begins with the idea that relationships are not nouns, they are verbs. The basic notion of relationality, dynamic coherence, interdependence and mutual causality helps us see the context of an idea and people, tangible or not, and respond appropriately. ... Relationships as verbs infers the intentional quality of connection this is experienced and remembered” (Meyer, 2011, p 6). From my own perspective, by giving priority to the relationships inherent in the family, the clan, the community and with the land, the principle of relationality opens many design avenues for
developing designs for housing and communities. As relationality includes the relationships that one develops while working in a community, they guide how much information is shared and when, as well as the amount and kind of involvement people will commit to a project.

During his presentation at the Northern Housing Forum 2012 in Alta, Norway, Dr. Gavin Renwick of the University of Alberta provided a thoughtful reflection on the nature of relationships. When that he was establishing through the gathering of stories from elders, Dr. Renwick made the conscious choice to use local young people as translators rather than learning the local language as this would ensure that the young people would also be exposed to the stories that the elders were sharing. An intimate understanding of relationships was inherent in this decision.

As part of design charrette I participated in in the community of Gameti, Northwest Territories, the importance of relationships and knowledge sharing was also evident in the descriptions that elders provided on the qualities of a Tlicho house. While only a partial list, in the words of the Tlicho elders a broad definition of the Tlicho house includes:

- a place where people share food, stories, knowledge, skills
- a place where you learn and share stories, languages and skills because it is open enough
- a place where both western and the traditional Dogrib and ways can be followed and learned. “Even if young people are doing homework and studying for school - they should be able to hear the Dogrib language, stories and learn Dogrib knowledge and skills. Thus, even if youth are not actually listening to stories, they can still hear them.” (CMHC, 2005, p. 7)

Agency

When considering the question of being from the ‘outside’, some reflection on the idea of agency is necessary for those who carry out work in Indigenous communities, particularly with regard to design. In an eloquent keynote speech on ‘Agency’ delivered by sociologist and feminist Gyatria Spivak at the “Theatres of Decolonization” conference in Chandigarh India in 1995, Dr. Spivak challenged the audience of architects, planners and researchers to understand that, when working in communities, we must ‘earn the right to undo the normality of another’s existence’, something that can only be done through the development of relationships. To Dr. Spivak, being professionals did not lessen us from our responsibility to others or from using processes that would help us understand these responsibilities - that one is not separate from the community, but that, because of the relationships that have been developed, one is seen to have responsibilities to the community. This is an aspect of one’s agency.

Agency requires taking on an appropriate set of ethics, values and viewpoints. As Shawn Wilson writes “My role is not to draw conclusions for another or to make an argument. My role, based upon the guidelines of relationality and relational accountability, is to share information or to make connections with ideas. The ethic in place is that it is not right to interfere with
another’s actions or thought processes - that would not allow them to be accountable to their own relationships” (Wilson, 2008, p. 133).

**Community Design Charrettes**

I have shared thoughts on the importance of relationships, on knowledge sharing through stories and agency as these have become essential elements in the development of a northern design process. This has included using design charrettes for every project and continually adapting the process to reflect specific needs of each community and the lessons learned on each event. The significance of relationships, including the relationship with the land, has come up continually and consistently on the housing projects I have carried out across the north.

A design charrette held in 2006 in the Inuit community of Arviat on Hudson’s Bay in Nunavut is one example of this. In the case of Arviat, what was initially to be a one day workshop, soon evolved into a three day event. As the elders, local administrators and builders explored ideas, I soon noted that the conversation was being dominated by the builders, whose legitimate cost and capacity concerns appeared to present many obstacles to the innovative ideas (spatial and technical) being proposed by different participants. Realizing this was preventing an open flow of ideas, I asked the builders if they could return for a second day, where we would take all of the ideas being proposed and examine the technical and cost implications as well as potential solutions to these. Agreeing to this, the conversation was freed up, allowing for a wide range of ideas to come forward. For the builders, the uneasiness was not with the ideas in new themselves, but with ensuring the challenges of those who would build these projects would not be lost.

When I also noted that the women attending were less forward in bringing ideas to the conversation, elders I had come to know shared that many women in the community were not comfortable talking in a public context like this. To address this I proposed that we hold an additional day just for women in the community, asking one of my own ‘intermediaries’ if she could invite a group of women to come and talk about housing. This became the third day.

