DECOLONIZING ARCHITECTURE: STORIES FROM THE CANADIAN NORTH

by

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ABSTRACT

This is the story of nearly thirty years of my work where I aimed to support the creation of culturally appropriate architecture and the promotion of sustainable building practices. Much of this work was directed towards the development of culturally appropriate, energy efficient housing in the Canadian north, carried out in collaboration and direct consultation with Indigenous communities. My story is entangled with the stories of five northern communities in Canada, one northern community in the USA, and a Tibetan refugee community in India. This story is written as a self-reflection that is deeply personal and is intended to lead towards better understandings of the processes of creating housing with communities through something I call 'decolonizing architecture'. My story is a kind of auto-ethnography, written from the perspectives of white privilege, human ecology, and architectural design. This work takes a practice-based approach where, as a son within an immigrant family, an advocate, a builder, an architect, and a person who lives within Canadian society, I reflect upon my own practices.

To make sense of my story I reflect upon typical Western ways of practicing architecture and turn to the principles used and promoted by Indigenous scholars when working in their own communities to advance ideas on how architecture can be practiced differently. The decolonized approach I propose is partially a response to the calls to action of the Truth and Reconciliation Commission of Canada, but also a means to de-centering euro-western ways that architects typically use. Decolonizing architecture means removing the euro-western biases and architectural design practices/processes that dominate the design of buildings in Northern Canada. It aims towards creating culturally appropriate buildings and settlements by working with Indigenous people that live in these communities, while shifting the attitudes/beliefs of practitioners who are from outside these communities.

The decolonizing architectural process I describe illustrates seven core values learned from my own work and include: establishing the architects location, the building of relationships (including the relationship to the land), embracing alternative ways of knowing, listening to stories, making differently, seeing Indigenous spirituality as an integral part of all things, and using our 'agency' for the benefit of Indigenous communities. The chapters of this thesis detail the seven values which are presented as a series of vignettes' with the aim of encouraging architects to embrace and slow down the collaborative creating process so that it is more mindful and honours the people who need to live, for many generations, with the archi-

tecture that is produced. My hope is that my story will aid future architectural designers working in the Canadian North, as well as those working with Indigenous cultures in other parts of the world, to embrace approaches and processes that bring the voices and practices of the Indigenous peoples to the forefront of architectural design.

PREFACE

I was honoured to be invited and participate in ceremonies with various Indigenous communities throughout my work on Community-led collaborative projects that were attempting to decolonize architecture, a significant act that I hoped was validation of my participatory design methods and cooperative practice. In one of the ceremonies I attended I was further honoured with a spirit name, a significant act that I hoped was validation of my participatory design methods and cooperative practice. These ceremonies have shaped me as an architect and are integral to the work I do. They have fostered in me the belief that the process of creating architecture needs to understand and incorporate ritual and ceremony and the understanding that these are an integral part of 'culture' and when removed or ignored, leave something that is quite incomplete. This needs to be understood by my profession and can only be achieved through gaining the trust of a community while working with them to achieve a common goal. However, in order to respect the rights and practices of my community partners, to engage in ethical practice, and to avoid exploitation, cultural appropriation and epistemic habits of researchers and practitioners who come from outside indigenous communities, these ceremonial practices must-remain between me and the people I worked with. These can only be told by Indigenous people themselves as alone they can ensure the validity of what is being told and it is only, they who can determine to whom these stories should be shared.

Understanding and experiencing ceremony has been a fundamental aspect of my experience working as an architect in Indigenous communities and to developing the understanding that architecture is a temporal experience as much as a spatial or aesthetic one. From this perspective, it becomes important that architects who work in Indigenous communities take the time to foster these experiences, to attend festivals and rituals when invited, and to make room for unprogrammed time where the building of relationships and trust can occur. It raises the question as to whether commercial practices that do not have time for these experiential activities should leave this to those who can. It also is a challenge to the notion of 'settler privilege', that we as present-day architects and the descendants of the conquering settlers are somehow not responsible for the plight of Indigenous people today, as we were not there and did not participate in these actions.[1]

It is important to note that I have chosen to write about Tibetan building rituals as I have participated in these rituals as the designer of buildings for the community where my involvement in the rituals was integral to the process. Previous writing that I have carried out on this topic is already in the public domain and had the full permission and support of the Tibetan community in exile.[2]

1   Dina Gilio-Whitaker, "Settler Fragility: Why Settler Privilege Is So Hard to Talk About", Accessed April 2, 2020, https://www.beaconbroadside.com/broadside/2018/11/settler-fragility-why-settler-privilege-is-so-hard-to-talk-about.html

2   Semple, *Symbolism and Ritual in Tibetan Architecture,* Cho Yang: *The Voice of Tibetan Religion and Culture*

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PROLOGUE

… honouring ceremony, enriching design

The focus of this thesis is to illustrate a practice-based, self-reflective approach where I present four case studies that are entangled with architectural processes and concepts that are not typical to euro-western ways of practicing architecture. My intention is to report architectural approaches and processes that bring the voices and practices of the peoples within Indigenous communities to the forefront of architectural design that result in the development of more inclusive design processes and the creation of more culturally appropriate architecture. As such, my hope is that this work will aid future architectural designers working in the Canadian North, as well as, those working with Indigenous cultures in other parts of the world.

I wish this work to encourage alternative ways of creating architecture that involve a slowing down of the collaborative creating process so that it is more mindful and honours the people who need to live, for many generations, with the architecture that is produced. Furthermore, I believe that returning control of decision making to Indigenous people should be one of the goals of each architecture project that is carried out in an Indigenous community, whether in the north or the south. Signifying this belief, I brought this perspective into my work as the Northern Housing Researcher at CMHC. During my job interview for this position, I had made the case that the lack of meaningful engagement with Indigenous communities had, in a significant way, led to the design and delivery of housing that did not meet the needs of Indigenous families or address the rigours of the northern Canadian climate. I advocated that a different approach was needed and that this is one of the things that I would introduce into the process. I had learned a great deal about different non-western ways of knowing and being from my work with Tibetans in India and had a strong sense that there were experiences that I could draw upon and lessons that I learned that could be applied to northern Indigenous communities in Canada. Building relationships and taking time to observe and listen were two of these - lessons that were essential to understanding the issues from an Indigenous perspective and to ensuring that Indigenous perspectives would drive the design process.

My story as an architect began in 1991 when it became clear to me that supporting the creation of culturally appropriate architecture and the promotion of sustainable building practices would be my life's work. Throughout my career, and presented in this thesis, are the different

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communities where I've had the great privilege of working and living: working on the design of a Buddhist Nuns Institute with a Tibetan refugee community in India, and on the design and construction of culturally appropriate, energy efficient housing in the Canadian north—the Yukon, the North West Territories, Nunavut, Nunatsiavut and northern Quebec—as well as in Alaska in the USA. Over these years, to aid in the creation and development of various housing projects, I carried out collaborations and direct consultations in Indigenous communities with Elders and a wide range of community members who live in these communities.

The chapters of this thesis detail seven core values that are highlighted through a series of vignettes' learned from my practice and include: establishing the architects location, the importance of relationships including the relationship with the land, embracing alternative ways of knowing, listening to stories, making differently, seeing Indigenous spirituality as an integral part of all things, and using our 'agency' for the benefit of Indigenous communities. Framing these seven core values are four other essential stories that are significant to the telling of my own story, and are highly meaningful to the Indigenous people that I design with. Colonization is naturally at the center of the Indigenous story. The ongoing story of colonization includes the northern housing policies that have driven and continue to drive the ways that housing has been created in northern communities for decades. Also significant to Indigenous peoples is the way that research (and collaborations in general) have been and are conducted by white privileged persons who have come from outside of these communities.

Another valuable contextual aspect to the five main chapters of this thesis is a brief review of the euro-western practices of creating architecture that are generally used for all architectural projects within Canada. The seven core values and five entangled stories (mine, colonization, northern housing policies, ethical practices within communities, and normative architectural practices) of course are about story itself, something that is highly valued within Indigenous communities. The rest of this prologue sets the stage by contextualizing my story with these four other stories as well as a little bit about the idea of story in and of itself. I finish off the prologue with an examination of the methodology and the methods that I used to carry out this work.

COLONIZATION
My story of decolonizing architecture in Northern Canada must begin with reflections on the history of colonization in Canada. It is well known that colonization had profound effects on the Indigenous peoples this country. People from the colonies, immigrants like my own family and

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1   Nelles, H.V. (2004) A Little History of Canada. Oxford University Press. pg. 32. In this book Nelles takes a colonial perspective to recounting the history of Canada. That said, he begins the book with observations on when people arrive in Canada, they first see The Jade Canoe sculpted by the Haida in Vancouver or land in Mississauga a superb named for a native tribe near Toronto (2004, Becoming Canada, v.). Nelles peppers his book with small details about the Indigenous peoples of Canada, particularly the first chapter after the prologue titled *Home and Native Land*. For example, he writes about Indigenous people and natives in respect to "weapon's superiority", hunting and pottery (pg. 3), acknowledges some of the impact of colonization by stating "From the native point of view, Cartier's voyage foretold a world turned upside down" (pg. 20), "Natives of the Arctic, the Beothuk of Newfoundland, and the woodlands peoples of the Maritimes felt the impact of the European presence most acutely." (pg. 22), and a recognition that in order for the colonists to survive in Canada they needed to engage in reciprocity such as "The French borrowed indigenous technologies—canoes, snowshoes, and toboggans—to travel in the new landscape, adopted some aspects of Native clothing, and had recourse to herbal remedies for sickness and injuries." (pg. 27). The rest of the book takes a euro-centric position in the telling of Canadian History yet ends with a short chapter titled 'Another Opening' that begins with "French and British colonization efforts, and especially the diseases associated with those undertakings, fundamentally altered indigenous societies one after another." (pg. 255).

pioneers earlier on, came to Canada to build settlements based on Christian Euro-western values. The primary objective was the acquiring land, controlling it through farming and ranching practices, building churches, building businesses and exporting raw materials. H.V. Nelles, a Professor of Canadian History writes in his book *A Little History of Canada*, "The French plan for the colony came straight from the mercantilist pattern book".[1]

This story of colonization has continued to disrupt Indigenous ways of living and knowing. Along with colonial peoples wishing to acquire and control land, they also brought ways of living and being that were contrary to the ways that Indigenous peoples lived. Practices such as living on and with the land through wandering, making trails, trapping, collecting roots and berries, telling stories, and the deep Indigenous spiritual connection with the land did not fit with the euro-western notions of progress that placed value on 'being industrious', giving value to the land through its exploitation, and using money as a primary means of trade, while completely disregarding the land-based knowledge of Indigenous people. One of the challenges for the euro-western perspective is that, when it scrutinizes the land, it does so without any context, that is, without defining any relationship with the land or any natural level of accountability for how it is used or what is taken from it. Furthermore, euro-western colonialism brought ways of thinking that aggressively forced assimilation and disrespected Indigenous peoples in a long list of profound ways. Any small (or large) history of Canada now acknowledges that colonial pioneering and immigrant ways of land-ownership and control, lack of land stewardship, segregation of nature and people, the value for monetary trade, attempts to forget the past, and practices such as not engaging in reciprocity have been and remain contrary to those of Indigenous peoples. The *Truth and Reconciliation Commission of Canada* (2012) acknowledged and presented a long list of unspeakable injustices that had been imposed upon Indigenous children, families and communities across Canada as a step in the process of amending some of the damages of colonization. These injustices included forced schooling at residential schools away from family and continued pressures to assimilate Indigenous communities into euro-western ways.

These euro-western ways have and continue to include approaches to architectural practices and design that are devoid of human-centered practice, placing value on the latest trends in architecture, the use of cost-efficient construction techniques and scientific/business-oriented approaches to building research and development. As noted by the eminent Finnish Architect and scholar Juhani Pallasmaa "our secular, materialistic culture is turning buildings into mere instrumental structures, devoid of

mental meaning, for the purposes of utility and economy."[2] Although human-centered designing practices have gained some credibility in current times, in the early days of colonization and throughout the design and development of Indigenous housing and communities there has been little, if any, human-centered designing[3]. In addition to this, the delivery of housing in remote northern communities has largely been carried out by builders from outside the communities using southern construction techniques and materials that are ill suited to the rigours of the harsh northern climate. Often mass produced and prefabricated in the south, housing and other buildings would arrive in communities like 'spaceships' with little, if any, consideration for who these buildings were being assembled for. For people who had an intimate relationship with the land and deeply developed skills on the building of structures for surviving and thriving on this land, this became another of the deeply destructive actions that accompanied, and in many ways continue to accompany, colonialism in the Canadian north. Although it is out of the scope of this thesis to describe the history of housing in Northern Canada, it is useful to provide a brief history of architectural design practices as a counterpoint to the processes that are described throughout the rest of this thesis.

NORTHERN HOUSING POLICIES AND PRACTICES

Various housing policies, initially called housing acts, have existed in Canada for nearly a century. The Dominion Housing Act of 1935 was the earliest of these policies, enacted with the aim of ensuring improved shelter, high quality housing and high-quality residential environments for Canadian citizens[4]. This was followed by the 1944 National Housing Act that is recognized as having provided the basis for all future Canadian policies[5]. Not surprisingly, these approaches to housing policy in Canada, which were applied equally to all parts of the country, took an "assisted free market" approach with the goal of providing funds to stimulate the housing market[6.] Informed by euro-western governments that openly promoted the assimilation of Indigenous people in the country, this prevailing agenda echoed the colonization projects of Canada's historical past and undoubtedly informed future Northern housing policies. When housing policies were developed for Indigenous communities in the past, not only were the opinions or views of northern Indigenous peoples not sought out, but the design and installation of housing became part of a conscious process of assimilation. As noted by Indigenous scholar Dr. Cora Weber Pillwax, "I watched new Alberta housing systems come in, new land tenure, new ways of holding land. That stuff destroyed our communities. Every community went through it, reserves included."[7]

Today's *Northern Housing Policy* prepared by the Government of Canada[8] identifies that Canada's North has "…many unique and regional-spe-

2   Pallasmaa, *The Embodied Image: Imagination and Image in Architecture,* 119

3   Human-centred design has a long history going back to participatory design practices of the 1970s. See Nigel Cross (1971) Design Participation. Unfortunately, these early practices of human-centred design were designer-led and involved testing ideas that were well formed with clients rather than spending the time to actually understand the real design needs of the people who would live or work in buildings. Since the 1970s there has been a rise in human-centred practices within design studies, however, these do not provide concrete approaches to designing with unique communities such as the Indigenous persons of Canada. For example, the D-school at Stanford's (see https://dschool.stanford.edu/) proposes a five-stage design thinking process: empathize, define, ideate, prototype, and test. Although the D-school process begins with the concept that designers should empathize there is no real concrete way that designers are taught to empathize. That said, within the design community there are human-centred practices for specialized communities that take human-centred approaches that result in meaningful solutions (for example, see Strickfaden & Devlieger, 2011; Devlieger & Strickfaden, 2012).

4   Bacher, Canadian Housing "Policy" in Perspective, 8

5   ibid, 10

6   ibid, 11

7   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 108

cific challenges influencing housing conditions, including: the high costs of transportation of materials and fuel, shortages of local skilled labour, a lack of affordable and suitable housing, overcrowding, short building seasons, climate change, and inadequate or inconsistent funding."[9]

Uniquely, the development of the most recent Northern Housing Strategy brought together representatives from across Canada and Alaska and focused on coming up with a strategy that included more holistic housing solutions, integrating Federal and regional management boards, promoting collaboration and knowledge sharing, supporting socio-economic research initiatives, and supporting Indigenous self-determination.[10]
It is hoped that within this post-Truth and Reconciliation Commission era Northern Housing Policies and new architectural projects will utilize processes that are more culturally appropriate. That said, at their heart Canadian Northern Housing Policies are still informed by euro-western values and approaches and appear to be largely, if not exclusively driven by the market economy. As such, I believe that these policies are still linked to the rationale and perspective that Indigenous people should be assimilated into euro-western values, and make little attempt at reconciliation with Indigenous ways of knowing and being.

While a great deal has been written on the process of research and how it could better reflect the values of Indigenous peoples—where process and product are indelibly interconnected— little or no attention has been paid to the process of creating architecture in an Indigenous community and what this means to the design process. Furthermore, no research has been done on the history of Northern Canadian Indigenous architecture; however, there are some accounts of housing on reservations and on-reserve housing programs [11]. In turning my own attention to the question of processes to creating culturally appropriate architecture, I have drawn upon my own experiences in community and have researched the work of Indigenous scholars and researchers to inform the architectural design process.

My research and design work on northern housing also exposed the lingering perception amongst government departments and northern housing agencies that a 'one size fits all' approach to housing design will work across the vast territory of the north and the wide range of cultures that exist there. As Justice Thomas Berger wrote in the *Mackenzie Valley Pipeline Inquiry*:

> *"The specialized material and intellectual culture of the Inuit and Dene obviously cannot be elaborated in this report, but I wish to emphasize that each of these peoples had its own way of hunting, of making clothes, of raising children, of dealing*

with one another, and of regarding the environment and the spiritual powers they saw as integral to their world. Their knowledge of the land and its life constitute distinctive ethno-scientific traditions."[12]

Through my work in communities I believe, unfortunately, the perception that 'one size fits all' still prevails among people who parachute into communities without any context or understanding to create housing. This, and other ingredients, has honed my strong desire to support each Indigenous in Canadian to develop their own architectural designs and solutions (sometimes with the support of people like me). What is interesting is that communities have a keen interest in developing their own architecture, even though they might have seen designs developed in various First Nations or Inuit communities. In my experience, no community has ever taken an existing design and said 'yes, we can use this one'. Instead there has always been interest in how these were developed and in bringing that process to the community.

A BRIEF ACCOUNT OF EURO-WESTERN ARCHITECTURAL DESIGN PRACTICES

To make sense of my story and, to advance ideas on how architecture can be practiced differently, I reflect upon normative, mainstream euro-western ways of practicing architecture and turn to the principles used and promoted by Indigenous scholars when working in their own communities. While studying architecture, my curriculum focused on course work in architectural design, while also covering architectural history, building science, structures and other related course work. While the focus was on developing our skills in creativity and problem solving it is fair to say that human-centered design practices were not part of the curriculum.

In many ways I have come to see this as a reflection of what began after WW2 with the era of modernism, continued into the 1980s, where architects were increasingly led by their vision of themselves as leaders in the creation of the modernist vision for western society, a vision that both ignored and rejected the past, while also ignoring the values, knowledge and wisdom that existed in the architecture of a wide range of non-western cultures. Architecture and architects were driven to create idyllic spaces and places that were designed for a 'grateful public'. For example, the mass housing projects built prior to the 1970s, while embodying efficiency and equality among families through cookie-cutter styled dwellings and high-rise structures, were devoid of personality, choice, and culture; and did not take into account the heterogeneity of society[13]. For Indigenous communities in Canada, this cookie cutter approach resulted

8   See: https://www.canada.ca/en/polar-knowledge/northern-housing-forum-knowledge-products/policy-recommendations.html

9   ibid.

10   ibid.

11   See the PhD thesis of Sylvia Olsen, *Making Poverty: A History of On-reserve Housing Programs, 1930-1996.*

12   Thomas Berger, *Mackenzie Valley Pipeline Inquiry,* p. 7

13   For example, the Pruitt-Igoe urban housing project in St. Louis, Missouri, USA built in 1954 and intentionally destroyed in 1972 epitomised the fall of modernist architecture that was devoid of essential qualities for the people inhabiting them. See: Chad Freidrichs The Pruitt-Igoe Myth: An Urban History (documentary film) http://www.pruitt-igoe.com/ and https://www.theguardian.com/cities/2015/apr/22/pruitt-igoe-high-rise-urban-america-history-cities for further details on Pruitt-Igoe.

in the continued development of communities that were devoid of any cultural context or any connection to time and place. These were both a reflection of the values of the modernist era as well as a continuation of the colonial mindset.

When it comes to architectural design practices, generic design methodologies and methods prescribed by scholars of design studies such as Nigel Cross[14] and John Christopher Jones[15] have dominated architectural education and subsequently architectural practices for some time. These early methodologies describe designing as an iterative process that predominantly resides in the minds of designers and includes clarifying objectives, research, concept generation, concept evaluation, concept refinement, and detail design. It's notable that, like my experiences at architectural school, working with people is not part of this process. This way of engaging in architectural design practice has been emphasized by scholars and architects who have focused on studying creativity devoid of context. The work of Bryan Lawson, for example, investigates *How Designers Think* [16]; while architects such as Frank Gehry, in the book *Architecture + Process – Gehry Talks* [17], report on the brilliance of creative process without considering people, context or land.

Some more recent scholarship in euro-western architectural design practice touch on meaningful ways that people encounter architectural spaces. Juhani Pallasma's book titled *The Eyes of the Skin: Architecture and the Senses* approaches how the human body relates to buildings and spaces through multisensory experiences that include shadow, light, acoustics, scent, taste, and memory. Pallasma's work is unique to architectural practice in that he advocates moving away from seeing vision as people's primary connection with space [18]. "Every touching experience of architecture is multi- sensory; qualities of space, matter and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton and muscle. Architecture strengthens the existential experience, one's sense of being in the world, and this is essentially a strengthened experience of self. Instead of mere vision, or the five classical senses, architecture involves several realms of sensory experience which interact and fuse into each other".[19] While the important writings of Pallasma point towards a potential shift towards a humanizing in euro-western architectural practice, they still do not provide details on how to engage with people for the design and creation of culturally appropriate spaces as the focus remains on the end product and not the process of getting there.

Through literature summaries on methodologies for practicing architectural design, it is clear that there are few resources that support how architecture can be practiced differently. Although human-centered prac-

tices are being employed (as noted earlier in this prologue) there are few documented examples of these, specifically ones that relate to collaborating with Indigenous communities. As such, I have turned to experts within the Indigenous context to explore what decolonizing architecture as an approach means in order to move away from the euro-western ways that have dominated the work that has been carried out by architects working within the Northern Canadian context.

ETHICAL INDIGENOUS PRACTICE

According to the *University of Alberta's Research Ethics Office* "The landscape of research involving Aboriginal peoples is rapidly changing."[20] As a reflection of this change, universities in Canada adhere to the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 (2018)*[21] with specific attention to *Research Involving the First Nations, Inuit and Métis Peoples of Canada* in Chapter 9. [22] For example, working to promote and develop the skills and perspectives of northern Indigenous peoples, the *Nunavut Research Institute (NRI)* works towards supporting researchers to "…develop, facilitate, and promote scientific research as a resource for the well-being of people in Nunavut". [23]

These developments both reflect and are driven by the growing amount of significant research that Indigenous scholars are carrying out in their own communities, with a number of important books written by Indigenous scholars about Indigenous values and the goals and the responsibilities that come with carrying out research in Indigenous communities. Notable works include Linda Tuhiwai Smith's book titled *Decolonizing Methodologies: Research and Indigenous Peoples* and Shawn Wilson's book titled *Research is Ceremony: Indigenous Research Methods*[24] These works have developed and highlighted the important characteristics and qualities of Indigenous research, emphasizing, from an Indigenous perspective, the ways that each of us need to reflect upon before engaging in indigenous research and/or design. They stand as superb examples of the ways in which Indigenous people undertake research within their own communities.

The work reported in this thesis has undergone considerable ethical scrutiny through the *University of Alberta's Research Ethics Office*, consulting the *TCPS 2 (2018)*, and consultations with *NRI* (see appendix for letters of verification). It is important to note that no original research was conducted for this thesis, all the projects and stories reported on are already in the public realm (see appendix for a list of publications), and the communities that I engaged on architectural design projects with are aware of these writings. Furthermore, the decolonizing architectural pro-

14   Nigel Cross, *Developments in Design Methodology.*

15   JC Jones, *Design Methods: Seeds of Human Futuress.*

16   Bryan Lawson, *How Designers Think: The Design Process Demystified.*

17   Mildred Friedman (Ed) *Architecture + Process – Gehry Talks.*

18   Juhani Pallasma, *The Eyes of the Skin,* 15-16.

19   Ibid, 41

20   See: https://www.ualberta.ca/research/support/ethics-office/human-research-ethics/research-with-aboriginal-populations

21   See https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html

22   See https://ethics.gc.ca/eng/tcps2-eptc2_2018_chapter9-chapitre9.html

23   See https://www.nri.nu.ca

24   Other notable books are: Margaret Kovach (2009) Indigenous Methodologies: Characteristics, Conversations, and Contexts; Bagele Chilisa (2012) Indigenous Research Methodologies; Maggie Walter and Chris Andersen (2013) Indigenous Statistics: A Qualitative Research Methodology; Lori Lambert (2014) Research for Indigenous Survival: Indigenous Research in the Behavioral Sciences; and edited books: an edited collection by Donna Mertens, Fiona Cram, and Bagele Chilisa (2013) Indigenous Pathways into Social Research: Voices of a New Generation; and Susan Strega and Leslie Brown (2015) Research as Resistance: Revisiting Critical, Indigenous, and

cesses I propose throughout the following five chapters describe ethical indigenous practices that are based on thirty years of continuous relationship building, and respect for Indigenous ways of knowing and being. What comes from this is a very different approach to the design process. It is a process that places emphasis on relationship building and finding collective voices. It is also about power and ultimately placing control over the process and its outcomes into the hands of the local Indigenous peoples. The necessity of this is driven by the need to address the levels of injustice and mistreatment that has been imposed upon Indigenous peoples.

While Indigenous communities have been amongst the most heavily researched people in the world, they have benefitted little from this. On the perspective that Indigenous people have of research, Maori scholar Linda Tuhiwai Smith writes: "At a common sense level research was talked about both in terms of its absolute worthlessness to us, the indigenous world, and its absolute usefulness to those who wielded it as an instrument. It told the things we already known, suggested things that will not work, and made careers for people who already had jobs." [25] Similarly, while the government has made numerous efforts at addressing housing needs in northern Indigenous communities, these efforts have almost exclusively been part of a numbers game where measuring success has been limited to highlighting the numbers of houses that have been built, rarely, if ever, considering the local culture or environment, or the performance and durability of these houses, while also consistently falling fall short in addressing the significant housing shortages that exist in all northern communities. .

METHDOLOGY AND METHODS

In examining different methodologies, I have sought to seek an approach that honours and recognizes Indigenous peoples' ways of knowing. The methodology I have used involves the use of architectural practice and is rooted, within tactility, in the act of making and doing. It is connected to and draws from Human Ecology and more specifically material culture and how these disciplines view the world through the lens of interconnectedness. The methodology that I utilized in this thesis is heavily influenced by the Indigenous Research Methodology (IRM) and the principles that are essential aspects of that methodology. In this way IRM provides the paradigm upon which this work has been carried out, furnishing the principles that have guided my work.

Under the umbrella of this methodology and its supporting principles are primary methods that are implicit in my work. In defining the role that methodology and method play, I agree with Jane Mills[26] who sees

methodology as providing the lens through which the work is viewed and decisions are made. As a practitioner and maker, I understand these methods as the tools and techniques that were necessary for carrying out the research. In the case of this thesis, autoethnography and case study are the methods that I have used. I note here that detailed information on many of the projects that I write about are already in the public realm in reports and documents. What I have added to this are my own impressions of and reflections on the process of undertaking this work and what I have learned from this process.

As underlined by researchers such as Ellis, Adams and Bochner, "Autoethnography is an approach to research and writing that seeks to describe and systematically analyze personal experience in order to understand cultural experience. This approach challenges canonical ways of doing research and representing others and treats research as a political, socially-just and socially-conscious act. A researcher uses tenets of autobiography and ethnography to do and write autoethnography. Thus, as a method, autoethnography is both process and product."[27] It is a way of writing that brings together ethnography and a looking outward at the world, with autobiography or an inward reflection of the self. As highlighted by Heather Forest, "The aim in composing an autoethnographic account is to keep both the subject (knower) and object (that which is being examined) in simultaneous view."[28]

My use of autoethnography is also, in a number of ways, an acknowledgment of Indigenous 'ways of doing' and the emphasis that is placed on the use of story and the oral tradition for the sharing of knowledge, and the 'relationship' that the storyteller has with that knowledge. Through doing autoethnography we develop relationships and personal ties with participants, who can and often become friends through this process. It is important to point out that this is part of working within an Indigenous community and that the building of relationships is an essential component, Indeed the need to generate a sense of local propriety over any project necessitates this.

Such a position offers some ethical challenges as neither researchers or architects work in isolation. When we write about our work and when we design, we implicate others. "Autoethnographers thus consider "relational concerns" as a crucial dimension of inquiry (ELLIS, 2007, p.25; TRAHAR, 2009) that must be kept uppermost in their minds throughout the research and writing process."[29] As Elizabeth Dauphinee notes, "Autoethnography opens space for the reader to see the intentions - and not just the theories and methodologies - of the researcher. It opens us to a deeper form of judgment. That is the core of its ethics." [30] This contributes

Anti-Oppressive Practices.

25   Linda Tuhiwai Smith, Decolonizing Methodologies: Research and Indigenous Peoples, p. 3.

26   Mills, Methodology and Methods

27   Ellis, Adams and Bochner, Autoethnography: An Overview, p 1

28   Forest, *Artful Leadership for Creating Positive Social Change: Reflections on an Arts-Based Autoethnography*, P 73

29   Ibid

to its usefulness in supporting reflective practice by facilitating introspection and reflection. It requires a constant sharing of perspectives between the viewer and the viewed in order to ensure that what is being shared, reflects the perspectives of all the participants. As shared by Wolff-Michael Roth "Every act, by its very nature, changes the (social and material) world. This world is not our own but is co-inhabited by and co-constituted with others. … There is no time out, no alibi from our being and responsibility (BAKHTIN, 1993). We can only assume this responsibility or deny, repress, and abstract from it. These latter actions are inherently without ethics, un-ethical, because they constitute attempts to cut ethics of and remove it from our lives, which we inherently share with others in what Harold Garfinkel (e.g., 1996) has come to call "immortal society."[31]

There is another value in the use of autoethnography that is important to reflect upon. Many Indigenous scholars reject the euro-western notion that there can be objectivity in research, that objectivity allows researcher to be neutral in their assessments. To Roxanne Lynn Doty this gives scholars power, "a power that enables scholars to present their work as authoritative, objective and neutral. Autoethnography shuns this power and makes it clear that writers are part of the work, part of the story that they tell, they are connected"[32]

I also use 'case study' as a method to specifically examine architectural projects within the overall research and design work that I have carried out. I view case studies as a vital resource in undertaking ethical research creation, particularly through being a scholar-practitioner. "This ability to accommodate a range of philosophical positions is seen as an advantage whereby case study enables the opportunity to design research that can be specifically tailored to the inherent complexity of the research problem."[33] The Case Study method easily accommodates the need for both the collection of qualitative (e.g. people's perspectives) and quantitative (e.g. energy consumption) data, making it a natural fit for documenting the projects that are included in this thesis.

STORY
Story is an important part of Indigenous ways of knowing. In the hundreds of encounters, I've had with Elders and Indigenous community members, the use of story to share knowledge and information is a common thread. As an example, I recount a story told by author Joseph Boyden at the 2016 inaugural address of the Allan Teramura as president of the Royal Architecture Institute of Canada. In his address as a guest speaker, Boyden recounted a conversation he shared with an Anishinaabe Elder who reflected on the place of humans in the physical world. From the standpoint of the Anishinaabe the Elder shared that

"The physical world does not need humans to survive at all in order to thrive."[34] Building on this the Elder went on the challenge the Euro-western belief that humans sit at the top of the natural world. "So how, he asked, can we consider ourselves at the top of the animal kingdom and the masters of the earth? … Are we really at the top of the totem pole? … No, of course not, we are actually at the bottom.   We need help from the atomic particle up."[35] Through the story told by an Anishinaabe Elder and recounted by Boyden, the differences between an Indigenous and Euro-western perspective and belief about the relationship that humans have with the natural world was exposed, revealing a fundamentally different perspective on the idea of a relationship with the land and animals – one of sharing and dependency versus that of taking and exploitation. It was seemingly a very simple story and yet it exemplified much about the ways of knowing of Indigenous people, a knowing that embodies interconnectedness and relationships, while challenging the sense of superiority of western values that have driven colonialism. I have learned through nearly thirty years of engaging and collaborating with Indigenous and Tibetan communities a great deal about the power of story.

This thesis focuses on a series of case studies on projects that have been carried out over the length of my career, a reflection on years of experience working on projects where culture, identity and place have been of continual importance. It is as a self-reflective and deeply personal story as a result of my experiences with both Indigenous and Tibetan communities. I chose to use a more narrative form of prose, reflecting the importance of the oral storytelling tradition that is used as a way of sharing and transmitting knowledge by Indigenous people across the world, as well as my own roots in Ireland, a land where the tradition of storytelling has strong roots. It is also a particular kind of story as it comes from the perspectives of white privilege, human ecology, and architectural design. It is a reflection upon my own practices as a son of an Irish immigrant family, an environmental and social advocate, a builder, an architect, and a person who lives within Canadian society. Throughout this thesis, I share the insights of Indigenous scholars, personal experiences and reflections, and project examples that I hope will highlight what I have learned. It is important to note that the connections that I make and conclusions that I reach are from my own standpoint and a reflection of my own views and experiences. This has been my own journey – one that is not complete, but still evolving. It is a process that I would encourage others to take. As such, I invite architects and other practitioners to read my story and to use my story to reflect and reconsider on how they engage in practice. In doing so, I invite architects and other professionals to explore alternative ways of doing architectural practice *with* Indigenous peoples in Canada and beyond.

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30   Dauphinee, *The Ethics of Autoethnography*, p 813

31   Roth, Auto/Ethnography and the Question of Ethics

32   Doty, Autoethnography – making human connections, 1048

33   Harrison, Birks, Franklin & Mills, *Case Study Research: Foundations and Methodological Orientations*

34   Boyden, 2016 RAIC President Investiture Ceremony

35   Ibid

As Juhani Pallasmaa writes, "The timeless task of architecture is to create embodies and lived existential metaphors that concretize and structure our being in the world. Architecture reflects, materializes and eternalizes ideas and images of ideal life."[36] Unfortunately, the 'ideal life' that has been visioned for Indigenous peoples has been a euro-western view rather than an Indigenous one.

36   Pallasmaa, The Eyes of the Skin: Architecture and the Senses, 71

1 LOCATION

... learning from a long journey

Location is an Indigenous principle that recognizes that each person has their own predispositions and that it is necessary and important to account for them. When people engage in a relationship, engaging through 'location' helps listeners to put what is being shared within the context of how and what the learnings of the other is. This leads to knowing and understanding what each person brings to the table. In a contemporary context, 'location' is to know oneself, which relates to knowing someone else. Location is about knowing where someone is 'coming from', which is linked to knowing and understanding some of the perspectives, values, and experiences of the other person. This chapter establishes my personal location and is necessary to share when considering that this thesis (or story) is about process and an unfolding of what bringing an Indigenous perspective in architectural design means to the 'process' of doing this work. For myself, this has included developing and redeveloping the perspective and skills that I carry with me into each new project.

It is important here that I reiterate, once again, that all that I share here are my own perspectives, and that these are the products of my own experience and learning. As Indigenous teachers and Elders emphasize, we can only speak of our own truths and these truths can only come from the experiences that we have had and from the knowledge that we have acquired from these. On writing about her research and the use of first person Indigenous scholar and teacher Rebecca Sockbeson highlights "This inhabiting of the story corresponds to Indigenous ways of situating knowledges, and prevents my removal or distancing from the research."[1]

As Kathy Absolon shares when considering her own location as an Indigenous woman, "As an Anishinabe woman I assert a specific set of experiences based on my cultural, racial, geographical and political location."[2] It is interesting to note that Absolon, in this short statement, identifies herself with a specific gender and indicates that "cultural", "racial", "geographical" and "political" are signifiers that are aspects of locating oneself. This chapter will provide details on how I am located using these signifiers. Along with these signifiers, I further locate myself within my life history and in many ways the journeys that have also been taken by my ancestors. By locating myself, I am doing two major things. First, I am reflecting upon who I am as a person in order to better understand my own journey, a process which then assists me in understanding and opening

up to others. Second, I am demonstrating how locating oneself can be achieved as a facet of participating in Indigenous engagement processes. Later in this thesis, I will continue by expanding on how locating oneself is significant to working with Canadian Indigenous communities.

MY WHITE PRIVILEGE

I am a husband and a father, an architect, a builder and a researcher. I am also a traveler and adventurer. My spiritual persuasion is that of a Buddhist, where I share the viewpoint that 'inner journeys' are 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 have shaped significant aspects of my character as well as the challenges I have faced in my own life and work. It is also what this book is about. For nearly 20 years I have been working on housing projects in northern Indigenous communities in Canada. And while there are many pragmatic and logistical challenges that need to be addressed in the design and construction of northern Indigenous housing, the world view of Indigenous peoples necessitates that we place greater attention on what I sometimes call the 'immeasurable'. These are the unquantifiable realities that influence perspectives and guide actions. I am drawn to those whose stories examine the mysteries of life and place an emphasis on learning ways to understand and explore those mysteries.

I was born in Ireland and moved to Canada in the mid 1950's when I was two years old. But unlike my parents, I have no accent, nothing that outwardly places me as an immigrant. And while we were immigrants, when we moved to Canada we moved into a 'white' society' where most people looked and talked like we did, and where the customs of everyday life had a tremendous familiarity. When my parents share their early challenges of moving to Canada, it is the economic challenges that they talk about, not cultural and societal ones. As a white middle-class family in the 1950's we easily gained the papers needed to immigrate into the country; our white privilege beginning even before we arrived in the country and continuing through my life as I grew up.

My father, a white middle-class banker, soon found a job, and we found and could afford housing. When we were old enough, my sisters and I had no problems getting into a school, arriving to find that all the other students seemed to be just like us; young white children from families like ours. The courses I was taught at school, such as history, only further confirmed this privilege. This was the history of how white people turned, what was seen through white European eyes as an unused 'wilderness', into something 'profitable'. The landscape was also converted

1   Sockbeson, *Indigenous Research Methodology: Gluskabe's Encounters with Epistemicide*, 4

2   Abolson and Willet, *Aboriginal Research: Berry Picking and Hunting in the 21st Century,* 5

into a model of landscape that we had come from. This re-moulded landscape was yet another form of white privilege as it breathed a familiarity into our European eyes. This altered landscape never required us to begin to even consider that there were communities of indigenous people here before us. When considered at all, Indigenous people were portrayed as primitives at best and savages at worst, where the arrival of white people was presented as something provident, bringing Indigenous people into the civilized world. This is what I was taught. My white privilege never questioned this, never wondered about who these people were, never asked questions about what was done to them or why they were not in the classrooms with me?   My white privilege gave me the illusion of innocence, removing me from the past and from any blame or responsibility for what had been done. The history I was taught only confirmed this and deepened the sense that white people were the first real people to live in Canada, the country that was now my home.

When I was a child, for our summer weekends and vacations my parents would take my two sisters and I camping on weekends and for our summer vacation. While our destinations were to fairly tame campgrounds, this was where I began to develop my close affinity with and love for the land. These camping excursions led to joining in on canoe trips in Algonquin Park and places in the region. I grew to love these outdoor trips and being surrounded by the quiet and peacefulness that these places brought. I did not shy away from the work that going into remote areas with a canoe took. I enjoyed engaging in long paddling trips that involved packing gear in the canoe, portaging parts of lakes or rivers, and setting up and tearing down campsites along the way. From the beginning, I loved the idea of 'leaving nothing more than footprints behind' and the idea that I could tread so lightly across the land that this was the only 'impression' that I left behind.

Throughout this time, I was completely unaware of the impact that white privilege had on the land through the renaming of all of the lakes, rivers, hills and valleys, of Eastern Ontario, where I grew up. As the conquerors, white people replaced these with names of their own people and the places that they had come from. This added to the sense that the land I was now on was more an extension of where I was from, rather than a new place to which I would have to adapt to. I was never taught and never knew any of the names that were used to describe these lands and waters before white people came. Few white people were interested in the poetic descriptions of the land or how these described the people's relationship to it.

My white privilege continued throughout my life as I grew up. I have al-

ways had food and shelter. I have never suffered from living in an over-
crowded house, nor did I ever question whether I deserved any of this or
not. It simply just was.   Being white, I have never been refused service
in a restaurant or shop, no matter how I was dressed. Even when I have
travelled internationally to other places, my white privilege has always
opened doors rather than closing them. If I was identified by my colour,
it was always an advantage, not a disadvantage.   This was reinforced by
the ads in countries like India, where skin cream for women is promoted
as something to make your skin 'more-white'. In these countries I could
always get visas, transportation, places to stay and things that I needed.
The experiences I had and the connections I made with other peoples
and cultures were also the result of my white privilege, which was exem-
plified by the fact that others often wanted to meet me and connect with
me because of the privileges that came with my colour and status.

As I continued through high school and into university, almost all of the
faces around me were white. While we debated the state of the envi-
ronment or the best way to tackle a particular design issue, we were
always doing this through the eyes of white privilege and what it valued.
As middle-class white kids we knew nothing of the 'other', never once
asking the question of 'whose traditional lands are we on' or 'how we
should honour this'? When I studied the history of architecture, it was
about the buildings of Europe: gothic architecture, classicism, modernism
and more. The techniques, principles, and ideals were all Eurocentric,
influenced by Christianity, the Renaissance and contemporary western
thought.   All of these prepared me to be a productive member of the
white middle-class society that I was to be a part of. When I shop, watch
television, vote in elections, or just walk the streets, my white privilege is
continually reinforced. I have never been refused a job because of the
colour of my skin.

As I have grown to learn more about the nature of white privilege and
the impact that it has had on Indigenous people, I have come to see how
each of us must learn to accept our responsibility for what our society
has done and continues to do to Indigenous communities.   It is what
Indigenous scholars such as Gina Dilio-Whitaker calls 'settler privilege'.[3]
Citing the work of Brayboy, Castagno & Maughan (2007) Indigenous
scholar and member of the Penobscot, Rebecca Sockbeson provides
key questions that each of us must ask ourselves: "How is our life tied
with the lives of others? How is our privilege at someone else's expense?
How are the decisions we make tied to the well- being of others no mat-
ter how removed by race, nationality, or geography?"[4]

3   Gilio-Whitaker, *Settler
Fragility: Why Settler Privilege
Is So Hard to Talk About*

4   Sockbeson, *Maine Indige-
nous Education Left Behind: A
Call for Anti-Racist Conviction
as Political Will Toward Decolo-
nization*, 124

EARLY ACTIVISM

My first connection with community engagement came during my studies in urban and regional planning at the University of Waterloo (U of W) in the early 70's, and some of the influential people I met at that time. When I went to the U of W I was coming off of my first experience with community activism as part of the move to stop the Spadina Expressway in Toronto. While this was an issue that pitted highways against public transit, it was a fight that exposed much about where power really rested; despite all the rhetoric about democracy, it was a battle that was inherently and heavily stacked in favour of the status quo and those who favoured the idea of a new expressway. At the University of Waterloo, I was exposed to ideas that challenged this perspective and to people who offered alternative views to what meaningful citizen participation looked like.

One of the more influential writings that I read during that period of time was an article called 'A Ladder of Citizen Participation' by Sherry Arnstein. While originally published in 1969, and using what might be considered as dated examples, it remains a significant piece of work that is still of value to anyone who is interested in the issue. The concepts discussed in this article are still mostly unknown by people around the world. As Arnstein points out "Many planners, architects, politicians, bosses, project leaders and power-holders still dress all variety of manipulations up as 'participation in the process', 'citizen consultation' and other shades of technoable."[5] The article was instrumental in helping me recognize and comprehend patterns of manipulations that are used in 'community participation initiatives, exposing how many examples of this are merely token gestures that can be worse than doing nothing at all, as they give the impression that the people are being consulted while ensuring this has no influence or impact on the decision making process. This has been influential on my own approach to architecture and how I give emphasis to using a process where the ideas that are raised through a process of engagement have a pronounced impact on the designs that are developed, and wherever possible, the final decisions on the design are left with the community.

Upon graduating from the University of Waterloo, my first jobs were working as a park planner, both in Canada and New Zealand. Park Planning seemed a natural extension of my love for the outdoors. It represented a chance to work on projects that fit into my personal values. Living and working in New Zealand for two years was a tremendous experience. There were many Maoris working in the office where I was employed. A couple became friends of mine and through them I was invited to some

important Maori events. I began to learn the Maori names for the lakes, rivers and mountains of what was made aware of the beauty of indigenous names. I was struck by the poetics and the experience of place that was contained in these names; names such as Aotearoa (the land of the long white cloud), the Maori name for New Zealand. When I had the privilege (as a middleclass professional I had many invitations to join other privileged whites on sailing trips) of sailing away from New Zealand and viewing the land from afar, I saw the spectacle of the sweeping long white clouds that stretched over the north island of Aotearoa. It was only then that I really understood how the Maori peoples experience of place was contained in these names and if these names were removed, the Maori themselves would also be removed from the land. I remember thinking that, as a white male in my mid-twenties, I knew little about the Indigenous names for the part of Canada where I was from.   My white privilege removed me from all that and also removed all the questions that may have arisen regarding the indigenous people who would have given those names.

While in New Zealand I was quite involved in the environmental movement, volunteering time with the Native Forests Action Council and the Environmental Defense Council. It was a momentous time in the country with Maori land issues, the protection of the remaining native forests, and the advancement of the nuclear free south Pacific all increasingly becoming part of the national dialogue. Two issues I was involved in remain as vivid memories of that time.

The New Zealand government of the time, the conservative National Party, was permitting US powered and armed nuclear war vessels to dock in New Zealand harbours.   In protest of this, a group of yachts people, sailors, and activists formed what became known as the 'Peace Squadron', a band of yachts people who would use their boats to attempt to block the mouth of the harbour in order to prevent a U.S. nuclear powered submarine from entering. I was on one of these boats as we watched a New Zealand warship and several NZ Forces helicopters rapidly approach the sail boats circling at the harbour mouth. As the ship approached, a trimaran[6] piloted by an experienced sailor, cut across the bow of the frigate, causing it to reverse its engines and in order to avoid a collision, veer off its intended course. A rush of energy went through all of the boats as we all turned and began to sail towards the stalled frigate. What followed was a truly alarming display of power as the escort helicopters dropped into place and proceeded to use their blades to blow the approaching sailboats out of the way; with their blades, at times, lower than the tops of the masts on the boats. In the disorder that followed, we

5   Arnstein, *A Ladder of Citizen Participation,* 1

6   A trimaran is a multihull sail boat that is made up of a main hull with two smaller hulls that are attached to the main hull with lateral beams.

could hear the engines of the US submarine roar as the vessel literally blasted through the opening created by the helicopters, quickly reaching a speed that left us speechless. I was about 10 meters away, as the submarine passed, and it remains one of the most sobering experiences of my life. Later, we shared much as a group, aghast at what we had seen, shocked that lives were put at risk by the actions of the military vessels and sobered by the unmistakable demonstration of power that had been directed towards us.

The second experience was the occupation of Bastion Point and the issue of Maori land claims. Bastion Point was the last remaining piece of contested Maori land on the southern shore City of Auckland's Wait-emata Harbour[7]. To stop the government's plans for selling the land for high income housing, a group of Maori activists and supporters carried out an occupation of the site. Like many other environmental and social activists, I spent several days at the site. I was impressed with how we were greeted and welcomed, at the feeling of collective amongst all the occupiers, and the sense of that we were all working at something that was much larger than this piece of land. This 'occupation' was about the rights of the Maori people and the protection and advancement of Maori culture, with 'the land' being part of that culture.

I also learned more about the history of the Maori land issues and other ongoing struggles. It was exceedingly revealing as New Zealand often offers the impression that it has addressed issues with the Maori in a more liberal fashion than what has transpired in countries such as Cana-da and Australia, and that the country did not have any significant ongo-ing issues with the Maori. On May 25, 1978, when a police force ended the 507-day Bastion Point occupation and arrested 221 protestors, the image of New Zealand as a liberal nation took a massive beating. In the 1980's the New Zealand Government returned the land to the Maori as part of the Waitangi settlement process. The unfolding of the Bastion Point protests and the experience of the Peace Squadron, in a quiet and peaceful country like New Zealand, revealed to me the extent that the powerful will go and that oppression is much closer to the surface in western liberal societies than we would like to acknowledge.

NEW SKILLS
In the late 1970s I returned to Canada from New Zealand. I was not sure what I was going to do, having left the planning profession and basically the studies that I have carried out to get my degree. I returned to East-ern Ontario where had been living prior to going to New Zealand. I went to visit a good friend of mine, Jamie Cook, who was a log housebuilder

area. He shared with me that he was about to start teaching a course on house building, and invited me to take the course, suggesting that if I was good at it and was interested, he would give me a job. I had not done much in the way of building, but the little I had done I enjoyed. I saw this as an interesting opportunity, feeling that it would be good to learn something practical – an alternative to reports that would 'sit on a shelf'.

As it turns out, I was good at doing this work, and I enjoyed it. I loved the physical exertion and the opportunity this provided to get out of my head as log house building; working with chainsaws, axes and chisels, requires you to 'be there' at all times. I also loved being able to spend my days outside. Working in the countryside I would take moments, as I worked with different handtools, to take in the peacefulness of the place that I was in. Perhaps this was a bit of a contradiction as the very nature of what we were doing and the noise that we made was an assault on this peace. But to us, as we were using materials that came from the very area where we lived to build houses that potentially would last for generations, we were doing honourable work. I also grew to love the satisfaction that I gained from 'doing' where, at the end of each day, I could stand back and admire what I had completed that day. Each day I acknowledged the value of this measurable reward.