In addition to perspectives on the extended family, the women brought forward important perspectives on the household’s relationship to the land. For example, while hunting remains an integral part of life in the community (for both food and skins), the women noted that it was difficult to sew caribou and other skin clothing in their houses because, even if they had room, the temperature inside houses was too warm for storing and maintaining skins. The women suggested the house needed a ‘place’ where the temperature could be kept at 5 degrees C., the temperature where skins would remain pliable but would not begin to deteriorate from the warmth. This was added to the house – becoming the sewing (and butchering) room (Figure 2).
As I have carried out ongoing explorations of culturally appropriate housing, I have been surprised by the range of examples of ‘culture‘ and how these have influenced the design of housing projects. In 2014, I facilitated a design charrette in Nain, Nunatsiavut, the Inuit territory in northern Labrador. As part of Nunatsiavut’s Sustainable Community Initiative, the charrette was intended to inform best practices and create a design for a small (4 apartments) culturally appropriate multi-unit housing project that would be shaped by the needs and preferences of the Nunatsiavummiut. Significantly, throughout the north, there has been a growing trend towards the use of multi-unit housing in all the northern territories, driven largely by ever increasing site development, infrastructure and construction costs. Correspondingly, there is a large degree of cultural resistance to multi-unit housing, with few examples yet developed showing how these could be developed to address local ways of life. This project was intended as a step in bridging this gap.

As the session unfolded, it was no surprise when participants (including elders, policy makers, youth and builders), shared perspectives on housing needs in the community, identified seniors and young people as the target groups for this new housing. When the specific needs of elders were considered, participants identified the importance of providing room for those come to care for elders, evolving from there to also consider the reality that elders were often caring for or raising their grandchildren – that each apartment unit required two bedrooms in order to address this.
From this standpoint, the conversation went on to consider the community’s responsibility for raising children – particularly considering the number of foster children that, at times, been the result consequence of poor housing, overcrowding and its related social problems. In a surprising turn to the discussion, a young person who was actively participating, stated that if she had an extra bedroom, she would happily foster a child rather than have that child leave the community. The result was widespread support for two bedroom units for all of the apartments. For me, this unexpected twist, provided another surprising insight and perspective on the nature of culture.

In addition to including two bedroom units for each of the apartments, the design that we developed addressed a list of priorities (Figure 3) that were provided by the participants:

- An open concept
- More lighting in the living room for sewing
- Private entrances for each apartment
- Staircases that do not allow views into other peoples apartments
- Entrance porches built as ‘warm spaces’ for household storage
- Large pantries for the storage of bulk food
- A kitchen with adequate counter space
- A separate laundry room/area.
- Larger bedrooms that would allow doubling up
- Larger bathrooms that do not ‘feel claustrophobic’.
- Outdoor storage sheds for the storage of outdoor gear

Figure 3: Floor Plan: Nunatsiavut Multi-Plex (Semple and Fournier, 2015)
Northern Sustainability

While I have been stressing the design process and cultural needs, delivering increasing levels of energy efficiency to northern housing and testing and utilizing solar technologies has also been an essential component. It is important to note that, in each community, this is being delivered through a process of incremental steps, with each project building upon the previous one. This is a reflection of the reality that, in the remote north, ‘the great’ can be the enemy of ‘the good’ – with numerous examples where trying to go too far and failing has generated the perspective that ‘this does not work in the north’. With the importance that Indigenous people place on ‘learning through direct experience’, I have also ascertained that each region needs to experience this in their own way. While ideas from other areas are drawn upon, each house design and the construction details used to meet agreed upon energy efficiency standards has been different. This reflects an approach where construction details are developed using that local knowledge and practices in combination with lessons learned in other areas. Three optional construction details, shown below, were developed to use local builders, generate local employment and to provide options for the client, depending on funding and training, to incorporate increased levels in energy efficiency (Figure 4).
Final thoughts on Process

For designers and researchers, when culture is included within the sustainability umbrella, it brings with it the inherent challenges of combining quantitative and qualitative means of evaluation and understanding. While it is possible to quantify our progress on measurable tasks (such as energy efficiency) understanding success on cultural issues has been a greater challenge. This cannot likely be done without evolving our own ‘ways of doing’ to give greater voice to and learn from the range of viewpoints that exist on culture.

In my own work and in what I have learned from the writings of Indigenous scholars and researchers, I believe there are several essential components for the development of a more culturally appropriate design process. These include:

- **Relationships and relationality** – it is the basis upon which all things are carried out and includes the natural world
- **Knowledge** – it represents a collective, rather than an individual reality.
- **Oral Tradition** – it gives primacy to the oral tradition and storytelling
- **Axiology** – Indigenous values and ethics cannot be separated from either the process or the outcome.
- **Spirituality** – it recognizes the sacredness of the earth and the interconnectedness of all living things
- **Process** – it emphasizes a non-linear process where all parts continually refer back on each other
- **Agency** – the designer/facilitator is an active participant in the process, assisting in identifying and advancing the ideas and values of the collective

I also conclude by suggesting that sustainability cannot be attained without attending to both culture and the environment, and that it is incumbent on designers and researchers who work within non-western communities, to explore approaches and methods that ensure that the ‘ways of being and doing’ of Indigenous peoples are not lost in our efforts to create a more sustainable future. In this I believe we still have much to learn.

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