While my career in log house building lasted about two years, I continued in the building industry, moving into timber frame construction and then onto more traditional framing in order to expand into constructing energy efficient buildings. While I loved log houses, I also began to see their limitations, particularly when addressing the use of energy. It was the early 1980's and the OPEC oil crisis of 1973 had changed the world's energy equation, bringing issues of both supply and cost to the fore in what was a time of peace. "The OPEC embargo was a decision to stop exporting oil to the United States. On October 19, 1973, the 12 OPEC members agreed to the embargo. Over the next six months, oil prices quadrupled. Prices remained at higher levels even after the embargo ended in March 1974."[8]

The rising cost of fuel perpetuated by the OPEC oil crisis soon impacted the building industry by raising the need for more energy efficient buildings. In 1981 in response to this Natural Resources Canada, in partnership with the Canadian Home Builders Association, launched the R2000 program; a voluntary program that was designed to exceed the building code in energy efficiency in order to advance environmental accountability. "The goal of the R-2000 Standard is to improve the energy efficiency

7   New Zealand History (Website). Accessed March 24, 2020, https://nzhistory.govt.nz/keyword/bastion-point

8   The Balance (website).

Figure 1.1: Nepal and the route to the Himalayas (W Semple)

Figure 1.2: Wooden window frames built by the Nepali Carpenters (W Semple)

Figure 1.3: Annapurna 3 towers over the Village of Pisang (W Semple)

of new houses without compromising either the interior or exterior environments. These technical requirements include both the performance goals and prescriptive measures that a house must meet to become eligible for R-2000 certification. The requirements are intended to give the builder flexibility in the selection of construction techniques, building products, mechanical equipment, lighting and appliances."[9] The move toward more energy efficient buildings impacted my own approach to building, resulting in a move away from log house building into more traditional wood framed building practices that would allow for increasing levels of insulation and air tightness. Within a few years this culminated in my returning to University to study architecture, a move that would provide me with more opportunities to explore and advance environmentally sustainable buildings.

NEW PERSPECTIVES

Before returning to school, I decided that I wanted to do some extensive travels to Asia, as I knew that once I completed another degree, I would need to use the momentum of those studies to launch into a new career. I love to travel, and wanted to do some more before I settled in to a new direction. While in Thailand, my spouse Pam Wiggin and I heard through the travelers' network that the border between Nepal and Tibet (China) had been opened for foreigners. Having spent time with Tibetans on previous trips to Nepal, we jumped at the chance to get in to Tibet and soon left the tropics of Thailand for the high mountains of Nepal and Tibet (Figure 1.1). It was summer in the region and though this meant dealing with monsoon in Nepal and the road closing landslides that often accompany these heavy rains, it was also the best time to travel to the high Tibetan plateau.

To be able to do this trip was another reflection of the privileges were afforded us in being white people from the west. While those of us with passports, financial means and the stamina to undertake some rugged travel were being allowed into Tibet, Tibetans themselves, whose traditional lands we were going to travel were certainly not being allowed in by the Chinese. I was reminded of the more subtle ways in which this privilege is revealed by an experience I had in a remote Nepali village. One day when visiting a house under construction during one of my earlier trips to Nepal, through with a young Nepali who was eager to practice his English, I asked the carpenters whether they would mind if I took their picture, sharing with them that I too was a carpenter. To this they all quietly laughed because, I would learn, the idea that carpenter could have a camera like I had, as well as the time and the financial means to travel

across the world to be in that village and take that picture was, for the Nepali carpenters, really beyond belief. They thought I was being polite and considerate, and were happy with me taking pictures. But they did not believe that I had any skill as a carpenter (Figure 1.2).

While hiking through high mountain villages of the country, I also had my first encounter with Tibetans, staying with families in mountain villages that clung to the side of steep valleys under the towering mountains of the Himalayan range. In the village of Upper Pisang, under the shadows of Annapurna 3 (Figures 1.3 and 1.4) I had my first experience with Tibetan Buddhist rituals when the morning quiet was broken by the chanting of mantras and the aroma of incense coming from a morning puja was being performed by group of Tibetan lamas (monks) in the adjacent house.

Travelling the Tibetan plateau, prior to the economic 'awakening' of China was not what it is today. There were few buses between towns and no taxis or other transport within them. Travelling took time and patience as there was no guarantee that you would reach your destination, let alone that you would reach it on time. Yet it was a remarkable journey with the unqualified freshness that comes from being in a place before it has become 'discovered' and overrun with travelers.

The experience crossing of the first great pass into Tibet is an experience that remains burned in my memory. Historically, crossing the great passes was both arduous and dangerous. Potential and quick changes to the weather assured that safe passage of the passes was not guaranteed at any time of the year. Crossing Tong-La, at 5129 metres/ 16,828 feet the first pass in Tibet was a breathtaking setting that provided unparalleled views of the Tibetan plateau and the distant peaks that formed a complete ring around us. Leaving our bus, we joined Tibetan travelers as they completed a circumambulatory walk three times around a cairn of rocks that marked the summit, while adding colourful prayer flags to the numerous prayer flags already blowing in the stiff winds of the high mountain pass (Figure 1.5). "Tibetan prayer flags are used to promote peace, compassion, strength, and wisdom. Tibetans believe the prayers and mantras will be spread by the wind and bring good will and compassion to benefit all beings."[10] For each Tibetan this walk, along with the offerings that being made, are part of the ritual of giving thanks to the gods for safe passage over the mountain pass. This was the beginning of the many lessons I would learn from Tibetans about the importance of ritual[11] and the powerful role it played in the life of Tibetan Buddhists. Through these experiences I was also beginning to learn more of the

9   Government of Canada (website). Details of the R-2000 Standard.

10   Tibetan Nuns Project, "How to hang and dispose of Tibetan prayer flags respectfully."

11   Prayer flags are made by printing sacred Tibetan Buddhist prayers on pieces of coloured cotton cloth, with each colour representing one of the 'directions' and one of the 'elements'. When tying a single new prayer flag to an existing string of flags or putting up a long string of prayer flags, Tibetans are practicing their particular blend of Buddhism. Tibetan Buddhist are part of the Mahayana tradition, one of the two major Buddhist traditions. Mahayana Buddhists believe that one cannot attain enlightenment, the ultimate goal for Buddhists, unless this is being done with the intention that this is for the benefit of all 'sentient beings'. Prayer flags are just one way that this idea is played out, as Tibetans believe that it is the wind that reads each prayer, and it is the wind that then spreads prayer and sacredness throughout the sky and the heavens.

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Figure 1.4: The interior of the Village of Pisang (W Semple)

Figure 1.5: Tibetan Prayer Flags on Tong La (W Semple)

Tibetan people's gentle acceptance of others, and the unassuming way in in which I felt that went about their own lives.

This was also the beginning of my experiencing of a land of great strength and majesty. On this pass I was to 'feel' Tibet's reputation as 'the roof of the world'. The quality of blue in the immense Tibetan sky, the clouds that remind one that the stylized version of clouds found on Tibetan thangkas[12] (religious paintings), and the ethereal experience of the thin mountain air all contributed to this. This was a place to reflect upon and celebrate the sacred and the great reverence that the Tibetan people have for the land that is their home and the place from which their culture and religion developed.

Prior to this trip I must admit that I knew only a little of the history of the country or about the Chinese claim that Tibet was an historic part of China and the Chinese occupation of the country. The time I had spent with Tibetan peoples in Nepal made me suspicious of these claims, and in our travels across Tibet we were to experience many moments that were reminders of how much of what once was, was now gone (Figures 1.6 and 1.7). From what I could 'feel', I sensed this was an occupied place. It was not just the visual presence of the Chinese army, but also that the qualities of these two people were so different that it was difficult to imagine they were of the same place; it was like a blending of oil and water. One of the great tragedies to befall Tibet under Chinese rule was the Cultural Revolution. And while this had a devastating impact on religious artifacts as well as cultural and religious practices all over China, it was much more severe in places that offered resistance to Chinese rule in

any way, with Tibet being one of these places. The impact of the Cultural Revolution was not just in the loss of monasteries, temples, chortens and other artefacts of the landscape, I also felt the loss of the poetic license of a people and their ability to engage with the land around them in ways that were meaningful to them. To experience and understand Tibetans is to see how they each connect with their spiritual places and the rich symbolism that is contained in the many gestures and rituals that are part of this.

As we travelled long distances across this dramatically beautiful land, visiting many parts of what the Chinese now call the Tibetan Autonomous Region[13], I began to observe examples of 'quiet resistance' that the Tibetan people carried out against their occupation. In one example, I was visiting the Potala Palace which, until his flight from Tibet and exile in 1959, was the home of the His Holiness the Dalai Lama. While taking photographs of a Tibetan Buddhist Lama (Figure 1.8) and the great Tibetan Buddhist wall paintings of the Potala, I was soon accosted by the Tibetan lama who loudly proclaimed, for the benefit of a Chinese soldier who had just entered the room, that I was not permitted to take photographs. As the soldier left the room, the lama moved to the door and watched as the soldier moved on, gesturing to me to continue taking photographs while he kept an eye open for other soldiers. This was the beginning of my own learning, where I began to witness the nature of resistance, how it takes many forms and how, through careful observation, I was learning to recognize it.

And while we had witnessed the ritual of stringing of a few new prayer flags on the stone cairn at Tong-la, we came to see that this was an isolated ceremony in what we felt should have been a common practice and a daily occurrence throughout the country. We also had begun to learn more about the extent of destruction that came as a result of the Cultural Revolution and of the vast number of monasteries and temples that had been destroyed. But it was challenging to understand the extent of this destruction and we knew we would not have a real sense of this until we experienced a place of Tibetan culture that had not been impacted by the Cultural Revolution. That place was Ledakh. Ledakh is often referred to as 'little Tibet', and it was here that we hoped to 'see' and experience a more 'untarnished' example of Tibetan culture.

Ledakh is located in the north-east corner of the State of Jammu and Kashmir in India.[14] Once a small independent kingdom on the western edge of the Tibetan plateau, Ledakhi's practice Tibetan Buddhism and culturally share a great deal in common with Tibetans. While Kashmir

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12   "A thangka (also called tangka, thanka, tanka, or Tibetan scroll painting) is a classical and stylised form of Nepalese and Tibetan painting, consisting of a painted picture panel surrounded by a textile mantle that is supported by scroll sticks and overlain with a silk cover. The mantle is typically constructed from a rich material, usually silk brocade, and the painting is generally executed in oils on treated cotton duck, although some notable exceptions occur, including pictures created from pigments ground from semi-precious stones, appliqué and silk or cotton embroidery. Thangkas typically depict important Buddhist motifs, the Wheel of Life, images of the Buddha, other Buddhist deities and mandalas being the most common. Thangka paintings are usually very intricate and detailed, with images inter-woven in a stylised geometric series of overlapping grids, taking many weeks or even months to complete." In Kashgar (website). "Meaning and Symbolism of the Thangka"

13   Prior to the Chinese occupation of the country, the term Tibet referred to the complete area of the Tibetan plateau. "To the Chinese government, *Tibet* consists only of the Tibet Autonomous Region, which makes up only 1/2 of the Tibetan Plateau and has only around 40% of the total Tibetan population. To the Tibetan people and to most of the rest of the world, Tibet consists of all areas of the Tibetan Plateau where Tibetan people are native to. This area includes all of the Tibet Autonomous Region (TAR), nearly all of Qinghai, northern and western Sichuan, the southwest portion of Gansu and the northwest corner of Yunnan." In The Land of Snows (website).

14   "Jammu and Kashmir, union territory of India (until October 31, 2019, a state), located in the northern part of the Indian subcontinent in the

Figure 1.6 and 1.7: Tibetan Nomads (W Semple)
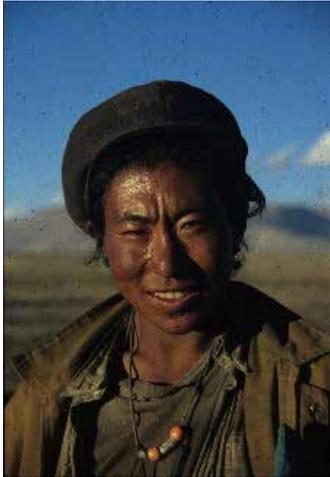
Figure 1.8: Tibetan monk in the Potala Palace (W Semple)

is predominantly Muslim, Ladakh's Buddhist culture had been protected from the Mughal invasion of India by its remote location and inaccessibility. Ledakh was similarly sheltered from the impact of the Cultural Revolution by its location in India.

It was a long and arduous journey to get to Ledakh, a circuitous trip that took us overland back through Tibet and Nepal to New Delhi, and then by train and bus to Srinagar, the capital Kashmir. From the beauty of the Kashmir valley[15], we then left on a rough two-day bus trip to Leh, the capital of Ledakh. Much of the route followed a narrow-paved road that clung to the side of steep gorges that plunged hundreds of meters to the valleys below (Figure 1.9). We traversed high passes and dropped into stunningly beautiful valleys where the dry rocky desert landscape was broken by the golden hew of ripe barley terraces (Figure 1.10).   With the beginning of harvest season underway, we arrived safely In Leh.

SIGHTS AND SOUNDS

The experience of entering and beginning to encounter Leh was astonishing as the town was filled with a richness of sights and sounds. Under the familiar striking blue sky, we were soon soothed by the sound of water that rushed through the numerous small channels that brought the melt waters from the mountains to the abundant small fields and terraces that stretched out from the town; and by the movement of wind through the colourful bands of cloth that Ledakhi's install above the windows and doors of their houses. In the midst of the desert like environment, it was an experience of sensory abundance as the Ledakhi buildings seemed almost alive.

While we visually encountered only a smattering of Tibetan artifacts on the landscape in Tibet, in Ledakh these artifacts were everywhere. In a radius of less than 25 kilometers around Leh we were to see more monasteries, temples, chortens (stupas), and prayer flags than we experienced in many hundreds of kilometers of travel in Tibet (Figure 1.11).   It was here that the true extent of the destruction of Tibetan culture in Tibet as a result of the Cultural Revolution was revealed to us.   And from my time with Tibetans, I knew the losses were not just visual as they included lost 'stories of place', the disappearance of a Buddhist teachings, rituals and traditions, and, for the Tibetan people, the aching which comes with a deeply profound sense of bereavement. I could not help but close my eyes and imagine what the landscape of Tibet would have looked like with all of the cultural richness of the Ledakhi landscape; a process of visualization where I imagined what was missing from each village and town that we had passed through or stayed in while in Tibet. It was a

powerful impression and one that uncovered for me what the landscape of Tibet would have looked like without the impact of the Cultural Revolution. It was a dramatically different place.

As well as an abundance of cultural artifacts across the landscape, the tension between the Tibetans and the Chinese was gone. Though there was a large Indian army contingent in the region, it did not feel like an occupying force. Without the Indian army this area would almost certainly have been occupied by the Chinese army, and with it, the rich culture of the Ledakhi people would also have been destroyed. Culture, of course, is much more than the artefacts that it produces. The objects of culture reflect the way of knowing and the way of doing of a people and in this way Ledakh felt different as well. There was a greater sense of lightness to the Ledakhi's and a clear sense that the Ledakhi people had been spared the oppression that had been foisted upon the Tibetans. We encountered this lightness whenever we explored the countryside where, during the ongoing harvest season, the manual labour of cutting and thrashing was always accompanied by song and ritual. We could not pass by a group of people without being invited over to meet them, with our arrival marking the perfect excuse for everyone to take time for conversation and tea. It was not difficult to fall in love with the Ledakhi people.

My time in Ledakh finished at one of the most remarkable and visually rich events that I have been a part of, the annual festival for the monastery of Thikse. (Figure 1.12) Every year, on an auspicious day selected by an important Lama, each Tibetan monastery holds a festival that functions as a spiritual cleansing ceremony for the monastery itself. Lasting for a few days, and featuring mask dances, rituals and ceremonies, the festivals bring together the villagers from all over the district, most of whom also have family members who are lamas (monks) in the monastery, a reflection of reflecting the close and binding relationships that exists between lay people and the monastic communities. To my great fortune, the monastery of Thikse was holding this event as my stay in Ledakh was coming to an end.

The tourist season was winding down and I was one of the few foreigners remaining in Leh. Pam had left to join her parents who were arriving in New Delhi as I made my way to Thikse to explore the architecture of the complex and take in this important event. Upon arrival and hearing the sound of radongs, the great horns that Tibetan Buddhists use at important events, I soon found myself hiking through the monastery to the roof of the main temple. Here I found two lamas who were practicing

vicinity of the Karakoram and westernmost Himalayan mountain ranges. The territory is part of the larger region of Kashmir, which has been the subject of dispute between India, Pakistan, and China since the partition of the subcontinent in 1947." "Jammu and Kashmir State, India."

15   The Kashmir Valley is recognized for its beauty and its moderate climate. "The Vale of Kashmir is an ancient lake basin about 85 miles (135 km) long, 20 miles (32 km) wide, and 5,300 feet (1,620 metres) high that is drained by the upper Jhelum River. Lined by mountains that rise 12,000 to 16,000 feet (3,600 to 4,800 metres), the vale is sheltered from the wet southwest monsoon. … The valley was the resort of Mughal emperors, notably Jahāngīr, who reigned in the early 17th century and constructed picturesque gardens and buildings in the vale for his empress, Nūr Jahān.". In Encyclopedia Britannica (website). "Vale of Kashmir". Accessed March 24, 2020, https://www.britannica.com/place/Vale-of-Kashmir

Figure 1.9: The Journey to Ledakh (W Semple)

Figure 1.10: The Indus Valley (W Semple)

their radongs, playing the horns so that a continuous sound would echo down the wide mountain valley (Figure 1.13). When the lamas were finished, we soon struck up a conversation as they were as interested in me as I was in them. I shared with them that I had recently been to Tibet and how the experience was both uplifting and disturbing, and that I had come to Ledakh to learn more about Tibetan Buddhism and Ledakhi culture.

I was soon befriended by one of the lamas who invited me to stay in his small apartment in the monastery, a stroke of privilege that allowed me to experience the festival in a way that I never imagined. Early each morning, well before sunrise, my lama friend would rise, make tea for the two of us and then leave for the temple rooftop where we met to play the radongs with another lama. There, under a starlit sky untouched by electric lights and enveloped by a quiet that only comes with remoteness, the sound of the two radongs would echo out across the valley, calling all of the lamas to the main prayer hall of the monastery for the first morning puja.[16] That first morning, with a mixture of curiosity and reverence, I found myself at the door of the prayer hall, cautiously looking in and hoping for a few glimpses of the morning pujas that would be performed. I was soon invited in and given a place at the side of the prayer hall where I was to sit for several mornings. I had never experienced anything like it.

On the last day of the festival, I recall standing, looking down on the high walled courtyard outside of the main temple as a progression of monks, in full ceremonial dress, filed down the stairs into the courtyard from the main prayer hall (Figure 1.14). With the breathtaking backdrop of beautiful Indus valley and the embrace of its high mountain ridges, a row of lamas played a long continuous sound through their radongs while the crowds of Ledakhi's quietly recited Buddhist mantras. It was simply an astonishing sight and it was the moment when I knew that my 'Tibetan journey' was not over, that I had more to learn and experience. From this viewpoint, it also seemed that the only place that I might discover what I needed

was in Dharamsala, the 'capital' of the Tibetan community in exile in India and the home of the His Holiness the Dalai Lama. It is where my journey took me next.

THE QUESTION

When I arrived in Dharamsala, I had planned on staying in Dharamsala for two weeks. I stayed for twelve. During my time there, I took two 15-day meditation courses at a center above the small community of Macleod Ganj.[17] The time between became a significant period of reflection, where mornings focused on meditation practice and doing volunteer carpentry work at the meditation center, while my afternoons were expended taking long walks in the forested foothills, with the dramatic snow-capped peaks of Dhalidiri range of the Himalayas towering in the distance like white jewels. It is difficult to describe the experience of that time except to say that it was filled with many remarkable moments that impacted, in a profound way, who I am as a person.

While in the community, I was part of a small group of people that was able to arrange for an audience with the Dalai Lama. As part of this audience, each of us was able to ask him a question, one that would assist us personally on our own spiritual journey.   When it came to my turn, I shared with Dalai Lama that I had been watching some people with fairly strong Christian perspectives struggle with their spiritual identity while they were undergoing a growing intrigue with and attraction to Buddhism. In explaining this I asked the Dalai Lama "Can you be a Buddhist and a Christian at the same time". He began by answering "Sure, why not" and then shared that the important question is not whether to follow one religion or another, but to understand what path will better help you on your own personal journey. So, he suggested, if a person is interested in the Christian notion of a personal connection with God, then perhaps Christianity is the better path. But if one is attracted to the Buddhist notion of meditation and the inner journey, then it may be that Buddhists have the most experience and the techniques that could assist with this kind of journey. To that point in my life, this was one of the more profound answers that I had heard from a religious leader as significant as the Dalai Lama.

While this was my first experience with the importance that Tibetan Buddhists place on each person finding their own question as part of the spiritual journey, it was not to be my last. During the second meditation course I took, taught by the learned Tibetan monk Geshe Sonam Rinchen[18], the Tibetan Buddhist perspective on the importance 'the question' as an essential component to a person's own spiritual journey, once

16   Pujas, a word that is of Hindu origin. are "ceremonial worship, ranging from brief daily rites in the home to elaborate temple rituals. The word puja is derived from the Dravidian pu ("flower"). In its simplest form, puja usually consists of making an offering of flowers or fruit to an image of a god. The components of a puja vary greatly according to the sect, community, part of the country, time of day, needs of the worshipper, and religious text followed." In Encyclopedia Britannica (website). "Puja: Hinduism". Accessed March 24, 2020, https://www.britannica.com/topic/puja

17   McLeod Ganj is located in the Kangra District of the state of Himachal Pradesh in India. Also known as 'Little Lhasa,' due to the large Tibetan community that lives there, McLeod Ganj is home to a few of the most important Tibetan Buddhist monasteries in India. The town is an important center for the study of Tibetan Buddhism and is a popular tourist destination.

18   The term Geshe refers to a Tibetan monk or nun who has completed an 11-year Geshe curriculum. "The title "Geshe" is not just a name for a graduate. In the monastic system we believe that to graduate as a Geshe is to create the karmic imprints to take rebirth in Shambhala. "*Ge*" means "virtue" and "*she*" means "knowing." Geshe thus means one who knows virtue, one who knows what should be practiced and what should be abandoned." In FPMT News (website). "What is a Geshe", Accessed March 24, 2020, https://fpmt.org/mandala/archives/mandala-issues-for-2007/april/what-is-a-geshe/

again came to light. The title of Geshe is a significant one for Tibetan Buddhists as it denotes that this person has attained the highest of level of proficiency in the philosophical teachings within the Gelugpa tradition of Tibetan Buddhism.

In spite of his position, Geshe Sonam Rinchen was typical of all of the great teachers of this tradition that I have had the fortune to meet: kind, humble, unassuming, full of laughter and possessed with great insight into the nature of the human condition. The class was made up of a group of 25 foreigners from 15 different countries and like most who come from western schools of thought, were used to challenging authority and exerting perspectives on issues such as individualism and human rights. In the early days of this course, when our western values were, from a Buddhist perspective, keeping us from understanding and attending to our own spiritual discoveries, the ideas being present-ed by Geshe Sonam Rinchen were often challenged. As we debated the philosophies and ideas being presented to us, the Geshe often countered our concerns with the explanation that he did not have the answers that we were looking for as he was just a simple monk. His approach instead, was to take us through different meditation practices and exercises as the knowledge that the Geshe was imparting, could only be 'learned through experi-ence'.   Slowly, with each of us taking part in this method of learning, we began to witness a remarkable change as our directed questions gave way to quiet contemplations, as we learned to place greater emphasis on 'listening' and 'experiencing'. We began to understand that our many questions were just getting in the way of the insights we wished to discover and the deeply personal experiences we increasingly wanted to have.
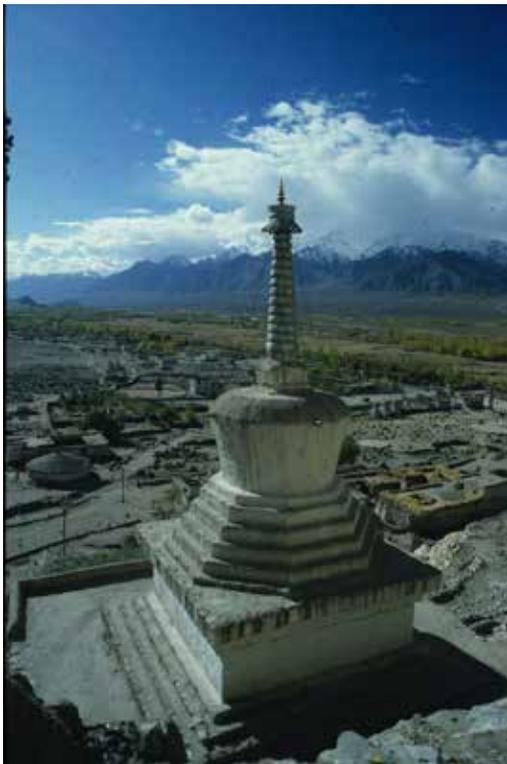
Figure 1.11: A Buddhist Chort-en (stupa) in Leh (W Semple)

It was a difficult time in India's history, as a little more than one year earli-er, on Oct 31, 1984, Indian Prime Minister Indira Gandhi was assassinat-ed, an event that unleashed a deadly wave of sectarian violence across the north of the country. While there was peace in the mountains, it was difficult to ignore that India was raw with emotional intensity and a ten-sion that seemed at times to be verging on the edge of carnage. What was to be done? What could be done? Was this not the kind of act that required intervention? During the very early days of the course, while we were still anxious for debate, India's issues came into the discussion. Somewhere in the midst of these discussions, the western philosophical

concept that the 'end justifies the means' came into view. We wondered what the Geshe thought of this?

With eyes that shone with wisdom and delight, the Geshe shared with us the problem with this thinking; that the ends and the means were so entwined that they could not be separated and that they needed to be considered within the understanding of their inter-connectedness. It was for the Geshe, simply 'the wrong question'. In the truest Buddhist sense, he did not tell us what the question was because he was, after all, 'only a simple monk'. He eluded to the fact that determining and understanding the question was often more challenging than finding the answer; that each person's questions were deeply personal and that these could not be determined by rational thought alone. In addition to helping us to grasp the importance and challenge of discovering our own question, the Geshe also challenged us to carefully consider the nature of intervention and how the very questions that we use are often followed by actions that can have unintended consequences.

LEARNING ARCHITECTURE

In 1988, when I enrolled in the Architecture Program in the Faculty of Environmental Design at the University of Calgary, I ended my career as a builder. I decided to return to school to study architecture, for a couple of reasons. For one, I needed some new challenges and while I loved building I could see, even in my mid 30's, that there was a time limit to how long I would want to do this. I did not want to grow old at the end of a hammer. I did not have any trepidations about doing this, it was to me a great opportunity. I was looking forward to having the time to learn.

While the years of my studies at the U of C were eventful and included a number of rich experiences, they also brought some unexpected challenges. I was, for example, surprised by the challenges that being a builder would bring; how I needed to learn to turn off 'my building mind' in order to stop developing building solutions before the ideas for the design had evolved. As a builder I had always put great measure in pragmatics and the construction details, on understanding materials and how the use them, while I now needed to put greater effort into understanding and developing the design itself, on the big picture.

Two experiences in my first year that were instrumental to my early and developing views on the 'making of architecture'. The first came in my first design studio. From a couple of other students, I heard about a design studio that was being taught by one of the younger professors, John Brown and went to learn about this project. This was to be an interactive

Figure 1.12: Thikse Monastery (W Semple)

Figure 1.13: Monks playing radongs on the roof of Thikse Monastery (W Semple)

Figure 1.14: Ledaki's gather for the Thikse Monastery Ceremonies (W Semple)

group project for a small group of 5-6 students. John proposed to take a building that had been designed from a piece of literature called the 'Danteum', an unbuilt tribute to Dante's Divine Comedy' designed by Italian architect Giuseppe Terragni; and re-design the building based on a second piece of architecture, Luigi Pirandello's play 'Six Characters in Search of an Author'. It was, for me, the beginning of learning about architecture as experience, where the architect tells a story through the experience of being in a building.

The course was also an early study into the use of computer design as a method for working collaboratively on a design project, and in a way, to test how the carrying out the design entirely on a computer affected what we could do and its impact on the design process. We were to take the disassembled Danteum, and using different layers on the computer for each character, reassemble the building to tell the story of the play, with the pieces describing each character and the interactions between the characters. One of the few rules was that we were to use all the pieces, but could not add any others. It was a challenging task, at least in part, because of the technological limitations of both the hardware and software as the state of design technology in 1988 was primitive when compared today's tools. It was a tremendous exercise in collective design and cooperation. We had to interact constantly, making trade-offs and working together to describe, architecturally, how each of our characters would interact with another character. This design process resulted in the creation of a computer-generated three-dimensional design for a 'new building'

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that would be called the 'Pirandellum'.

To present the project to our fellow students and to the faculty, we decided to build a large model of what we had created on the computer. In spite of working with a 3D CAD programme, the process of assembling the building piece by piece provided a number of surprises and became something of a revelation. While some of the surprises involved in how the interactions of our characters worked architecturally, other surprises came with how we experienced different spaces as we assembled the model by hand versus how we experienced these same spaces when created three dimensionally on the computer. It was a revealing lesson in how different mediums and methods influence perception.

During the term following work on the Pirandellum, I was part of a small team that Prof. Brown put together to develop an entry to a design competition called 'Freeway as Art', a project to develop an artistic intervention on a massive highway interchange in Houston, Texas. As with the Pirandellum, this project required us to delve into thinking about the 'experience' of the spaces that we would be creating. We began by asking ourselves what the driving on a highway meant to each of us and how we could build upon that experience. In our early design sessions, often over bottles of wine and complemented by gales of laughter, we soon discovered that to each of us it was music and the road; that driving meant putting on a cassette tape (yes, this is dated) of our favourite driving music and 'hitting' the road.

As the competition had a very tight timeline, the design quickly evolved as the project developed. As we thought about the experience of music and the road, we explored ideas of how to bring the experience of road music to the driver. We came upon the idea of using a pattern of shadows that would be cast across the highway where the driver, travelling at 60 miles an hour, would travel through a shadow pattern. Somewhere in these conversations Prof. Brown's research uncovered a piece of music that was based on the Fibonacci sequence, a developed numerical pattern that, once in place, is continued through repetition. The piece of music, which was developed for a quartet, would form the basis for our design; a repeating pattern of objects placed along the edge of the highway that would cast shadows across the road. For our 'quartet' we chose two types of trees and two types of metal columns that are used commonly used to support highway lighting and signage. Each one of these would representing one player in the quartet, with the placement of each determined by the Fibonnaci sequence. Someone in the group found a country music song called 'Blue Shadows', which seemed the

perfect imagery and became the title for the project.

We talked a great deal about how we would display our design, as the competition rules emphasized the use of drawings over models. If a model was to be used, the rules stated that it was to be lightweight and be easy to install at the competition venue. But, as our project was about an experience, we did not feel that the competition rules offered us the latitude, we needed to demonstrate this and we decided that we would break these rules. In doing this we knew that we had to provide a compelling reason for the jury to overlook this and allow our design to be considered. We decided to use a model that we would build out of wood as we wanted it to be beautiful; to be stunning enough that those looking at it would decide to keep it in the competition. With a laminated walnut plywood base, walnut veneer topography, maple veneer highways and trees and other objects made of cherry and pine, the final product was stunning.

To enhance the idea of a highway experience we made a video, using lamps to simulate the sun and show how the shadows would move across the highway at different times of the day. While a far more 're-alistic' version of this could be created with contemporary sophisticated 3D technology, I think this would lack the beauty of what we created, and would have taken away the experience we had in resolving aspects of the design while we built the model. We continued to learn about the design we developed as we carefully assembled the pieces model while having a great deal of fun doing it.

Figuring out how to ship the model to Houston resulted in another mo-ment of innovation. To get the model to the competition venue on time we were sending it to Houston by airfreight. While our crate would have to be strong and durable, we thought that the opening of it had to be a moment of discovery, one that would cause those looking in to the crate to want to put it together, as the model was in four pieces. The custom crate I designed and built had five slide out shelves, one for each of the four quarters of the model. The fifth shelve would have a one-page sheet with assembly instructions, the simple plates and bolts to be used to attach the four quarters of the model, a wrench for tightening the bolts and the video we shot of the shadow patterns that would be cast. Assembly was simple, designed so that two people could put it togeth-er in less than 5 minutes. We hoped that whoever looked in would be intrigued enough to put it together, and once together, they would not be able to resist putting it up on a wall in the competition venue. We won the competition.

As I reflect back on these two projects, there are some common themes that emerge. The first was in the 'experience of architecture' we hoped we were fostering – for ourselves with the 'Pirandellum' and for the drivers with 'Blue Shadows'. The second was the significance of using different tools in the design process, where we began to grasp the impact that this has on our perception and how the hand and the eye are connected; this at a time when, from a personal perspective, the design of architecture increasingly appears to be carried on computers, to the detriment of hand drawing and the making of models. The third was the importance of thinking about the complete process and how we ensured that 'making' was a significant part of our own process. All of this under the umbrella of collaboration.

While at the University of Calgary I developed a friendship with a Tibetan named Nima Dorjee, who was studying engineering at the University. We met through a presentation that I had given at the University on Tibet and its architecture, perspectives that I gained through my travels to Tibet and Ledakh. During the time when I was putting the proposal together for my thesis project, I shared with Nima that my goal was to work on a project in Asia, as I was interested in many issues relating to traditional cultures and architecture and wanted to explore this. He asked 'why don't you work on a project with the Tibetan community in Dharamsala'? I told him that I would be thrilled to work on a project with the Tibetan community, but wondered what there would be to work on? It had seemed like a pretty sleepy place and there was not much building activity going on when I was there.

With Nima's assistance I was able to connect with people in Dharamsala, who confirmed that there was a project that they would like me to work on, and that they would like me to come to the community to stay and work. When I first arrived, to work on what would be the first of a few projects that I would carry out with Tibetan communities, I had a sense of great excitement mixed with feelings of trepidation. While I had travelled fairly extensively In Tibet and in Tibetan parts of India, spending a great deal of time photographing, observing and studying Tibetan architecture, taking on an architecture project for the community was a significant step. I was out of my own cultural context and this was the first project of its kind that I was to work on. As many who come from the west, where we have an orientation towards 'taking action' and 'getting things done', I arrived ready to get onto the project. I was both ready to discover and also to prove myself.
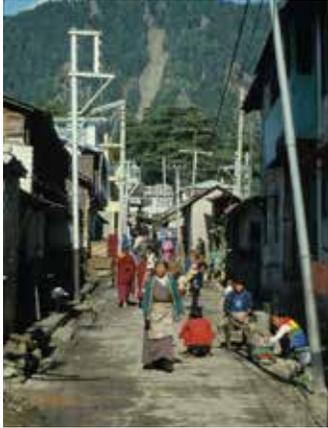
Figure 1.15: McLoed Ganj in 1991 (W Semple)

Figure 1.16: A young boy plays on the street (W Semple)

Figure 1.17: With smaller houses life spills onto the street (W Semple)

STARTING OUT

My first contact was Kim Yeshe, a woman of European descent who was the wife of Kalsang Yeshe, chairman of the Kashag, the cabinet of the Tibetan Government in exile. It was a lofty place to begin, but also a somewhat intimidating one. But while I was ready to launch into the work on a project, I was to discover that the project was not ready for me, but not at all in a way that I would have anticipated.

After I had been in the community for a few days, I wondered when I would begin working on a project and more importantly what that project that would be? Coming from a western educational background, where success is measured with respect to what gets done, I was anxious to get started. When I raised the point with Kim Yeshe, I was told there was a project, but could not get any more detail than that. A follow up inquiry a few days later elicited the same response. I did not know it at that time but it was not the project that was not ready, but rather that my relationship with the Tibetans was not ready as we had not developed any connection, and they did not 'know me'. While it was my connections with the Tibetan community in Canada that had resulted in me being here, the Tibetans in Dharamsala did not know who I was, nor whether my approach to doing things would fit with theirs. When my questions about projects did not advance the process in any way, I stepped back and decided that I would use the time to meet people and observe and learn about what was going on in the community. Over a period of about three weeks I talked with monks, government people, shop owners and others: I took pictures of street life in Dharamsala, I visited building sites, and spent time at temples observing rituals and ceremonies, all the while watching the ebb and flow of daily life in the community. I learned a great deal and I relaxed into the rhythm of the community. (Figures 1.15 to 1.17)

Sometime in this process I was approached by a Tibetan that I had met through Kim Yeshe. He told me that I should connect with Rinchen Khandro, President of the Tibetan Women's Association (TWA), about a project. The next day I proceeded to the Kashmir Cottage, where Rinchen and her husband Tenzin Choegyal, the youngest brother of the Dalai Lama, lived. With a commanding view over the foothills below, this lovely old stone cottage which combined local Himachal Pradesh and British Raj architectural styles, was Rinchen's home and business.

The initial connection that Rinchen and I made was a very good one. The TWA was planning on building a center for Tibetan Buddhist nuns, many of whom were recent refugees from Tibet, and they wanted me

to work on the design for this complex. It was, to me, both an astonishing privilege and a completely daunting task which, of course, I agreed to take on. Working on this project took me deeper into the life of the community and became the vehicle for my continual learning and understanding. I was also to discover that during my early explorations of the area, while I was observing and learning about the community, they were doing the same with me; a process that I have come to call the 'observer and the observed'. But most importantly, this was about building relationships, a prerequisite really, for working with and on a project in this Tibetan community. I was beginning to discover the ways in which the process of doing things in the community was different from my own.

I also grew to understand that the way that the project was 'revealed' to me was another part of the process. Using a third party to connect me with the project leader provided me with the freedom to decide, without losing face, as to whether to work on the project or not, and all parties with the opportunity to build their own relationships, and most importantly, with the freedom to decide whether to develop a relationship or not. It was my introduction to the use of Intermediaries, something I would see many years later within Indigenous communities in Canada where intermediaries can play an important function in the developing of relationships. With the project I was given, I was able to attend numerous ceremonies and rituals and had access to many people at all levels of Tibetan society in the community. I used this access to learn as much as I could about Tibetan culture and the Tibetan way of viewing the world. I found Tibetans to be profoundly thoughtful in their responses to my questions and I often turned to different people for guidance and advice. I also spent a great deal of time looking at the community's architecture and visiting building sites to talk with builders.

DISAPPEARING TRADITIONS

As a consequence of my environmental background and my experience as a builder, I have a great affinity for traditional buildings and building practices. While travelling in Tibet and other parts of the high Himalaya I visited many traditional buildings that demonstrated the great connection that exists between environment and culture; built using local materials and traditional building practices using designs that embody local styles and layouts. In areas where local materials such as wood began to disappear, the traditional building practices and the traditional architecture styles would also begin to disappear. Dharamsala was a case in point as the Tibetan architecture in the community was being exclusively constructed using cement, steel rebar and sheet metal roofing; new materials of choice that were fundamentally changing the architecture of the community.
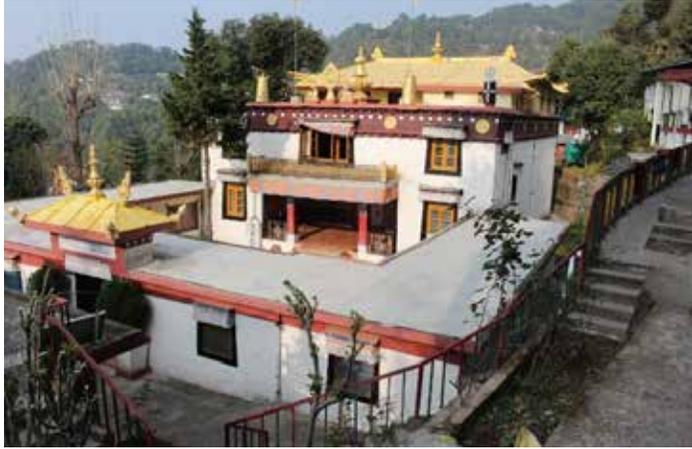
Figure 1.18: A Tibetan monastery constructed using concrete (W Semple)

Figures 1.19 to 1.21: Traditional adobe buildings of Himachal Pradesh (W Semple)

Coupled with this, as a refugee community, there were no traditional Tibetan builders in the community, with all of the work being carried out by Indian contractors and workers. This resulted in the design and construction of Tibetan buildings that I came to see as decorated concrete boxes that lacked almost all the qualities that define the Tibetan architectural tradition (Figure 1.18). Stylistically the new buildings were also trying to copy the flat roofed buildings of the dry Tibetan plateau, in an area with the second highest monsoon rains in India. This was in direct contrast to the traditional buildings of the state, whose pitched roofs with decent overhangs and raised stone foundations provided protection for the walls of houses that were often constructed using adobe (Figure 1.19 and 1.20).

ARCHITECTURAL JOURNEYS

While my travels in Tibet and Ledakh had shown me a great deal about Tibetan architecture, most of these were examples from the high, dry Tibetan plateau, not of the wet, forested areas of the eastern Himalaya that have climatic similarities to the Dharamsala area. The monastic architecture of these regions combined the Tibetan tradition with the local vernacular to fashion monastic buildings that are suitable for addressing the heavy rainfall of these regions. I decided that I needed to see more examples of Tibetan Architecture that is found in these heavily forested areas and soon launched myself on two trips to carry out some research. As it was uncertain whether I would be able to get permission from the Chinese to enter eastern Tibet, I decided to travel to areas outside Tibet where the Tibetan architectural style was influential and Tibetan Buddhism

was practiced. These were the Indian State of Sikkim and the country of Bhutan, both areas with rich cultural traditions that had been unaffected by Chinese rule and the impacts of the cultural revolution. In the early 90's, both were areas where local cultural and architectural traditions remained as one of the driving forces for decision making within the local governments.

Both trips were great journeys where I was able to meet architects, build-ers and government staff who all opened many doors and assisted me with my research. At times it was tremendously serendipitous. In one example, when applying for my permit to go to Sikkim, as it is a restricted border area, I met man in the reception who, upon hearing about what I was doing, told me about Rumtek monastery near Gangtok, the capital of Sikkim, suggesting that I speak with the Rinpoche of the monas-tery about the architecture of that complex. While Rumtek was an old monastery, it had a very new Institute that had been designed by a local architect who had to consider many of the issues that I was addressing, including the disappearance of local building materials.

After a long journey to get to this complex I sought out an audience with the Rinpoche of the monastery, sharing with him the project that I was working on and the rationale that had brought me there; my quest for more knowledge on the Tibetan architectural tradition and the challenges it faced today. The Rinpoche introduced me to the architect, Narendra Pradhan, who had designed the new institute that was attached to the historic monastery. I ended up staying at Narendra's house in Gang-tok, engaging in many conversations with him on Tibetan architecture. Through Narendra I was able to meet a number of important Government officials who were responsible for the maintenance of Sikkim's Monastic buildings, as these complexes were considered to be an integral part of the State's heritage. Through these contacts I was able to visit numer-ous temples, with permits that allowed me free rein to measure and photograph the different parts of the buildings that I was interested in.

Travelling to Bhutan provided other insights and opportunities. Close Tibetan friends in Dharamsala helped me get into Bhutan, providing introductions to relatives they had in Bhutan, often the historical linkages that were the result of marriages between the Tibetan and Bhutanese noble families. Similar to Sikkim, my connections opened many doors. I was able to travel to Bhutan on a special one-month permit as a 'Guest of the Bhutanese government'. Once in Bhutan, Todgye Dorji, head of the Department of Education and a second cousin of a good friend in Dharamsala, , provided me introductory letters to each of the Dzongs,
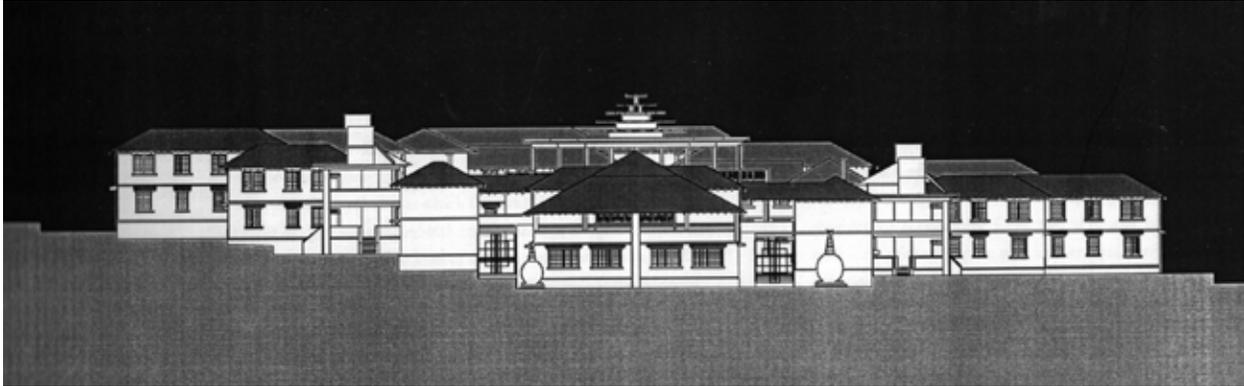
Figure 1.22: Proposed Dolma Ling Nunnery: Entrance Elevation (W Semple)

the great fortress monasteries of Bhutan, that I wanted to visit. Again, these letters gave me the permission to enter and photograph each of these complexes, and to meet with the people who were responsible for their care.

The two trips were packed with rich encounters with the architects, builders and monks who understood and worked on these complexes. In Sikkim, where the disappearance of forest resources also resulted in the replacement of traditional building practices with contemporary concrete buildings, I was able to observe the impact that this was having on both

Figure 1.23 Proposed Dolma Ling Nunnery: Site Plan (W Semple)

CIRCUMAMBULATION PATH
PAVING STONES
CHORTEN
PATHWAY
BOUNDARY

COURTYARD TREES
SITE PLANTING

WATER COURSE
PONDS

TEMPLE
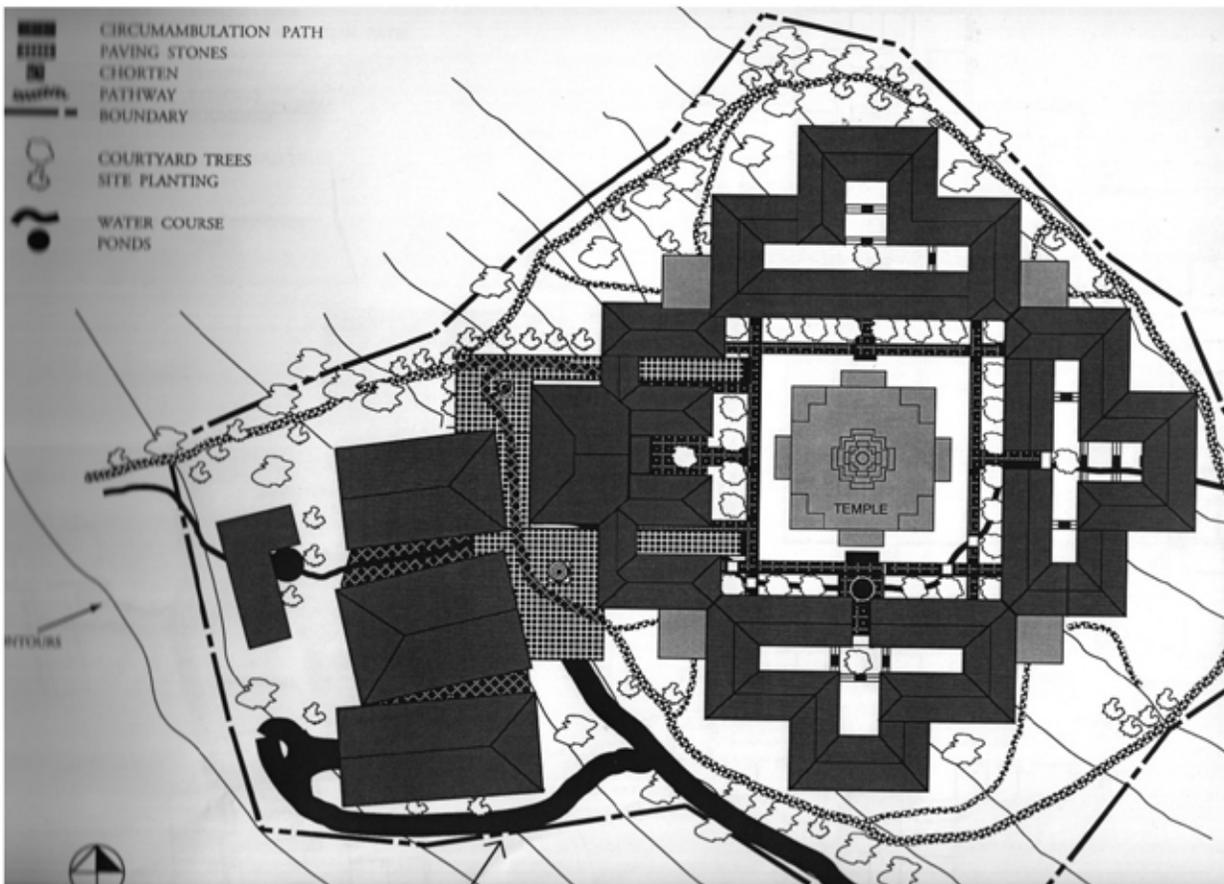
the restoration of existing monasteries and the construction of new ones. In Bhutan, I was able to see what a living tradition looks like as the great forests, along with the country's culturally supportive architecture policies, have guaranteed that the traditional building practices have stayed alive. Both trips provided many insights and lessons on what I see as the inherent connections that exist between environmental and cultural sustainability. I returned to Dharamsala with these insights and continued working on the Nuns project.

The research I was carrying out on the traditional Tibetan architecture found in the various regions of the Himalayan region and the Tibetan plateau had consistently highlighted how the local Tibetan architectural tradition was significantly influenced by local environmental conditions and the local materials that were available, blending these with Tibetan Buddhist principles and practices. While sloped roofs were rare on the Tibetan plateau, they were commonly found on the monasteries of Sikkim, Kham and Bhutan, regions with extensive forests that were the result of the high levels of rainfall that they received.

Drawing from the local vernacular and wishing to avoid the creation of more 'decorated concrete boxes', for the design of the Nuns Institute, I wanted to avoid the elaborate details used on Tibetan architectural details such as windows, doors and columns and capitals; details that had traditionally been constructed using wood, but were now being constructed using concrete. I also wanted to use a sloped roof on the complex. While I was convinced this was the best approach to take, I was concerned with the identity of the building and whether removing these details would make the building less Tibetan. Yet, as the first Tibetan Buddhist Nuns Institute, reflecting Tibetan identity was a paramount concern, and the decision to change this could not be mine alone.

Feeling myself in somewhat of a dichotomy, I approached Rinchen Khandro to gain her perspective on this as I was searching for a story, for something that would help me resolve this design issue. As I commonly heard Tibetans orient themselves with the disclaimer 'when we go back to Tibet …', I wondered why this complex was being created and what purpose ensuring a Tibetan identity would serve, if the Tibetans were going to return to Tibet? When posed with this question, Rinchen replied that the building had many important functions, and symbolically, if Tibetans were able to return to Tibet that this complex would be a reminder to people that 'this is where the Tibetan were'. I found this to be a powerful rumination on culture and identity and the idea of taking a proactive stance on site memory. While I could now see that copying details was not a requirement, it was essential that the complex would
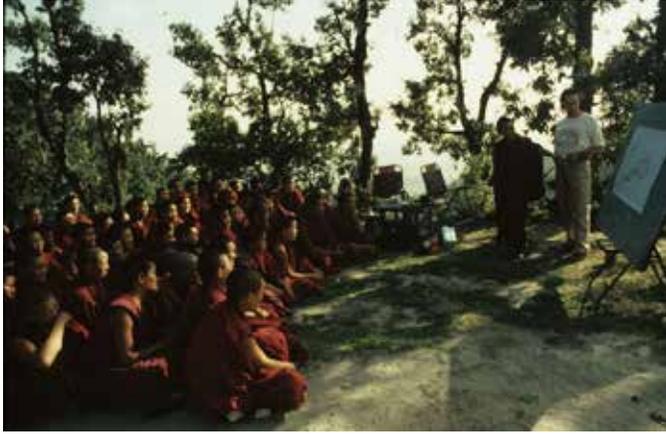
Figure 1.24: Meeting with the Nuns (W Semple)

Figure 1.25: The Nuns: Studying Buddhism in their modest rooms (W Semple)

Figure 1.26: The Nuns at Prayer (W Semple)

have a 'Tibetan feel'.

In developing the preliminary design for the complex, I drew upon the traditional vernacular architecture of this region where rammed earth houses on stone plinths, with sloped slate roofs are the norm (Figure 1.21). While I did not utilize any elaborate details, the colouring of the buildings and details like handrails drew upon traditional Tibetan practices. I also drew upon the traditional spatial organization of Tibetan monasteries, organizing the complex around a series of courtyards. While most of the symbolic details that are typical of traditional Tibetan architecture were not used, the overall plan of the complex drew upon Tibetan symbolism, while the massing of the building combined the use of heavy load bearing walls that were typical of traditional Tibetan monastic buildings. When combined with the sloped roofs covered with local slate, the complex would take on a character that reflects the typical regional variations that are the result of the local climate and available building materials (Figures 1.22 and 1.23).

Sharing the initial preliminary design ideas with the Nuns presented another set of challenges and lessons. During a bright spring day, the Nuns were brought together so that I could present them with the initial plans for the complex (Figure 1.24). I felt that input from the Nuns was essential and I wanted to know what the Nuns thought of the ideas that I was exploring. I soon discovered that this was too formal of a process, that the Nuns would not provide any comments on the design in deference to my position as 'the architect' on the project. Prior to this gathering, the Nuns had always seen me in the company of Richen Khandro, Kim Yeshe or another prominent Tibetan in the community, and from this they had placed me high up the social hierarchy. Being humble Tibetan Nuns, they saw any comments as challenges to my authority, and this was something they were uncomfortable to do. And so, I learned to meet and spend time informally with the Nuns; observing them in their daily lives and talking with them about their needs. These conversations helped me learn about the necessities of the Nuns and perhaps more importantly, revealed how

I needed to adapt the process to reflect the 'ways of doing' of those who were going to inhabit this complex (Figures 1.25 and 1.26).

From working in this project with the Tibetan community I learned a number of important lessons about the different approaches that could be used for working in non-western communities that I would carry forward into future work in ways that were yet to unfold. I learned that understanding the question is part of the journey; that developing relationships was the first part of a project; that knowledge was collective and belonged to the community; that other ways of knowing present remarkable viewpoints on the human condition and need to be honoured; and that not everything that is important can be quantified and that for many cultures, mystery and the immeasurable have a place. In exploring the design of culturally appropriate architecture, these were valuable lessons to learn.

THE CREATION OF STORIES

In 1995I travelled to India to give a presentation at a conference in Chandigarh, the state capital city of the states of Punjab and Haryana. Designed by the great French architect Le Corbusier to reflect a modernist vision for the newly independent country, the city of Chandigarh provided an intriguing venue for the conference title "Theatres of De-Colonization"; and an undeniable entry point for examining the nature of the 'architecture', 'urbanism' and 'agency', the three sub-themes of the conference. One of the key note speakers at the conference was the gifted Indian architect Balkrishna Doshi. As a speaker Doshi had the ability to draw in an audience and take you on a journey. When I reflect upon this in terms of working in communities and understanding my role in this, both qualities seem necessary. I learned that the role of the storyteller was to weave together these aspects of their inner and outer journeys to take the listener to a place they had not been before – and for the listener, when they have arrived there, to know they are changed.

Doshe reflected on his early days in the Indian village where he grew up, and the importance that family, household rituals and visits to temples played in his life. He spoke of his apprenticeship as a young architect working in the Paris office of the great French architect Le Corbusier's office and the perspective that this provided him on science and technology, as well as the different viewpoint this afforded him on religion and culture. He explored architecture and shared his designs. He reveled how, from his perspective, this highlighted the difference between a western focus on rational time and compartmentalization, in comparison to the Indian focus on time as a 'continuous non-conscious' flow. Citing examples from the impact of the Moguls and the British, Doshi shared his

Figure 1.27: Travelling above the clouds (W Semple)

fascination with the ability of Indian culture to absorb and incorporate into day to day life what it found to be useful, and to let the rest fall away.

Doshi shared the story of his work as an architect and how, he came to a point where he felt compelled to return to the village, to once again draw from his past in order to experience and reflect upon this in the present. Part of this seemed to be a reaction to what he saw as the western view that building form is created by geometry, which, to him presented a distinctly finite offering for design. In contrast, the Hindu perspective encouraged interdependence, fostered flexibility, growth, and identity. To Doshi, the Indian mind incorporated storytelling, and more easily integrated other forms of knowledge sharing and the use of informal participation in act of designing. Doshi's continued his story, sharing an example of this within his own design process.

While working on the design for the National Institute of Fashion Design in New Delhi, Doshi discovered that the building site included a spring that was often used by local residents of that area of the city. Incorporating story and ritual as part of the design process, Doshi spent time interacting with the local users of the spring, examining the ritual of water gathering and exploring how space for this could be created in the new complex. As the design evolved, a new story began to emerge about the role of the spring in the complex that was being created and its significance as a place for water gathering. While he told this story, I watched in fascination as the audience began to split along cultural lines, with westerners wondering, with concern, whether they were watching a

charlatan in action, and the Indians celebrating an unconventional use of what they saw as an essential aspect of their culture. Clearly diverging views on the validity of what he was doing emerged.

I was enthralled. I felt I had been provided with a glimpse at how stories are created and are given meaning, and how ritual can be part of a larger context, and that ritual and storytelling were alive and part of the present. As I continued to reflect upon the projects I worked on with Tibetans, I could see that I had not considered storytelling as a part of this process. While I considered ritual to potentially be an important design 'element', I wondered about the appropriateness of a 'western' architect using this as part of the design process. But mostly, though, I was unsure of the path ahead, I felt the sense of wonderment that one feels with a new and exciting discovery. Perhaps it was due to my time with Tibetans but I found that I did not want to pass judgement on which group (western or Indian) had the correct view. Instead I focused on my own experience and began to understand how to see how I could use story telling as part of an enriched design process.

Was Doshi using stories to manipulate the community or was he using the power of story to create, in part at least, a richer sense of place around the site and the building complex he was designing? As I have learned more about the nature of stories, particularly when used within cultures other than my own, I have come to see that this a question that each one of us must decide for ourselves. Stories are part of the oral tradition. From the privilege and experience of travelling to and working with other cultures, I have learned that oral traditions generally place emphasis on giving the receiver of knowledge the choice in how that knowledge is understood and used - providing flexibility both to how the stories are told and how they are heard. When I learned more of the story telling tradition within Indigenous communities in Canada, I was not surprised to find that these qualities were there as well.

In this light, I also returned to reflect upon what I learned years ago from the Geshe Sonam Rinchen. As a teacher and storyteller, he did not make claims. Rather he too would tell us stories and send us on experiences into our inner worlds that for most of us, changed how we see the outer world. It certainly did that for me. It also reinforced my own rejection of the idea that there was one truth, one absolute in the world, and how I approach those who make claims that one truth exists and that we must follow it, with tremendous caution. There is an interconnectedness between how we 'know' and how we 'do' and this is embedded within the wisdom of storytelling - a certainty that each person could benefit
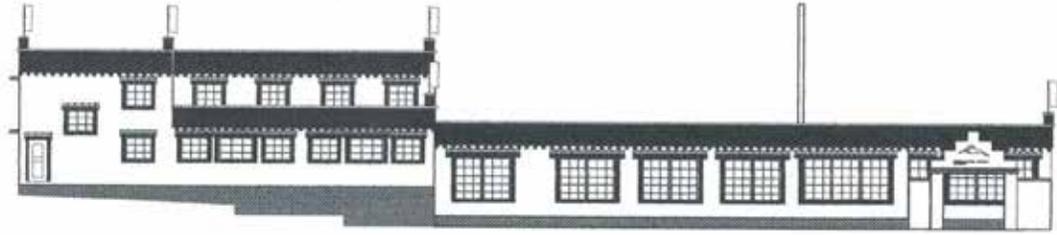
Figures 1.28: Xegar Training Centre - South Elevation (Design: W Semple)

Figures 1.29: Xegar Training Centre - East Elevation (Design: W Semple)

Figures 1.30: Jammu Gateway (Design: W Semple)

from reflecting upon. I have returned to India many times since working on the Nun's project, sometimes to work on other architectural projects, sometimes to teach and give talks on my work and what I have learned, and sometimes just because it is part of my own journey.

RETURN TO TIBET

In 1998, on one of three trips I would take to work on architectural projects in Tibet, I returned to Tibet to work as the Architect with a small International team that was assembled by the United Nations Development Program (UNDP) to prepare an Ecotourism Master Plan for the Qo-

molangma (Mount Everest) National Nature Preserve (QNNP). Covering 36,000 square kilometers of the Tibetan plateau that straddles the border with Nepal, the QNNP is a land of enormous biodiversity and is home to five of the world's tallest mountain peaks. Elevated to a National Nature Preserve in 1984, with the expressed goal of attaining UNESCO heritage status for the preserve, the Ecotourism Master Plan was developed to help ensure the long term environmental and cultural sustainability of the region, and to reduce poverty through the development of an ecotourism industry in the region.

As part of this work the UNDP team undertook a four-week field study of the QNP with a team of Chinese experts from the China International Center for Economic and Technical Exchanges (CICETE). To travel to this remote and undeveloped area of Tibet, our entourage included Tibetan drivers for our Landcruisers, a large supply truck for all our camping gear and food, translators, and cooks to prepare food for the team. We visited remote villages untouched by modern development, important Tibetan temples and spiritual sites, and stunning natural settings. There were long days of travel on rough roads that took across a number of high mountain passes, winding our way through the clouds and into the sunlight where we could view the Himalayan peaks breaking through the monsoon clouds that covered most of Nepal, before dropping back through these same clouds and into another Tibetan village. It was an ethereal experience (Figure 1.27).

I was brought on to the team due to my expertise with Tibetan architecture. My role was to undertake the design of several buildings: including the Jammu Entrance Gateway, the Xegar Training Centre, the Rongbuk Monastery Guest House and a prototype Village Guest House (Figures 1.28 to 1.34); and to develop architecture design guidelines for the QNNP. In each village we travelled to we met with village leaders, local families who were interested in setting up small guest houses, and local builders and craftspeople. Tibetan traditions still survived in these villages and the villagers themselves wanted to keep their traditions alive. The Chinese government's desire to get UNESCO heritage status for the QNNP was one of the tools we were using to reinforce cultural traditions of the region and our mandate to support the environmental and cultural sustainability of the QNNP.

Our small international team had many challenges working with the Chinese group from CICETE. Sometimes after taking time to collectively make decisions together regarding site visits and other work, we would often find ourselves doing something different as I our Chinese col-

South Elevation

West Elevation

toilet and shower

toilet and shower

guest rooms

courtyard

Restaurant

guest rooms

Restaurant Terrace

First Floor

Second floor

Figures 1.31 to 1.34:
Rongbuk Guest House
(Design: W Semple)
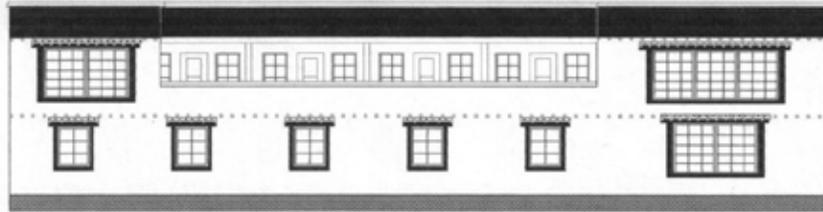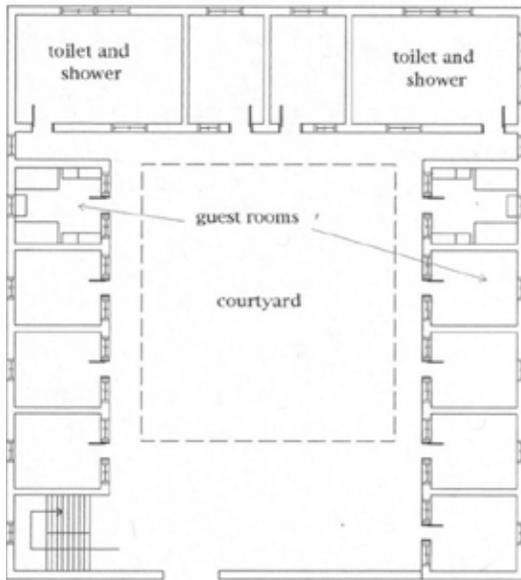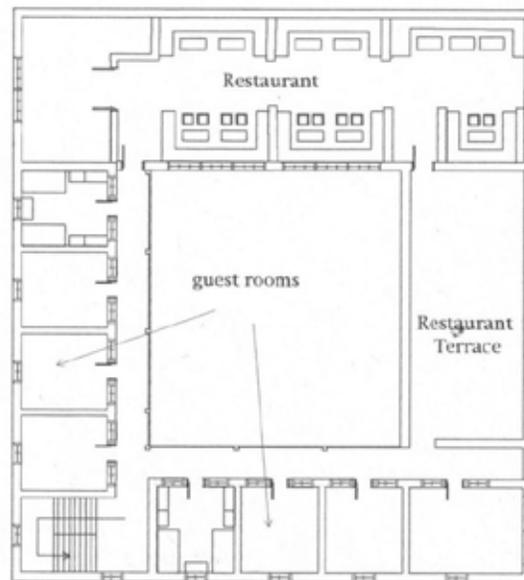
leagues would decide to change those plans; changes we would only hear about when we arrived at a different destination than one that

we expected. Unbeknownst to our Chinese colleagues, these instances often revealed aspects of the cultural and political realities of Tibet that they did not want us to see; part of what we saw as a careful choreography that was being used as a means of limiting our influence.

In one example, we had traveled to the western end of the QNNP, south

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of the village of Nyalam, into an isolated valley that stretched into Nepal, an area where tourists were not yet been permitted to travel. We went to the Tibet-Nepal border, visiting villages of houses that displayed a unique blend of Tibetan and Nepali architecture, both in form and in the finishing details that were used to embellish windows, doors and rooflines (Figure 1.35). I had seen examples of this type of architectural blending in other parts of Tibet where the villages were at a transition point between cultures (Figure 1.36). In areas like this, the buildings can be seen as transition pieces, reflecting how culture blends through the trading and family relationships that, in theses villages, would have naturally have moved up and down the valley prior to the establishment of the border that now exists.

As we drove to these villages, I noticed a small Tibetan temple high in the hills above the valley. Asking about this, our guides told me that the temple was there because this was the site of the cave where Milarepa, the great Tibetan Saint of the Kagyu School of Tibetan Buddhism, went on his multi-year meditation retreat. I wanted to stop and visit this temple and the cave but was told that this would have to wait until we were on our return trip out of the valley. At the moment, there was no time.

After spending a couple of days in a village near the border, we were to begin our trip back to Nyalam. I mentioned again to the Chinese team leader that I wanted to see this site, that as an important architectural feature and because of this, allowance needed to be made for this. I was told this would not work as we had an important meeting in Nyalam and everyone needed to be there. We countered that the meeting was one on policy and programs and that this was not something where I was needed – this was not my area of expertise. We were then told that logistics would not allow this as I was only one person, and if I took a driver and a vehicle, there would not be enough room in the other vehicles for everyone else. At that point one of my colleagues, our crafts and marketing expert, chimed in that he too did not need to be at this meeting and would like to see the site, pointing out that with our interpreter we would have a full vehicle and with this, there should no longer be a problem. It was agreed that we would stop to visit Milarepa's cave and everyone else would head to the meeting.

From the road, access to the gompa and cave was by a one hour walk up a winding mountain trail. Much to my surprise, when we arrived at the trailhead, a second Landcruiser, with a few of the Chinese team pulled up beside us. The real reason for the resistance to my request is that 'our hosts' did not want us to go there unescorted, that they did not want

Figure 1.35: Windows that combine Nepali and Tibetan detailing (W Semple)
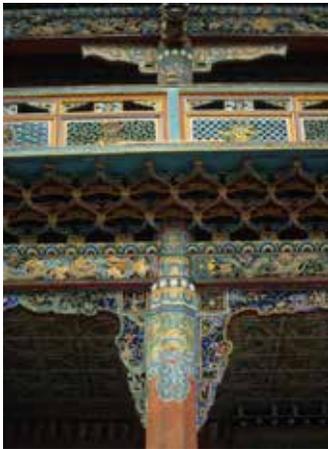
Figure 1.36: Chinese details from a monastery in Kham - Eastern Tibet (W Semple)

Figure 1.37: Looking towards Nepal from the Milarepa Temple (W Semple)

to lose 'control' over what we would see or of the information that was being gathered. This was not the first, and would not be the last time we experienced this. After taking the climb we arrived at the small Gompa, pausing to take in the breathtaking view of view of the valley stretching southward into Nepal (Figure 1.37). Inside we found two monks in attendance, the caretakers of this great religious site. Through our interpreter I explained that we had come to see Milarepa's cave and needed directions to get there. The youngest of the monks, looking over us and our Chinese escorts, quietly nodded his head and took us to a small cave near the temple, telling us that this was the Milarepa's cave. Our Chinese escorts were impatient to get back and insisted we return our vehicles and join the rest of the team in Nyalam. When we passed again through the temple, I paused to look at some of the wall paintings that depicted stories of the life of Milarepa, asking the young monk to explain the story to me. With their impatience growing, and already half way out the door, one of the Chinese insisted that it was time to go. I told him that I wanted to finish hearing the story and that we would be right behind them.

What followed was an experience similar to the encounter with the lama at the Potala Palace nearly 15 years before. Through the window, the young monk watched as the Chinese headed down the path, and once around a bend and out of sight, turned to us and asked "Would you like some tea"? We of course agreed, staying for tea and what turned into a long conversation on Milarepa, Buddhism, and sacred sites. After our conversation the young monk gestured for us to follow him and we soon found ourselves at the real cave. We did not ask why they had kept this from the Chinese, but I am sure this was another example of the quiet resistance that Tibetans use to protest all that has befallen them under Chinese rule. Resistance is not futile. After our visit to the cave we took the climb back to our vehicle a made the drive to Nyalam, never sharing what had occurred with any of our Chinese colleagues.

We were to have one final 'encounter' with the Chinese team before we completed our field trip. We had returned to Shigatse, Tibet's second largest city and the site of Tashi Lhunpo Monastery, the seat of the Panchen Lama, the second highest ranking 'tulku' (a recognized reincarnate) within the Gelug sect of the Tibetan Buddhism. We had returned from a frustrating day where we had again been diverted, without consultation or our agreement, from visiting some important Buddhist sites in the area. In response to this, our international team leader, Les Clark, a

planner from New Zealand, called for a closed-door meeting in order to speak candidly with the team from CICETE. With both teams in attendance, Les let it be known that we were not happy with the unilateral decisions that were made without our consent, particularly as these had been contrary to what we had all agreed on. Visiting these sites was an important part of our work and was not a 'negotiable' item on some check list. In no uncertain terms, Les let it be known that, if there were any other incidents like this before we completed our field work, we would include this in our report. It was pointed out to the Chinese team lead, Prof. Li Bosheng, that this could negatively impact the consideration of QNNP for UNESCO heritage status. Our team was not happy, and this displeasure was clearly laid out. For perhaps the first time, our Chinese colleagues had no response.

We left the meeting wanting to put some distance between us and the CICETE Team. Throughout the trip whenever we had been in towns different towns in Tibet, we would join our Chinese colleagues to eat at restaurants that served Chinese food as, unlike us, they never wanted to eat in the Tibetan part of town or in Tibetan restaurants. But we decided we would change this and would look for a Tibetan restaurant for our meal. While the meeting was behind closed doors, word of what happened soon moved quickly through the whole QNNP group, including the Tibetan drivers and other support staff. As we sat thinking about who we should talk about in order to get information on where to get some authentic Tibetan food, one of our drivers approached us, asking whether we were looking for a Tibetan restaurant. Confirming in the affirmative, he waved to another driver and one of the land cruisers appeared and soon we found ourselves in the opposite end of the city, in a restaurant frequented only by Tibetans. It was the setting we were looking for. When the driver dropped us off, he gave us a phone number where we could call him so he could come and pick us up and take us back to the hotel

We were all surprised by this gesture as our drivers had largely treated us with indifference throughout the trip, seeing us I suspect, as being an extension of the Chinese 'experts' who were driving the QNNP project and the development that was occurring throughout the Tibetan Autonomous Region. The drivers had never volunteered to take us anywhere and never offered to assist us with loading and unloading our gear. They did not engage or interact with us, keeping to themselves whenever they could. All of this changed. I was certain that the change that occurred was due to our willingness to confront the Chinese and our insistence that they could not unilaterally make rules for us. I had enough expe-

rience to recognize to clearly recognize this, and shared this with my colleagues.

NORTHERN HOUSING

In Canada in 2003, while working on contract in the Research Division at the Canada Mortgage and Housing Corporation (CMHC), the position for a Northern Housing Researcher was posted at the national office.   Previously situated in Yellowknife, the Northern Housing research position was being moved to Ottawa and being melded into the housing research team at the national office. This would allow the new researcher who would take on this position access to the wide range of technical skills that were available within the Research Division. Northern, in this case, was north of 60, and included Canada's sub-arctic and arctic.

It was an exciting opportunity and one that I could not pass on – so I applied. I had never worked in north, nor had I worked with any Indigenous communities in Canada. Out of interest I had, however, been following some housing projects in northern Canada and built on this by carrying out some research on what was going on in northern communities, including some reports on the challenges that the territorial housing corporations in each of the northern territories were facing. I was shortlisted for an interview.

Somewhere in the middle of that interview, triggered by a previous question, Jim Robar, the Director of the Housing Research team, turned to me with a challenge. Noting that I had never worked in the north and did not have any connections there, he wondered what I thought about that, about what I would do to address this shortfall. In my answer I shared with him that not only had I not worked in the Canadian sub-arctic and arctic, but had never been there. But I stated that I did not think that was a significant issue. I had worked in other remote places, and within cultural and political contexts that extremely challenging, citing projects I had worked on in Tibet and the political challenges that the Chinese presented. I asserted that I knew how to make and build connections and how to work with the nuances of different world views.

More importantly, when I looked at northern housing, and how it was being designed and delivered it seemed clear to me, that in spite of the efforts of many people, there were few successes, and that, at that time, the initiatives directed at addressing northern housing issues represented 'decades of failure'. From my perspective, I went on to suggest, a significant factor in this failure was a process for designing and building housing in northern communities that did not engage northern peoples, a

process that delivered housing that was not designed to meet the needs of northern Indigenous people. On top of this were issues of inadequate supply, and the use of building systems and materials that did not attend to the rigours of the northern climate and the challenges of improving durability and energy efficiency.

I had a sense that I was competing against someone with extensive northern experience and went on to suggest to Jim, that if he felt they needed someone who had all the connections and could 'hit the ground running' that I could not really compete against that and was the wrong person for the job. But, if they wanted someone who was going to look at northern housing challenges through new eyes, including bringing processes that were more cultural appropriate for the communities, then perhaps I was the person they were looking for. My contention and reasoning won the day and I was given the job. A new journey was about to begin. Over the next 10 years at CMHC, I would carry out research projects to promote and support the development of culturally appropriate, energy efficient northern housing.

2 WAYS OF KNOWING

... subjectivity, interconnectedness and the collective

"An Indigenous research paradigm includes.
(a) the interconnectedness of all living things, (b) the impact of motives and intentions on person and community, (c) the foundation of research as lived indigenous experience, (d) the groundedness of theories in Indigenous epistemology, (e) the transformative nature of research, (f) the sacredness and responsibility of maintaining personal and community integrity, and (g) the recognition of languages and cultures as living processes."

Cora
Weber-Pillwax

As I began to carry out research for this thesis, I gained a growing appreciation of the ways of knowing and being of Indigenous peoples of Canada, as well as a growing awareness that few non-Indigenous Canadians have any understanding of this. It is because of this that I continue this thesis with a chapter that examines the concepts of location, process and product, relationships and relationality, storytelling and oral traditions, knowledge and ways of knowing, and agency; all of which are, in my own estimation, the essential philosophical reference points that are required for understanding and working with Canadian Indigenous communities. In Chapter 3, I examine how these can act as a set of guidelines for both analyzing and developing an architectural design process for working in Indigenous communities.

When reading this chapter and the quotes of Indigenous scholars and researchers I encourage other architects and designers, as I do when I read their work, to replace the word 'research' with 'design or architecture' and 'researcher' with 'architect or designer'. For the architectural design process, this begins to develop a standpoint that emphasizes relationship building and the finding of collective voices. In my own case, carrying out research on these concepts has been immensely revealing and instructive, and has become a captivating and undeniable part of my own personal journey.

It is also crucial that those of us who are from the euro-western settler culture, begin to learn more about the Indigenous peoples whose land we occupy. John Ralston Saul, in his book 'The Comeback', makes the case that we, in the non-Aboriginal world, have a difficulty in listening to the Aboriginal point of view. Saul shares a quote from Leroy Little Bear when he states that "If we are to understand how Aboriginal and Eurocentric views clash, we need to understand how the philosophy, values and customs of Aboriginal culture differ from those of Eurocentric cultures"[1] Uncovering these differences has been part of my own journey.

INDIGENOUS RESEARCH METHLOGY
Many Indigenous scholars and researchers have written extensively on the process of carrying out research in Indigenous communities, the principles required, as well as important issues and challenges that need

to be understood. In their writings, they consistently highlight the necessity for the academic community to take a different approach to carrying out research in Indigenous communities; providing many insights on what this means, as well as guidance and examples of the Indigenous principles that should guide the research process. These many insights have developed into what is being referred to by these researchers and scholars as an 'Indigenous Research Methodology' (IRM). It is my belief that the architecture and planning communities have much to learn from IRM and the principles and guidance that it provides.

I first came upon the idea of an Indigenous Research Methodology, for example, while undertaking the course work that was required for my PhD studies at the University of Alberta. As part of these studies and in preparation for working on my thesis I was required to complete two methodologies courses, courses that could be taken in any department in the University. I began a search across departments in the university for courses that would support my own work and approach; one that supported community engagement, consensus building and the architectural design process. It was through this pursuit that I came upon a course called Indigenous Research Methodologies being given by Dr. Rebecca Sockbeson, an Associate Professor of Indigenous Peoples Education in the Faculty of Education. I contacted Dr. Sockbeson to get her permission to take this course, sharing with her my work on housing projects in northern Indigenous communities and my interest in bringing a greater understanding of Indigenous values and needs into the architectural design process. The course was my own introduction to an Indigenous perspective on research and to the ongoing bias that exists within the academic with relation to Indigenous knowledge and values; a bias that has often disadvantaged the unconventional approaches to research that Indigenous researchers often undertake.

In some ways, it is challenging to define an Indigenous Research Methodology (IRM). When I reflect upon the perspectives and reasoning that has been shared by Indigenous researchers and scholars, I share the viewpoint that an IRM is less a tool and more a paradigm or set of guiding principles, ethics and values.[2] For Indigenous researchers, these 'guiding principles' are used to form the basis for evaluating and selecting 'methods' and approaches that will be used to carry out their work, principles that could also form the basis for carrying out architectural projects in Indigenous communities. By its very nature, an IRM includes cultural values and protocols, and is the bringing together of a range of criteria than are not often considered to be aspects of the western academic research process, let alone principles that would guide an architectural

1   Saul, *The Comeback,* 168

2   Wilson, *Research Is Ceremony: Indigenous Research Methods*

design process.

Indigenous scholar Shawn Wilson, an Opaskwayak Cree scholar from northern Manitoba, uses the term 'Indigenous research paradigm' to describe the characteristics of an IRM,[3] where the methodology is the governing paradigm that both ethically and morally guides the research; with the 'tools' or methods to be used in implementing the process as being interconnected under the philosophical direction of the governing paradigm. Throughout this thesis I will be taking this same standpoint, viewing both the research and design processes and the products or outcomes of these processes as being intertwined and inseparable. The Indigenous viewpoint that views the world through the lens of interrelatedness is key here.

From a personal standpoint I find the term paradigm useful as, in developing my own interpretation of an IRM, I too see it as a set of morals, and ethics that guides the process, while also providing direction for identifying and selecting the methods or tools that will be used. While this opens up many possibilities, it gives very clear guidance with regard to the Indigenous values and protocols that must be considered, as well as the methods that would be appropriate and if needed, how these must be refined to support the process. Dr. Cora Weber-Pillwax provides an encompassing overview of some of these ideas. An Indigenous research paradigm includes.

> *"(a) the interconnectedness of all living things, (b) the impact of motives and intentions on person and community, (c) the foundation of research as lived indigenous experience, (d) the groundedness of theories in Indigenous epistemology, (e) the transformative nature of research, (f) the sacredness and responsibility of maintaining personal and community integrity, and (g) the recognition of languages and cultures as living processes."[4]*

Throughout my readings and research I have been struck by many of the ideas and challenges that have been put forward by Indigenous researchers and scholars relating to the history of how research has been carried out in Indigenous communities, how this is viewed by Indigenous peoples and what the design process has to learn from this. It is essential to note here that, within Indigenous communities, there is a widespread distrust for the way that research has been carried out, how it has been interpreted, and who has done this interpreting. Many Indigenous researchers also highlight how little value has been delivered to Indigenous communities, particularly when considering the large amount of research that has been carried out in these communities.[5] As

"It is our opinion that one of the most fundamental principles of aboriginal research methodology is necessity for the researcher to locate himself or herself. Identifying, at the outset, location from which the voice of the researcher emanates is in aboriginal way of ensuring that those who study, right, and participate in knowledge creation are accountable for their own position."

Abolson and
Willett

Dr. Kathy Abolson, an Anishinaabekwe from Flying Post First Nation and Cam Willet, a Cree from Little Pine First Nation state; "We are suspicious of people misrepresenting us. We are suspicious of people who take knowledge and use it and we are suspicious of being exploited and used. That knowledge that we give sometimes gets turned around and used against us."[6] Abolson and Willet embrace the viewpoint that the use of an IRM should be required when carrying out research in Indigenous communities. It would be fair to say that this process is also needed to counterbalance existing approaches to research on Indigenous peoples and eliminate ethnocentrism in the writing of the history of Indigenous peoples.

While I bring extensive design, construction and building science experience on northern and Indigenous housing to my work in Indigenous communities, I have often found my relationships with people develop more from my practical experience as a builder and that I can swing a hammer, than from my architectural design work that I do. It would be fair to say that this often has had a greater positive impact on the success of projects than most others skills that I possess. Practical experience and sharing time together can open the door, while taking time to listen to people and demonstrating that you care about their community will expand the conversation and enhance the relationships you have with the community.

LOCATION

The Indigenous principle of 'location' is used at meetings or gatherings where each person who speaks shares information about themselves; their family, background, and the experiences that have influenced who they are. It also serves to open discussion to the range of perspectives that will be brought to a meeting or gathering and does this by 'locating' or attaching the perspectives that are shared to the personal context of the person who has shared this information. For an outsider to the community, when locating yourself, you are sharing who you are, how you behave in the world, the kind of work that you do and some of the values you hold. From an Indigenous perspective, understanding one's own location is necessary to capture how knowledge is generated, while acknowledging that there is no neutrality in the generation of knowledge. Meetings, community gatherings and decision-making sessions where there are new faces begin with each person sharing their location.[7] Regarding location Abolson and Willet write.

> "It is our opinion that one of the most fundamental principles of aboriginal research methodology is necessity for the researcher to locate himself or herself. Identify-

3   Wilson, *Research Is Ceremony: Indigenous Research Methods*

4   Ellis and Bochner, *"Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject",* 202

5   Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*

6   Abolson and Willet, *"Putting ourselves Forward: Location in Aboriginal Research"*, 103

7   Location shares some similarities with 'positionality', a term that is commonly used in the Social Sciences. As written by Dr. Brian Bourke of the Murray State University in Murray Kentucky, "Our own biases shape the research process, serving as checkpoints along the way. Through recognition of our biases, we presume to gain insights into how we might approach a research setting, members of particular groups, and how we might seek to engage with participants." (Bourke, B. Positionality: Reflecting on the Research Process, 1). While 'location' will assist the outside architect/researcher to better understand and address their biases, its intention is to assist the community itself in understanding the biases of the 'outsider' in order to better understand how the impact of these on the process and on the outcome of the project.

ing, at the outset, location from which the voice of the researcher emanates is in aboriginal way of ensuring that those who study, right, and participate in knowledge creation are accountable for their own position out of the. We are of the opinion that neutrality and objectivity do not exist in research, since all research is conducted and observed through human epistemological lenses."[8]

"In place of measuring the good life in terms of products, many Indigenous traditions recognize and express the good life as a process – active and complementary participation in natural processes not of our design. Consequently, their focus was on finding ways to live in environments, or, let us say, within environments, instead of expending the energies modern humans devote to changing environments."

Daniel Wildcat

For Indigenous researchers, the process of 'locating oneself' is also an affirmation of Indigenous values that place an emphasis on personal, subjective knowledge and process of gaining that knowledge. When an Indigenous researcher shares an experience, they are saying 'this is my experience, this is what I know.' In locating themselves they are, using the language from a more contemporary western context, letting you know 'where they are coming from', that is, the perspectives, values and experiences that they are bring to the discussion. For Indigenous people this will include understanding who is their family, their clan and their community. A person's location encompasses much more than a list of jobs or accomplishments and is not meant to be listened to from a place of judgment. It is instead more a sense of sharing of dispositions and how we will account for them. It is a way of building trust. As shared by Abolson and Willet:

"When we locate, you're saying, 'this is just my view'. It's not the view of the Anishinaabe nation because I'm not Anishinaabe. It's not the view of the coastal nations. Is not the view of a 100%, full – blooded Cree. It's not the view of women. It's just my view and this is who I am. This is my mother. This is my father. These are my ancestors. This is where I grew up geographically. This was my experience as I grew up. Based on all of those things, this is what I think. You might say that any part of my experience accounts for my opinion and that is the whole point – that who I am mitigates what I say. … We locate because what you remember about what anyone says depends in large part on who is doing the talking."[9]

As an architect I have noted the truism of these words and how the sharing of one's 'location' is one of the most significant tools for the process of working in an Indigenous community. For the research process it is also seen as a technique for eliminating ethnocentric writing from the academic community. As Maori scholar and researcher Dr. Linda Smith wrote; "We believe that research conducted from a "neutral" or "objective' location is Eurocentric and is, therefore, unethical. Ethnocentric writing can be avoided, however, if the writer reveals his or her epistemological location at the outset through a brief introductory autobiography."[10]

Location also recognizes that it is important for a community to define location in their own way and in their own terms. As Dr. Linda Tuhawai Smith notes, location helps frame the larger context of what is included in

the idea of community. "For Maori there are several ways of identifying yourself by naming the mountain, the river, the tribal ancestor, the tribe and the family. Through this form of introduction, you locate yourself in a set of identities which have been framed geographically, politically and genealogically."[11] Within an Indigenous context, this is an acknowledgement of the importance of relationships and significant role that relationships play in the decision-making process.

In Chapter 1 I shared my own location.

PROCESS AND PRODUCT

While location' provides context for views that are expressed as part of a design consultation process, it also demonstrates how 'process' cannot be separated from the 'product' or outcome, that is, in the case of this thesis, the design for buildings or communities for Indigenous communities. For Indigenous people, the way of getting to a solution and the solution are intertwined: process and product cannot be separated. Within an Indigenous context there is a natural tendency to see and develop the connections or relationships that exist between things and to utilize those connections both in the process and with the outcomes.

In thinking about 'process' it is useful to recall that an IRM is less a tool and more a set of guiding principles, ethics and values for the overall process. "Aboriginal research methodologies are as much about process as they are about product. It is in the process of conducting research that the researcher engages the community to share knowledge, recreation, and work."[12]

Within an Indigenous context the natural tendency is to see and develop the connections or relationships between things and to utilize those connections throughout the process, including with the outcomes. For architecture it implies that the design process and the generating of architectural designs needs to be developed through a process of active engagement with the community; where an emphasis is placed on the sharing of knowledge and ideas and the generation of hoped for outcomes. In my own case, when I ruminate on process, it is the architectural design 'process', with a focus on listening and engagement and applying what is heard and learned to the design of housing and communities, that I am considering. For Architects and other design professionals there may be lessons to learn from the process of auto-ethnography and considering the 'experience' of the communities where we are working as an essential aspect of the design process. "Experientialist ethnographers emphasize over and over again interconnectedness in the field

8   Abolson and Willet, *"Putting ourselves Forward: Location in Aboriginal Research"*, 97

9   ibid, 106

10   Abolson and Willet, *'Putting ourselves Forward: Location in Aboriginal Research'*, 107

11   Smith, Decolonizing *Methodologies: Research and Indigenous Peoples*, 128

12   Abolson and Willett, *"Putting Ourselves Forward: Location in Aboriginal Research"*, 107

"This is one of the reasons that Aboriginal people everywhere have a reputation for living in harmony with Mother Earth and being good stewards of the land. It is true, but it is because we recognize that we have a relationship to all creation."

George Blondin

to particular individuals, in specific places, at a given point in time, for it is in interaction with other individuals that one gains knowledge of particular forms and processes of social life."[13] As knowledge can only be gained through experience, this points to the need for the collecting of as many experiences of the community as possible as an essential component of the design process.

Trends within ethnography have also moved towards the use of narrative inquiry and what Prof. Art Bochner calls evocative narratives.[14] Narrative inquiry could be considered a form of storytelling where the journey, rather than the destination, is given emphasis, as "narrative text refuses the impulse to abstract and explain, stressing the journey over the destination."[15] For architects this implies taking greater time to reflect on the ideas and voices that we draw upon to do our work.

Indigenous researchers also consider values and behaviors as well as cultural protocols as integral parts of the process of working in communities. "The final product is always secondary to the community benefiting from the process, … The actual research is in the research process, which cannot take place without the trust of the community, and one way to gain trust is to locate yourself."[16] Process is also geared towards empowering the community, where the people of the community are the final decision makers.

As Daniel Wildcat writes in 'Red Alert: Saving the Planet with Indigenous Knowledge'; "In place of measuring the good life in terms of products, many Indigenous traditions recognize and express the good life as a process – active and complementary participation in natural processes not of our design. Consequently, their focus was on finding ways to live in environments, or, let us say, within environments, instead of expending the energies modern humans devote to changing environments."[17] Dr Wildcat is highlighting that an emphasis on process and connection to place has always been an integral part of the way of life of Indigenous peoples, while an emphasis of product has come from the euro-west. Finding a way to emphasize process and avoid focusing on the end goal will be a significant challenge for the design professions as our fixation is on the products that we create.

RELATIONSHIPS AND RELATIONALITY
When we begin to think about relationships, it is common to think about our friendships, our immediate family, our extended family, our neighbourhoods and our communities. From an Indigenous perspective, the principle of relationships includes all of these familial human relation-

ships, but it also includes more. There are relationships with the land and with all other creatures who live on the land where, humans are seen not as rulers of the land but dependent on the land and its creatures for survival. There is also a relationship with knowledge and information, as well as the relationship with those who impart knowledge. Relationships provide context for decision making as it is through relationships that the nature of developing consensus is both understood and built. As shared by Dene Elder George Blondin; "This is one of the reasons that Aboriginal people everywhere have a reputation for living in harmony with Mother Earth and being good stewards of the land. It is true, but it is because we recognize that we have a relationship to all creation."[18]

The principle of relationality and the building of relationships is a central and ongoing component of the research or design process. From the experience that I have gained in working with Indigenous communities I have come to learn that all initiatives, actions and projects require the building of relationships, and without relationships, the chance of success rapidly diminishes. It is through relationships that a community decides whether and how to be involved, and whether and how to share information. Relationships are not the outcome of the efforts that a person makes but rather are the foundation upon which all initiatives are built. Without them it will be a project without meaning to the community as the community has no relationship it.

In support of this, I am reminded of a presentation given by Byron Mallot - the Lieutenant Governor of the State of Alaska, an Alaskan of Tlingit heritage and the leader of the Kwaash Ké Kwaan clan - in his keynote opening address to the Sustainable Northern Shelter Forum held in Fairbanks Alaska in March 2016. Lieutenant Governor Mallot shared that one of the most significant failures with the housing and other projects that introduce buildings into remote Indigenous communities has been the process through which they reach communities, arriving 'like spaceships', as alien objects that do not belong to and have no relationship with the community. To Byron, this lack of involvement in their creation through consultation, or connection with their design and their construction has been a significant factor in contributing to the alienation that many people in numerous communities' experience with the system that delivers housing and other buildings.

In his keynote address, Byron also shared the perspective that we 'used to take care of ourselves': how, at one time, people in the communities built their community halls, their own boardwalks and did things like their own electrical work. They hunted and fished and took care of each other.

13   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 251

14   Ellis and Bochner, *"Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject"*

15   ibid, 217

1   Abolson and Willett, *"Putting Ourselves Forward: Location in Aboriginal Research"*, 107

17   Wildcat, *Red Alert: Saving the Planet with Indigenous Knowledge,* 77

18   Blondin, *Trail of the Spirit: The Mysteries of Medicine Power Revealed,* 42

> *"An indigenous world view thus begins with the idea that relationships are not nouns, they are verbs. … Relationships as verbs infers the intentional quality of connection that is experienced and remembered. Here we begin our walk into Indigenous epistemology; into the simultaneity of the unseen and the seen."*
>
> Manulani Aluli Meyer

Those who were going to get homes had to be involved. All of this is gone. Lt. Governor Mallot's appeal: "If we don't change the way we build Alaska, we will be haunted by places where people have no ownership of their community.   Help us take our life back - to relearn how to do it ourselves!"[19] It also became the dominating theme of the Forum, with participants evaluating each of the discussion topics of the forum from the standpoint of this perspective and the need to foster relationships as part of the empowering of communities.

Community engagement, seen as a method for sharing information and collecting input from an Indigenous community, also needs to be seen within the context of relationship building. Over the past few years in particular, community engagement has been promoted as a necessary aspect for working on projects within Indigenous communities. While it is seen as important as a method for sharing information and gathering input from a community, its more significant purpose, the building of relationships with the community, remains very poorly understood. As a result, when projects have funding challenges, all too often it is the 'engagement' part of a process that is first eliminated. Yet, in my own experience, to have a meaningful architectural project and to help a community by providing, for example, a new facility, the community's connection with the building can be significantly reduced if the opportunity to develop a 'relationship' with the building or project is removed.

On relationships Professor Manulani Aluli Meyer, an Indigenous Hawaiian, writes, "An indigenous world view thus begins with the idea that relationships are not nouns, they are verbs. … Relationships as verbs infers the intentional quality of connection that is experienced and remembered. Here we begin our walk into Indigenous epistemology; into the simultaneity of the unseen and the seen."[20] For Indigenous researchers, 'relational accountability' with an emphasis on 'respect, reciprocity and responsibility' are key components of an Indigenous research paradigm, one that incorporates many more layers to relationships than would be considered within a euro-western context. Shawn Wilson writes, "In an indigenous research paradigm the researcher must ask:

- How do my methods help to build respectful relationships between the topic that I am studying and myself as researcher (on multiple levels)?
- How do my methods help to build respectful relationships between myself and the other research participants?
- How can I relate respectively to the other participants involved in this research so that together we can form a stronger relationship

with the idea that we share?
• What is my role as researcher in this relationship, and what are my responsibilities?
• Am I being responsible and fulfilling my role and obligations to the other participants, to the topic and to all of my relations?
• What am I contributing or giving back to the relationship? Is the sharing, growth and learning that is taking place reciprocal?"[21]

Building respectful relationships is necessary to ensure that the architect/ researcher and the knowledge, ideas and designs they might develop become part of what I see as a 'relationship umbrella' or series of actions and events that ensure that 'relational accountability' is an aspect of the process. Shawn Wilson and other Indigenous researchers encourage us to begin thinking of the world around us as a web of connections and relationships, one that is more complex and interconnected than might normally be considered within euro-western thought. The researcher is, of course, a part of this process and must have a vested interest in its outcomes. " The knowledge that the researcher interprets must be respectful of and help to build the relationships that have been established through the process of finding out information."[22]

As Shawn Wilson writes, "Relationality seems to sum up the whole Indigenous research paradigm to me. Just as the components of the paradigm are related, the components themselves all have to do with relationships. The ontology and epistemology are based upon a process of relationships that form a mutual reality. The axiology and methodology are based on maintaining accountability to these relationships."[23] The significance that the two components of axiology (ethics and morals) and relationality play within the Indigenous paradigm is difficult to overstate. The axiology of the communities, which includes Indigenous spirituality, is always an essential component in the decision-making process, and is closely tied into the idea of relationality. Relationality comes to play in many respects, and begins with how one locates oneself within the community.

Placing greater emphasis on process and relationship building as part of that is, in some ways, also being recognized by other changes that are occurring and advancing within the research community, with evolving trends in Ethnography as one example. In autoethnography, personal narrative, and reflexivity, the personal questions and struggles of the researcher are important aspects of the research. As Arthur Bochner shares "I was persuaded that social science texts needed to construct a different relationship between researchers and subjects and between

19   Byron Mallot, "*Opening Keynote Address for the Northern Housing Forum",* 2016

20   Meyer, *"Holographic Epistemology: Native Common Sense"*, 6

21   Wilson, *Research Is Ceremony: Indigenous Research Methods*, 77

22   Ibid, 77

23   Ibid, 71

"It is very clear to me that it is an important special thing to be an Indian. Being an Indian means being able to understand and live with this world in a very special way. It means living with the land, with the animals, with the birds and fish, as though they were your sisters and brothers. It means saying the land is an old friend an old friend your father knew, your grandfather knew, indeed are people always have known."

Richard Nerysoo,
Dene

authors and readers. I wanted a more personal, collaborative, and interactive relationship, one that centered on the question of how human experience is endowed with meaning and on the moral and ethical choices we face as human beings live in an uncertain and changing world."[24]

The Indigenous principle of relationality also extends into language, where one speaks only about the personal truth that one knows; a truth that is learned through experience. For this reason, Indigenous researchers, like the elders that they take guidance from, will only speak the truth that they know, hesitating to speak about something that is not personal knowledge. Within the Indigenous experience "rather than the truth being something that is 'out there' or external, reality is the relationship that one has with the truth. Thus, an object or a thing is not as important one's relationships to it. This idea could be further expanded to say that reality is relationships or sets of relationships."[25] This could be considered a good metaphor for architecture, where architecture as 'place', one that fosters and supports relationships, is emphasized over architecture as object.

A recent experience reminded me of how, with my ongoing engagement with Indigenous communities, I have become accustomed to knowing not only the source or carrier of knowledge in a community, but also the relationship that the carrier of the knowledge has with that knowledge; that is, the story of where it was learned and its significance to the community. I was at an 'Ideas Camp', a networking and experience sharing session held following the announcement of the winners of the Government of Canada's 2019 Smart City Challenge. The Camp included panel sessions that covered topics such as Data Governance and Engagement, with each session followed by questions from the participants. While some questions were delivered by members of the audience, text messaging was offered as one option for submitting questions to the session moderator, who would read the question to the audience. As the intent of the program was to be inclusive of Indigenous people, there were Indigenous panelists, as well as other Indigenous people participating in the audience.

Yet, I remember feeling quite odd and a bit unsettled when a question to the Data Governance and Engagement session panelists was read out by the moderator as I did not know who submitted this question: I did not know their 'location' or their relationship to the question, or from what place their voice came from. It was as if the question was dangling in the air without anything to support it. It had me reflecting on the changes and influences that working in Indigenous communities had personally on

me and the approach that I was taking to my work. I experienced this as a moment of reflection on my own journey.

In a conversation with a couple of other participants after the session, I remarked on how I found the question submitting process to be odd and how this is not an approach that we would use in an Indigenous setting. I shared with them my observation that questions delivered this way did not allow the listener to hear who delivered the question and the perspective of where this question came from. I realized that, from my experiences, I had learned to 'listen' in a different way and had become comfortable with the Indigenous approach to sharing knowledge, with people 'locating' themselves as part of the knowledge sharing process. I had experienced the significance that relationships play as an inherent part of the process. This also speaks to the generation of personal truths. Or as Jean Guy Goulet notes; "One always knows the relationship between the information and the person transmitting it."[26]

For Indigenous peoples there are many more aspects to the idea of relationships than euro-western people normally consider. There are. of course, all the personal human relationships that we would normally consider: relationships of the family, and of the extended family or clan[27]. There are also the clan to clan and community relationships. But one of the principle Indigenous relationships to consider, and one that falls completely outside the western paradigm is the relationship to the land. It is, in many ways, the fundamental relationship upon from which many indigenous cultures have evolved. It is the reason why many ceremonies begin with a spiritual acknowledgment of the land, of the community's ancestors and of the ongoing connection to place that this evokes and speaks of. As written by Justice Thomas Berger.

> "The native people of Canada, and indeed indigenous people throughout the world, have what they regard as a special relationship with their environment. Native people of the North have told the Inquiry that they regard themselves as inseparable from the land, the waters and the animals with which they share the world. They regard themselves as custodians of the land, which is for their use during their lifetime, and which they must pass on to their children and their children's children after them. In their languages, there are no words for wilderness."[28]

From my own perspective, the principle of relationality reveals many avenues for developing designs for housing and communities that give priority to the relationships inherent in the family, the clan, the community and with the land. Relationality also includes the relationships that a person develops while working in a community; relationships that will influence when and how information is shared, as well as the amount and kind of

24   Ellis and Bochner, *"Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject",* 217

25   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 73

26   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 35

27   "Clan has been used to designate social groups whose members trace descent from either male or female ancestors. For the Indigenous people in Canada, the term has been used most often to designate groups based on unilineal descent. This means that a person belongs to the clan of either parent." In The Canadian Encyclopedia, "Clan (Indigenous Peoples of Canada)", accessed March 20, 2020, https://www.thecanadianencyclopedia.ca/en/article/clan

28   Berger, *Northern Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry: Volume One*, 93

involvement people will commit to a project. Ongoing dialogue and consensus building are essential components at each stage of the process. In Indigenous communities everything encompasses relationships.

That the principle of relationality includes the relationship to the land and to all living things, adds many layers to its significance. As indigenous scholar Margaret Kovach writes, "Indigenous ways of knowing have a basis in the relationships that are inclusive of all life forms. The philosophical premise of take what you need (and only what you need), give back, and offer thanks suggests a deep respect for other living beings."[29] She goes on to point out that, in Indigenous communities, it is vital that a research methodology is relationship based, that it honour culture and that it is respectful.[30]

Figure 2.1: Innu Hunting Coat (Aanischaaukamikw Cree Cultural Institute)

As the land has always provided for the needs of Indigenous people, it held a significance as a place for teaching traditional ways. In his book, *Telling Our Stories: Omushkego Legends and Histories from James Bay*, Louis Bird, a James Bay Cree Elder, shares many thoughts on Cree teachings and the land. "The Elders would teach you about the land; how do you respect the land? Why do you have to respect the land? Total environment: Land and whatever it contains, living or not living or moving. Everything is living, they say, but some may not move. Some things move, in water, underwater, and above. All the living things are supposed to be understood and respected. This is the part where the first nation knew all those things, at the beginning, when there was no other nation around them."[31]

In *Ways of Knowing: Experience, Knowledge and Power Among the Dene Tha*, Jean Guy Goulet shares numerous reflections on the connection that the Dene have with the land. The "Dene Tha share a deep sense of dependence on animals, to which conventional signs of respect are faithfully given lest animals stop offering themselves to hunters who seek them as game. A Dene Tha child learns respect from his parents as they dispose properly of the bones of animals or the feathers of foul and as they avoid talking negatively about (animals know how one talks about them and will not present themselves in the bush to the hunter or trapper who speak negatively about them)."[32] What Goulet is describing is the relationship that a hunter must have with the animal that it is being

hunted: How this is characteristic of the deep relationship that the Dene have with the land, what this relationship entails, and how this is reflected in traditional Dene beliefs and actions. For the Dene, like other Indigenous peoples, the land is not something that is owned, but is a gift from the creator to be shared by all living things.

For Indigenous hunters, the relationship with all the other living things that inhabit the land is embedded within the relationship to the land. A person could not be a successful hunter without understanding and acknowledging this relationship. Cree and Innu hunters in northern Quebec and Labrador, for example, wore elaborately decorated hunting coats (Figure 1.1) that were meant to attract the animals being hunted rather that hide the hunter with camouflage. The coats reflect the belief that animals could only be hunted successfully if the animal spirits gifted that animal to the hunter for his family's survival; they were, in a sense, a form of hunting magic. As Louis Bird shared, "Sometimes person could kill the caribou in one shot, even if it was at long-range. If it was not a gift from the caribou spirit, you would never kill the animal, no matter how good you were with the gun. You would miss the animal you shot at no matter how many times you fired. The animal would still get away."[33] The decorated coat was worn as part of the process of building a relationship with the animals through the caribou animal spirit. "The Dene Tha share a deep sense of dependence on animals, to which conventional signs of respect are faithfully given lest animals stop offering themselves to hunters who seek them as game."[34]

In all of the words that I have heard and all of the writings I have read, Indigenous people consistently speak of the land with great respect and veneration. The Tlicho Dene of the Northwest Territories, for example, declare that "The land we live on is our home"[35], an acknowledgement of the deep relationship to the land that exists for the Dene, as it does for other Indigenous people. It is also a rejection of the belief that the land is a commodity, something that only has value if it can be used for economic gain. For anyone who has had the fortune of spending time with Indigenous people when they are in their camps out on the land, it is to witness a transformation, as people become more alive in their relationship to place and in their relationship to each other.
The distinctive relationship that Indigenous people, both in Canada and across the world, have with the land is also reflected in the naming of places, and how naming encodes these relationships. Place names describe the network of relationships that exist between people and place. Cree Elder Louis Bird shares an example:

29   Kovach, *"Emerging from the Margins: Indigenous Methodologies"*, 30

30   ibid

31   Bird, Telling Our Stories: Omushkego Legends and Histories from Hudson Bay, 40

32   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 63

33   Bird, *Telling Our Stories: Omushkego Legends and Histories from Hudson Bay*, 54

34   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha*, 63

35   Renwick, *The Land We Live on Is Our Home: The `Gameti Ko` Project Second Community-Led Workshop,* 1

"Place names are not simply symbols for locations, but part of the living language. … Western James Bay Cree place names are descriptive, encoding rich cultural information. 'Ekwan' means 'the River frequently used' or 'preferable way to go.' This name came about because it is very hard to travel around Cape Henrietta before the Bay ice has cleared the coast."[36]

"Indigenous ways of knowing have a basis in the relationships that are inclusive of all life forms. The philosophical premise of take what you need (and only what you need), give back, and offer thanks suggests a deep respect for other living beings."[1] She goes on to point out that, in Indigenous communities, it is vital that a research methodology is relationship based, that it honour culture and that it is respectful."

Margarat Kovach

Dating back to the first encounters that western explorers had with Indigenous peoples, land has always been at the heart of the contentious issues that exist between Euro-Western and Indigenous peoples, continuing through to contemporary land treaty negotiations. As shared by Thomas King an Indigenous author and scholar of Cherokee descent "the issue that came ashore with the French and the English and the Spanish, the issue that was the raison d'être for each of the colonies, the issue that has made its way from coast to coast to coast and is with us today, the issue that has never changed, never varied, never faltered in its resolve is the issue of land. The issue has always been land. It will always be land, until there isn't a square foot of land left in North America that is controlled by native people."[37] The ongoing history of land negotiations also make it quite clear that the Euro-Western intentions were always directed at securing more land, with the assimilation of Indigenous peoples merely a necessary step that was required in order to gain control of the land.

To understand the euro-western rationale and justification for these actions, we must begin with the *Doctrine of Discovery and Terra Nullius*. As cited by the Assembly of First Nations; "The Doctrine of Discovery emanates from a series of papal Bulls (formal statements from the Pope) and extensions, originating in the 1400s. Discovery was used as legal and moral justification for colonial dispossession of sovereign Indigenous Nations, including First Nations in what is now Canada. During the European 'Age of Discovery', Christian explorers "claimed" lands for their monarchs who felt they could exploit the land, regardless of the original inhabitants."[38] As written by Indigenous scholar Dina Gilio-Whitaker, "foreign invasion, dispossession of Indigenous lands, and genocide were based on (white) European religious and cultural supremacy as encoded in the doctrine of discovery, not racial supremacy. And, unlike for other people of color who have made significant legal gains in the US legal system, the nearly two-centuries-old doctrine of discovery is at the foundation of the legal system that still paternalistically determines Native lives and lands." [39] The Doctrine of Discovery was the tool that was used to carry out the complete subjugation of Indigenous peoples, both in Canada and around the world, and is the principle upon which colonialism was built. The church, the government and the business community

held the view that they had the right and indeed the moral obligation to take over and develop the land. There was never any consideration that the ownership of land was an unknown and alien concept for Indigenous peoples.

'Terra Nullius', a Latin phrase that means 'land belonging to know one', was an additional rationale for 'claiming' territory.[40] As cited by Merete Borch in Rethinking the Origins of Terra Nullius, "by the mid-18th century the theoretical basis of a new convention of acquiring Empire had emerged … if the region were not already possess by a rival, then a state might acquire it in one of three ways: by persuading the indigenous inhabitants to submit themselves to its overlordship; by purchasing from those inhabitants the right to settle part or parts of it; by unilateral possession, on the basis of first discovery and effective occupation."[41]

Roxanne Dunbar-Ortiz in her book, *An Indigenous Peoples History of the United States*, shares how the conquest and subjugation of Indigenous peoples across the U.S. has remained within the language of conquest of the American military; a demonstration of the mindset that remains with regard to the moral justification of these actions. During the Vietnam war, "American troops would be describing Vietnam as 'Indian Country' and search and destroy missions as a game of 'Cowboys and Indians'; and Kennedy's Ambassador to Vietnam would justify a massive military escalation by citing the necessity of moving the 'Indians' away from the 'fort' so that the 'settlers' could plant 'corn'."[42] Explicitly racist laws that allow for the abuse of Indigenous people also remain on the books in the U.S. "According to this doctrine, the United States could wield power over the 'unfortunate race' of Native Americans without constitutional limit. The doctrine prevented the Supreme Court intervening, even to protect constitutional rights. It was the plenary power doctrine that provided the federal government with the authority to establish detention camps and boarding schools, to engage in family separation and to criminalize religious beliefs."[43]

Where the euro-western quest for land was once driven by agriculture and 'acquiring' land for 'settlers', today it is largely driven by the consumer society and the insatiable search for the natural resources needed to support the Euro-Western consumer society. The proposed development of the Mackenzie Valley Pipeline is one of the many contemporary examples of indigenous land issues that have been driven by resource and mineral development. In the case of the Mackenzie Valley, this pitted Petroleum companies against the Dene Nation, the Indigenous people of the region.

36   Bird, *Telling Our Stories: Omushkego Legends and Histories from Hudson Bay,* 167

37   King, *The Inconvenient Indian: A Curious Account of Native People in North America,* 217

38   Assembly of First Nations, *Dismantling the Doctrine of Discovery*, 2

39   Gilio-Whitaker, *Settler Fragility: Why Settler Privilege Is So Hard to Talk About,* 2

40   While there appears to be some debate amongst historians as to the extent of the impact that Terra Nullius had on the 'acquiring' on Indigenous lands in North America, as British law recognized the 'ownership rights' that Indigenous people had for the land that they occupied, British actions were clear. From the head bounty placed the Beothuk and Mi'kmaq peoples of the east coast, to the distribution of small pox infested blankets with the intention of destroying Indigenous populations, the intent was to 'clear the land' for incoming settlers. Regardless as to whether Terra Nullius was officially used as a reasoning for the European appropriation of Indigenous lands across North America, the philosophy behind it directly influenced the justification, as well as the methods used for taking those lands.

41   Borch, *Rethinking the Origins of Terra Nullius,* 223. In reality, the third approach as outlined by Borch, the use of unilateral possession effectively considered Indigenous lands as 'Terra nullius' because the Indigenous inhabitants were regarded as primitive at best and savages at worst, as "having advanced beyond the state of nature only so far as to have developed language in the community of the family,

Figure 2.2: Dene Hunting and Trapping routes (Dene Nation)

To address this issue, in 1974, the Government of Canada established the Mackenzie Valley Pipeline Inquiry. Led by Justice Thomas Berger, the inquiry also became known as the Berger Inquiry. Ingrained in the discussion on the impact of Terra Nullius is the underlying sense of superiority that existed and dominates Euro-Western culture to this day. As Chief Justice Thomas Berger wrote.

"When the first Europeans came to North America, they brought with them a set of attitudes and values that were quite different from those of the original peoples of the continent. At the heart of the difference was land. To white Europeans, the land was a resource waiting to be settled and cultivated. They believed that it was a form of private property, and that private property was linked to political responsibility. This political theory about land was coupled with religious and economic assumptions. Europeans believed that the conditions for civilized existence could be satisfied only through the practice of the Christian religion and cultivation of the land. As an early missionary phrased it, "Those who come to Christ turn to agriculture." … It was to be the white man's mission not only to tame the land and bring it under cultivation, but also to tame the native people and bring them within the pale of civilization. This sense of mission has remained the dominant theme in the history of white-native relations."[44]

In carrying out his work, Justice Berger made the decision to open up the discussions to anyone in the Northwest Territories who wished to speak, holding hearings in more than 30 Dene, Inuit and non-Indigenous communities. The Berger Inquiry changed the course of dialogue in the north by giving a voice to Indigenous people in a way that had not previously occurred. His willingness to take the time needed in each community to hear each voice that wished to speak was noted by Indigenous people across the north. Berger set the stage for what meaningful engagement with Indigenous peoples looks like by supporting the honesty and openness of the messages that were delivered. He welcomed everyone to share their perspective in their own words. A great deal of the testimony from Indigenous people spoke about the deeply close relationship that people have with the land, and on how Euro-Western society, in not seeing any value in Indigenous knowledge or ways, was threatening their way of life. As Richard Nerysoo, a Dene from Fort MacPherson shared:

'It is very clear to me that it is an important special thing to be an Indian. Being an Indian means being able to understand and live with this world in a very special way.

It means living with the land, with the animals, with the birds and fish, as though they were your sisters and brothers. It means saying the land is an old friend an old friend your father knew, your grandfather knew, indeed are people always have known … We see our land as much, much more than the white man sees it. To the Indian our land really is our life. Without our land cannot - we could do longer exist as people if our land is destroyed, we too are destroyed. If your people ever take our land you will be taking our life. "[45]

From the experience of the Mackenzie Valley Pipeline negotiations and in preparation for other land claim challenges to their territory from resource exploitation, the Dene of the Northwest Territories developed a detailed map of all of their traditional hunting and trapping routes (Figure 1.2).[46] In 2014, I used this image for a presentation I was giving at my Indigenous Research Methodologies graduate course. I thought this was a powerful image and used this map to talk about my understanding of the significant relationships that Indigenous people have with the land. The Indigenous students, who made up the majority of the class, saw the map quite differently. To them is was yet another example of how white culture did not give value to the Indigenous emphasis on oral traditions as a way of sharing knowledge. The map was something 'measurable', developed to fulfil the Euro-Western need for measurable 'proof', rather than a verification of the Dene use of the land as part of land claim negotiations. The Dene did not need this map.

I have always enjoyed maps and the two-dimensional viewpoint that they provide. As a traveller I see the place connections that maps provide. Yet, while I continued to see the Dene map as compelling example of the Dene relationship with place, I began to appreciate how, within an Indigenous context, this same map could not incorporate the knowledge and wisdom that is encompassed within the oral tradition. It speaks to the great limitations that can come when a person does not take the time to experience reality through another's eyes. By placing emphasis on the 'measurable', we ensure that the oral tradition that is used to describe the land remains untold. From this standpoint, it is easy to see the Euro-Western need for this as 'proof' as a rejection of Dene values.

It is no surprise that the Inuit also used the oral tradition and story-telling to describe the land and to provide valuable information on the qualities of the places that people would intercept when travelling across the land. "'Maps' were registered in memory as a series of images illustrating features, places, and related objects located in temporal and spiritual landscape."[47] The Inuit maps are relational in that each would be accompanied by stories that would describe the relationships with the land that

but no further; in particular they had developed no agriculture." To this day, the viewpoint that sees agriculture as a Christian activity and as a measure of civilization, continues to be an assault on the hunter gatherers way of life of Indigenous people. As Thomas King writes in the Inconvenient Indian, "This was not to be a compromise between cultures. It was to be a unilateral surrender. Indians were to give up what they had and what they believed, in exchange for what whites had and believed." It is no surprise that the perspective offered by King is shared by all the Indigenous scholars and researchers that I have read.

42   Dunbar-Ortiz, *An Indigenous Peoples History of the United States*, 179

43   Blackhawk, *The Indian Law That Helps Build Walls,* 2

44   Berger, Northern *Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry: Volume One*, 85

45   Ibid, 94

46   Renwick, *"Southern Value, First Nation Life", presentation at the Northern Housing Forum 2010*

47   Hallendy, *An Intimate Wilderness: Arctic Voices in a Land of Vast Horizons*, 75

Figure 2.3: Simeonie Quppa-pik's Nunannguaq (Hallendy, p. 79)

have occurred along the route being described including perceptions of the route at different times of year, its place names, important events that occurred and the benefits or challenges for the those who would travel there (Figure 2.3). In his book, *An Intimate Wilderness*, Eric Hallendy writes of the richness of how topographical places were named by the Inuit, eluding to the significance and richness of the oral tradition as a way of sharing important information about the land.

"The images they evoked were multidimensional, recognizing that their appearance varied depending on the relative position of the traveler, season, or position of the sun. Because the Arctic landscape changed about every hundred days, these cognitive maps were dynamic, reflecting the prevailing conditions of the seasons, weather, and tides"[48] As these maps were recorded in memory and shared orally, they reflected the empirical knowledge of place and the experience of how these places changed over the seasons, qualities that go beyond what can be shared in a two-dimensional representation of place. When these Inuit convert these mental maps to a two-dimensional form, using materials such as sand or paper, they call them nunannguait or "imitations of the earth".[49]

SPIRITUALITY

For all Indigenous peoples there is a special and underlying spiritual connection to the land. Afterall, it is the land that provided for their needs. The land is where they live and hunt. It is where their stories and memories of their ancestors reside. Indigenous people see themselves as part of the land – it is a fundamental relationship. As Thomas King writes; "Land has always been a defining element of aboriginal culture. Land contains the languages, the stories, and the histories of the people. It provides water, air, shelter, and food. Land participates in the ceremonies and the songs. In land is home."[50] It is not an abstract relationship. In his book *Talking Tools: Faces of Aboriginal Oral Tradition in Contem-*

porary Society, Patrick Scott writes:

> "First Nations communities consider land to be a gift from the creator and not simply a commodity. They had a spiritual relationship and obligation to the Creator; a covenant. The concept of land ownership, when the Whiteman first arrived, was foreign to Aboriginal culture as they could not comprehend owning these lands and firmly believed they were one with the lands which were provided for the collective use and benefit of all living creatures."[51]

Prior to the arrival of western culture, Indigenous peoples lived a life where the spirits of the land were a part of everyday existence. A skilled person would not only have the pragmatic skills needed for survival, but also an understanding of the spirit world, and how not acknowledging or taking care of that world would result in hardship and misfortune. Communicating with the spirit world was a common practice. As George Blondin writes:

> "I have witnessed my parents greet the mountains, lakes, the sun, and the moon in this way. They would stand and shout out to them asking for their help. I remember feeling foolish at the time because I was just a boy and could not understand how they could communicate with the mountain. Still, all Dene people who travel on the land follow the example of medicine people and honor and recognize the spirit of these great creations this way."[52]

For Indigenous peoples there is also a spiritual nature and value to knowledge and to the process of collecting knowledge, and the conviction that all knowledge belongs to the cosmos. Lana Ray, an Anishinaabe scholar notes that while knowledge is obtained through relationships "there is also an emphasis on a spiritual context. This understanding derives from the belief that the basis of knowledge is not social but spiritual… the act of seeking knowledge is also viewed as a personal and spiritual journey. Seeking knowledge is an arduous process which teaches the knowledge seeker humility and patience and ensures that they are dedicated and understand responsibilities of the knowledge shared with them."[53]

The Anishinaabe perspective where the seeking of knowledge is a spiritual journey has many parallels in the practice of Tibetan Buddhists. Like the Anishinaabe, Tibetans place emphasis on the inner journey and the need to understand the world from a more subjective vantage point where each person is responsible for their own journey, and where each person has their own lessons to learn. Like accomplished elders, gifted Tibetan monks place great value in humility and make no outwards claims to being carriers of advanced knowledge and understanding.

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48   Hallendy, *An Intimate Wilderness: Arctic Voices in a Land of Vast Horizons*, 75

49   Ibid, 77

50   King, *The Inconvenient Indian: A Curious Account of Native People in North America*, 218

51   Scott, *Talking Tools: Faces of Aboriginal Oral Tradition in Contemporary Society,* 47

52   Blondin, *Trail of the Spirit: The Mysteries of Medicine Power Revealed,* 42

53   Ray, *Deciphering the Indigenous in Indigenous Methodologies,* 94

"I have witnessed my parents greet the mountains, lakes, the sun, and the moon in this way. They would stand and shout out to them asking for their help. I remember feeling foolish at the time because I was just a boy and could not understand how they could communicate with the mountain. Still, all Dene people who travel on the land follow the example of medicine people and honor and recognize the spirit of these great creations this way."

George Blondin

In contrast of the Euro-Western emphasis on the outer journey, both Tibetan Buddhists and the teachings of many Indigenous peoples put an emphasis on developing understanding through the journey of the inner self, providing extensive thoughts and examples on what constitutes the inner journey. Both Tibetans and many Indigenous peoples use methods of discovery that utilize dreams, ceremonies, storytelling and other techniques that are directed at fostering inner understanding and awareness. As Willie Ermine, from the Sturgeon Lake First Nation and Assistant Professor with the First Nations University of Canada, writes:

> *"the plants and animals were a vital nexus in comprehending the sophisticated directional maps into the metaphysical. Only by understanding the physical world can we understand the intricacies of the inner space. Conversely, it is only through journeys into the metaphysical that we can fully understand the natural world."*[54]

Buddhist practice and teachings share many values and perspectives with that of the Indigenous world view. These include; the sacredness of the earth, the inter-connection of all things, the collective ownership and hierarchical nature of knowledge, the importance of relationships, and above all, the search for understanding and personal development through the inner journey. I have witnessed with these teachings, that it has only been when one is willing and able (at least for a period of time) to cast aside the Euro-Western western rationalist paradigm and open oneself to ways of viewing and experiencing the world through 'other viewpoints', that the wisdom in the teachings begin to reveal themselves to you. In this way, the belief that the process and the product, that the journey and destination and that the inner and outer worlds cannot be separated become understood in an experiential way. It is the necessary shift in perception that is required to see the world through other eyes.

STORYTELLING AND THE ORAL TRADITION
While emphasis is placed on learning through experience, it is important to consider some of the techniques that are used for knowledge sharing, with storytelling and the oral tradition assuming an importance position within this. As Jean-Guy Goulet notes; "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."[55] Goulet further shares that "Stories are given for one to think with. They are meant to guide one's thoughts in thinking about a certain matter and to inform one's relationship with fellow Dene and fellow animals."[56] Rooted here once again is the notion that each person is encouraged to interpret stories

in their own way; to draw upon the teachings that embedded within the stories that are shared with them. In this way each person is responsible for their own agency and the actions that they take. In considering the nature of stories Dr. Patrick Scott shares that:

"Traditional storytelling intertwines identity with fact, emotional perspective with historical experience. It engages the community or the individual in an internal journey of imagery, moulding their choices, affecting their actions and charting their future. Researching the contribution of the practice of Dene storytelling to cultural sustainability challenges the researcher not only to listen to the story but to hear the story from within the Dene worldview."[57]

The process of learning more about the Dene world view, or that of any other Indigenous people, requires engaging with that community, building personal relationships, and taking the time to listen and experience how the community thinks and works. Through this you will come to hear more of the stories that define the community and its relationships with the land around it, where listening becomes the methodology.

Shawn Wilson adds to this by highlighting that stories are an essential form of knowledge transfer, providing 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"[58]

Margaret Kovach reveals that the storyteller is also a part of the story, imparting their own 'relationship' with the story while indirectly disclosing the lessons to be learned. "In the oral tradition, stories can never be decontextualized from the teller. They are active agents within a relational world, and are thus counted relationally. They lie with our past and provided basis for continuity with future generations."[59]

The unwritten rules or guidelines that provide direction with regard to how and when stories are told also reflect the significance role that stories play as part of an oral tradition. Shawn Wilson notes that,

"as a writer, speaker or storyteller, I have a set of obligations to fulfill in my discourse. 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

54   Ray, "*Deciphering the Indigenous in Indigenous Methodologies*", 107

55   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 29

56   Ibid, 90

57   Scott, Talking Tools: *Faces of Aboriginal Oral Tradition in Contemporary Society*, 15

58   Wilson, *Research Is Ceremony: Indigenous Research Methods*, 24

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 process - that would allow them to be accountable to their own relationships. ... As the speaker, I share the information that I am allowed to share. My main obligation is to make as many connections or relationships as possible and to respect the reader's ability to take what they are ready to receive or what their current relationships allow."[60]

"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"

Shawn Wilson

By tradition, Indigenous storytellers will locate their knowledge, declaring what is personal experience and what has been learned from other sources, as the efficacy of second hand knowledge cannot be guaranteed.

It is also clear within Indigenous communities that storytelling allows significant flexibility both for the storyteller and for the listener of stories. In her thoughtful article 'Honouring the Oral Traditions of My Ancestors Through Storytelling', Dr. Robina Anne Thomas, a Lyackson of the Coast Salish Nation, emphasizes the viewpoint that "storytelling has a holistic nature as how the story is told is up to the storytellers - they will tell the story the way they want. Story tellers may opt to share their culture and tradition (spiritual), how events made them feel (emotional), what things looked like, or how they physically felt (physical) or how this affected their ways of knowing and being (mental)."[61]

From an Indigenous perspective, the use of the written word has posed challenges to the Indigenous tradition of storytelling as a method for knowledge transfer. As Thomas King writes, "when Native stories began appearing in print, concern rose that the context in which these stories existed was in danger of being destroyed and the stories themselves were being compromised. The printed word after all, once set on page, has no master, no voice, no sense of time or place."[62] As Indigenous researchers and storytellers have noted, it is the 'relationships' being created by the telling of the stories that would disappear, while it is the relationships themselves that ensure the teachings contained within the stories can be fully considered and understood.

During his presentation at the Northern Housing Forum 2012 in Alta, Norway, Dr. Gavin Renwick provided a thoughtful reflection on the nature of relationships that are formed through storytelling. In carrying out his work in the Tlicho community of Gameti, the Elders asked him to use local young people as translators as through this each of the young translators would hear the stories that each of the Elders were sharing with Gavin. An intimate understanding of relationships and the sharing of knowledge was inherent in the guidance that the Elders offered.

It is often the case that storytellers will be considering whether the 'listener' of these stories is ready for the message that is being shared. Elders for example, will carefully consider the time for telling a story and whether the 'listener' is ready for these lessons, and will also tailor their stories with an understanding of the listener and the information and ideas they are ready to be able to hear and incorporate into their own life. This is especially true in the case for young people, as elders will determine when a young person is ready and what they are ready for.

For an architect, researcher or other professional coming to work in an Indigenous community there will be an ongoing process where your 'readiness' to receive information about the community will be carefully considered. This will influence both when and where information is shared. Jean Guy Goulet has noted that "Northern Athepaskans communicate with visiting anthropologists on the basis of their estimation of the ethnographers experience and knowledge"[63], while Indigenous elders share that "You understand, we can only explain to people who can understand."[64] For an outsider, this connects directly back to the importance of relationship building as without relationships there is no way for any Elder or other carrier of knowledge to know when you are ready to hear and when to share that knowledge. The more that you build relationships and connections in a community the more that will be revealed to you.

Jean Guy Goulet shares a story about a missionary who had spent 10 years in a Cree community where he had who had 'ministered' to them in their local language and had always felt welcome in the community. In meeting between the local missionary and the band, the missionary was introduced to a range of 'beings' that reveal themselves to the Dene on a day to day basis; sometimes to help and sometimes to harm. "The missionary had never known such beings existed amongst his parishioners. He was suddenly introduced to a subset of vocabulary he had never heard before, despite being fluent in their language and having lived with them for more than fifteen years. The missionary was dumbfounded. How could he have missed so much, over so many years, having spent so much time with local people, in their homes, or in his (for he was, indeed, well known for his hospitality)? The chief simply said that the band members thought that now was the time for him to know."[65] Knowledge about the community will come when you are ready to receive it, and that time will be determined by others.

The sharing of knowledge through storytelling is an ongoing tradition which remains in place to this day. It is through stories that a great deal

59   Kovach, *Indigenous Methodologies: Characteristics, Conversations, and Contexts,* 94

60   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 133

61   Thomas & Qwul'sihyah'maht*, "Honouring the Oral Traditions of My Ancestors Through Storytelling",* 245

62   King, *The Truth About Stories: CBC Massey Lectures,* 154

63   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 57

64   Ibid, 57

of Indigenous knowledge has been retained, in spite of the "generations of oppression and attempts to eradicate their Indigenous ways of knowing."[66] As noted by Rebecca Sockbeson "The ongoing practice of telling Indigenous stories through generations of Indigenous peoples in communities is an example of the ancient practice of knowledge mobilization where new forms of knowledge are brought to life from ancient knowledge and remembered and re-applied in new forms and contexts."[67]

KNOWLEDGE AND KNOWING

At a Master Speaker presentation given by Indigenous Scholar Daniel Wildcat at the Greenbuild 2009 in Phoenix, Arizona, Dr. Wildcat shared a story about the nature of Indigenous knowledge that went like this. A First Nations community in Canada hired a high-priced lawyer from Montréal to undertake a land claims case for the community. At the first meeting, the lawyer told the people in the community that he had brought an expert witness on board to testify for the community. When asked who this lawyer was, the people were told it was a professor from Montréal had studied their First Nation and written about them for years; the lawyer being convinced that an accomplished academic with credible research being him would be ideal for the case. To this the community replied that they had never met this person, that he had never been to their villages, and that he was not who they wanted to provide a testimony on the community.

In his place they told the lawyer that they wanted an Elder from the community to be their expert witness, an old man who could speak to who they are as a people. This man knew the land, had tracked and hunted on it his whole life and understood the land and the community's relationship to it. While the lawyer did not think this was a good idea and spoke out against this, the community prevailed and the Elder became their expert witness.

When the day in court came, the Elder was asked to come forward and to give his testimony. The court bailiff had the Elder put his hand on the bible and he was asked 'Do you swear to tell the whole truth and nothing but the truth?' The Elder thought about this for a few moments and said 'No'. The judge was perplexed and explained to the Elder that he was being asked to swear this oath and had to do this in order to testify. The bailiff asked the question once again, 'Do you swear to tell the truth and nothing but the truth?' To this the Elder again replied 'No'. Following the direction of the judge a brief meeting between the Elder and the community lawyer ensued where the lawyer explained the reason for the oath and the need for Elder's testimony. The Elder returned to the stand and

"The preference for learning by observation rather than by instruction is found in all native North American societies. … Among native North Americans generally, and among the Dene specifically, knowledge is not a commodity to be objectified in instruction; it is an expertise personally absorbed through observation and imitation. …

Jean Guy Goulet

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took the oath one more time, again answering the question with a 'no'. This time the judge turned to the elder and wondered what the problem was as he was only be asked to tell the truth. To this the Elder replied "No, you are asking me to tell the whole truth, but I can only speak about what I know."[68] This story speaks of the Indigenous nature of knowledge: that it is subjective, non-linear and that it is learned through experience.

Through my work in and my interactions with Indigenous peoples I have come to understand that the Indigenous perspective of knowledge, what it means and how it is shared, is fundamentally different in comparison to how knowledge is viewed from a Euro-Western perspective. While Euro-Western ways of knowing place great value on objectivity and the measurable, and utilize knowledge from this viewpoint, Indigenous ways of knowing place great value on subjectivity and knowledge that is gained through direct personal experience. As observed by Jean Guy Goulet;

"The preference for learning by observation rather than by instruction is found in all native North American societies. … Among native North Americans generally, and among the Dene specifically, knowledge is not a commodity to be objectified in instruction; it is an expertise personally absorbed through observation and imitation. … This absence of 'directed learning' means that 'children acquire skills and self – control in more informal ways, including trial and error, imitation, modeling, participation and observation'."[69]

Numerous Indigenous scholars share the perspective that the only true knowledge is knowledge that has been gained through experience and that "To explain too much is to steal a person's opportunity to learn."[70] The perspective that knowledge is based on experience is also reflected in the languages of many Indigenous peoples. The Cree word kiskey-ihtamowin, for example, which translates as 'knowledge, experience, learning', is reflection of the idea that knowledge is related directly to the process of learning through experience.[71]

To better apprehend the Indigenous concept of knowledge, both philosophically and in practice, it is necessary to develop a greater understanding of Aboriginal epistemology (ways of knowing). Providing some insightful thoughts on Indigenous epistemology Dr. Margaret Kovach, of Plains Cree and Saulteaux ancestry and a leading expert in Indigenous research methodologies in Canada, writes:

"It is a way of knowing that is fluid and experiential, derived from teach-

65 Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 85

66 Sockbeson, "Indigenous Research Methodology: Gluskabe's Encounters with Epistemicide." 16

67 Ibid, 16

68 Wildcat, *"Greenbuild Master Speaker Series Presentation"*, 2009

69 Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 31

70 Ibid, 29

ing transmitted from generation to generations through storytelling; ... It emerges from traditional languages emphasizing verbs, not nouns. ... It involves a knowing within the subconscious that is garnered through dreams and visions. ... It is knowledge that is both intuitive and quiet. ... Indigenous ways of knowing arise from interrelationships with the human world, the spirit and the inanimate entities of the ecosystem. ... It is born of the land and the locality of the tribe. Indigenous knowledge ought to be practical and purposeful. ... Indigenous ways of knowing are organic with emphasis on reciprocity and humour. As the elders say, "If you have important things to say, speak from the heart."[72]

The perspective provided by Dr. Kovach is shared across the writings of a wide range of Indigenous scholars and researchers. On the Dene, Jean Guy Goulet observed that theirs is an "epistemological stance that privileges direct, personal knowledge over any other kind of knowledge, and the ethical position that promotes 'the inherent right of individuals to govern themselves freely and independently are intimately associated'. The Dene way of knowing and living is an expression of great confidence in the human ability to learn to live responsibly and competently without diminishing other people's opportunity to do the same. … Among the Dene the ability to learn through observation and imitation and the power to accomplish one's own choices by oneself are nurtured and respected throughout one's entire life."[73]

In his examination of Aboriginal Epistemology, Indigenous Scholar Willie Ermine, a member of the Sturgeon Lake First Nation and Assistant Professor with the First Nations University of Canada provides many thoughts on the great divide that exists between the traditional values of Indigenous people and those of Euro-Western culture. For Prof. Ermine, much of this divide is based on two dominant western ideas; the first of which is the emphasis that Euro-Western thought places on 'objectivity' and the standpoint that views 'objectivity' as the only 'path to truth'. This fundamental aspect of the 'western paradigm' stresses that reality is both quantifiable and measurable, and that objectivity is the only legitimate path to creating knowledge. Ermine and virtually all other Indigenous researchers whose writings I have read clearly share the perspective that this has resulted in an almost exclusive emphasis on objectivity within the research community. From an Indigenous perspective, objectivity has continually been used by the Euro-West to create and justify its own sense of superiority and an outlook that sees all other viewpoints as being inherently inferior. To Indigenous scholars, the western paradigm has created a fragmented view of reality and a 'way of seeing' that compartmentalizes the world, placing seemingly insurmountable limitations on

"It is knowledge that is both intuitive and quiet. ... Indigenous ways of knowing arise from interrelationships with the human world, the spirit and the inanimate entities of the ecosystem. ... It is born of the land and the locality of the tribe. Indigenous knowledge ought to be practical and purposeful. ... Indigenous ways of knowing are organic with emphasis on reciprocity and humour. As the elders say, "If you have important things to say, speak from the heart."

Margaret Kovach

perceiving and understanding humankind's interconnectedness with all other life on the planet, our 'other than human relatives'. It is a viewpoint that is inherent in the Indigenous world view, and one that I personally share.

The second dominating western idea is the idea of 'measurable truth' and an emphasis on logic, rationalism and science and the creation of knowledge through what would be considered the 'outer journey' as the almost exclusive source of legitimate knowledge and discovery. This viewpoint stands in great contrast to the Indigenous perspective that emphasizes developing understanding through the journey of the inner self; that dreams, ceremonies, storytelling and other methods used by many Indigenous people for the development of inner understanding and awareness. These are essential components of Indigenous philosophy - one where Indigenous ontology (way of knowing) and epistemology (way of being) must be seen as qualities that cannot be separated - they are intertwined, constantly referring back to and influencing each other.

Indigenous knowledge also belongs to the collective, with all of the relationships that are implied by that. In contrast, Shawn Wilson notes that the common thread that connects western methodologies is that "knowledge is seen 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."[74] Indigenous 'ways of knowing' (epistemology) cannot be separated from Indigenous ways of being (ontology) (ways of being). As highlighted by Rebecca Sockbeson;

"Thus, epistemology and ontology are performative, they imply a dynamic force of action, movement, energy, transformation and change. To sustain this capacity for holding and carrying energy, neither epistemology nor ontology can be separated. This state of enjoinment is central to comprehending how Indigenous philosophies and people do not conceive of themselves as separate from the land."[75]

Indigenous knowledge is about subjectivity, interconnectedness and the collective. It is a different way of viewing the world and for determining the actions that each person will take. This could be considered as another metaphor for good architecture and the values that could assist in its creation.

AGENCY
Up to this point, drawing upon the writings and teachings of Indigenous scholars and researchers I have examined, Indigenous cultural values

71   "Knowledge", In *Online Cree Dictionary (website)*, accessed March 25, 2020, https://www.creedictionary.com/search/?q=knowledge&scope=0&submitButton.x=34&submitButton.y=19

72   Kovach, "Emerging from the Margins: Indigenous Methodologies", 28

73   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha,* 199

74   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 38

deserve careful consideration for their potential incorporation, into the architectural design process. As I have considered the viewpoints and positions of Indigenous scholars and researchers and reflected on the roles and responsibilities of those going to work in Indigenous communities, the question of 'agency' and how one uses and sees ones' agency is an important one, with different implications for non-Indigenous and Indigenous Architects/Researchers. While the use of ones' agency should be a significant question for architects, it is rarely, if ever, discussed. And while some reflection on this was covered in the exploration of the qualities and importance of relationships, some consideration of the idea of agency within the Indigenous paradigm would be helpful for contemplating what agency means, particularly with regard to architecture and design.

Whose research is it? Who owns it? Whose interests does it serve? Who will benefit from it? Who has designed its questions and framed its scope? Who will carry it out? Who will write it up? How will its results be disseminated?"

Linda Tuhawai Smith

Indigenous researchers continually refer to the necessity for outside researchers, consultants and designers to consider the needs and requirements of the community as being paramount for any project. They support this by placing an emphasis on relationships and relationship building, on subjective knowledge and learning through experience, and the importance of continual engagement and reflection; actions that challenge the process of objectivity by placing knowledge within context, challenging the notion of independent third-party thought. Indigenous researchers categorically reject the notion of objectivity and the idea that there can be an unbiased viewpoint of reality, noting that the 'unbiased viewpoint' that outside researchers and consultants speak of has had a tremendously negative impact on Indigenous communities. Indigenous scholars clearly and unequivocally state that the role and responsibility of the researcher (or designer) is to the community, regardless of the discipline they come from or the project they are working on. Indigenous peoples expect that you will use your agency for the benefit of their communities. My own experience of working in communities strongly reinforces this idea. It is why the process and the product cannot be separated. For Indigenous scholars and researchers, questions surrounding who is doing the research, for what purposes and how the community will benefit stand as essential aspects of their enquiry. Dr. Linda Tuhiwai Smith provides some important thoughts on the critical questions that Indigenous peoples are increasingly asking when it comes to having research carried out in their communities. In her seminal work 'Decolonizing Methodologies: Research and Indigenous Peoples' Smith writes:

"In contemporary indigenous contexts there are some major research issues which continue to be debated quite vigorously. These can be summarized best by the critical questions that communities and indigenous activists often ask, in a variety

of ways: Whose research is it? Who owns it? Whose interests does it serve? Who will benefit from it? Who has designed its questions and framed its scope? Who will carry it out? Who will write it up? How will its results be disseminated?"[76]

It is important to note here is that, while these represent some of the higher-level questions that community leaders and decision makers are asking, many less formal but equally important questions will be asked by the community itself. As Dr. Smith shares "these questions are simply part of a larger set of judgments on criteria that a researcher cannot prepare for, such as: is her spirit clear? Does he have a good heart? What other baggage are they carrying? Are they useful to us? Can they fix up our generator? Can they actually do anything?"[77] They are questions that will rarely be shared with you directly, but are an integral part of the process. They will begin as soon as you enter the community, continue throughout the process of relationship building and until to the end of your time in the community.   These questions reflect the on the ground realities that have developed in communities in reaction to the truism that Indigenous peoples have gained little and often paid a heavy price for the research that has been carried out within their jurisdictions. From an Indigenous perspective, ones' agency is to be used for the benefit of the community.

For architects and other designers, it is important to understand that these questions are being asked andsuccessful projects will be a reflection of how well we listen and reflect back to values that we have seen and experienced. For architects, this will include how well we expand the parameters of design work to include larger perspectives of culture, the environment and community empowerment. Through our work, for example, are we contributing to the regeneration of the local Indigenous culture? Are we honouring Indigenous values and contributing to the revival of Indigenous knowledge and the revival of Indigenous languages? Are we rebuilding of relationships and contributing to the healing of the community, while also designing and constructing buildings that meet both the pragmatic needs of the community, the actualities of the local climate and environment, and the cultural identity of the community? These are not idealistic questions but are the realities that exist on the ground.

When I consider my own experience as an architect, and though I am not an Indigenous person, I have come to see how my own work has been shaped by the relationships I have built, and how the success of projects has become measured by the reactions and inputs of the community. I have come to value and respect the process of relationship building,

75   Sockbeson, "Indigenous Research Methodology: Gluskabe's Encounters with Epistemicide" 8

76   Ibid, 10

77   Ibid, 10

listening, engaging and learning. As my own relationships and intimate experiences with communities has developed, the more I have seen my own agency as being something that is there for the good of the community. It is a reflection of the Indigenous view on the great interconnectedness of all things.[78]

The use of a person's own agency also extends into areas such as the sharing of information and the generation of knowledge. As knowledge, is communal in nature, the sharing of knowledge is done in a way so that all receivers of this knowledge retain the ability to use and interpret it in their own way. Indigenous researcher 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."[79]*

As an Indigenous person, Shawn implicitly works within a larger context where, while exercising his own agency, his actions will not interfere with the agency of others.

While participating at a 'Theatres of De-colonization' conference in India, I was presented with one of the more compelling outlooks on the idea of agency that I have experienced,   when the Indian Sociologist/Feminist Gayatri Spivak delivered a compelling key note address on agency. Gayatri Spivak's key note speech was devoid of the visuals that are usually the mainstay of presentations at architectural conferences. Dr. Spivak instead challenged us all, through her words alone, to consider the nature of agency and the responsibilities that accompany it. To Dr. Spivak agency represented 'the entitlement to action' and that, as architects and planners, each one of us were involved in implementing actions that would affect people's lives. With great command of the audience Dr. Spivak challenged everyone to consider that the act of doing, by its very nature, is an intervention, and that the very nature of intervention brought with it, inherent responsibilities. To Dr. Spivak the act of 'doing' and the alteration that this brings to the lives of others requires that you have a personal interest in the project you are working on, 'that you take it on as your own', asserting that that you must "earn the right to undo the normality of another's existence".[80] To Dr. Spivak "Agency is the entitlement to action."[81]

Over the period of an hour, Dr. Spivak provided a long series of compelling thoughts and perspectives on what this means, leaving no doubt that her message had to be considered. In part I am sharing this experience

"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."

Shawn Wilson

as it was an important event and moment in my life; one that changed the way I consider the world around me from that point forward. For myself and a majority of people who listened to Gayatri Spivak's presentation, it was a compelling and powerful personal experience, providing each of us with perspectives that I knew I would have to incorporate from that moment forward. To this day, I cannot work on a project without pausing to considering her words and her perspective on the nature of agency.

While taking the Indigenous Research Methodologies course at the University of Alberta I once again found myself considering the question of agency, and how and when it was appropriate to exercise my own agency. Throughout the course we were encouraged to reflect on our own work and how the readings and teachings from Indigenous scholars and researchers could influence our work going forward. During reflections on the responsibilities that come with working in an Indigenous community, I found myself tackling the 'question of appropriateness', wondering whether it was fitting for me, a non-Indigenous white person, to carry out work on housing projects in Indigenous communities. While I have long been a supporter of community engagement and bringing more cultural identity into the design work that I carry out, as a non-Indigenous white person I wondered about my own participation. While the writings of Indigenous authors provided some direction on this, I felt I was in a grey area and needed some guidance.

As most of my IRM class was made up of Indigenous women, and I had developed friendships with a few of them, I approached three different women as asked this question: "Is it appropriate for me, a white male, to continue working on housing projects in Indigenous communities." Each of the three women that I talked with shared the same two-part answer, though in slightly different words. Firstly, they shared the strong belief that the needs of Indigenous communities are so great, that the assistance of friends, allies and advocates was needed. But to be a friend and ally, they all insisted, there were two things that I must always keep forefront in my mind. The first was to always remember that it is the community that we are doing this for, and whether coming to the community from the government, a university or a business, as an architect, researcher or consultant, this condition would remain. The second part of the answer was to have a good heart. This generated an exercise in reflection that became a very poignant experience for me as I could not recall, over the course of my lifetime, ever getting advice from three independent sources where 'goodness of the heart' was a condition for taking action. It was wise counsel.

78   Tibetan Buddhists speak of this when they talk of the concept of 'independent co-arising', where all things are devoid of an independent or intrinsic reality – that all existence is relational. "All things arise through the co-working of many causes and conditions." accessed April 21, 2020, http://bschawaii.org/shindharmanet/studies/coarising/

79   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 133

80   Spivak, "City, Country, Country, Agency", 1996

81   Spivak, "City, Country, Country, Agency", 1996

As I have considered the qualities of an IRM, it is clear that whether researcher or architect, the outside professional must be an active participant in the process. In taking the time to develop relationships, to understand and experience more of the local indigenous culture and its relationship to the land, I believe you will naturally come to a place where no other outcome makes sense; where using personal agency for the benefit of the community is the only course of action. Yet, the question of agency and whether one's own agency will be used for the benefit of the community is something that each one of us must personally examine and come to an understanding on. It is part of the personal journey.

3 LISTENING

... experiences from the field

"In the Maori language there is the expression Kanhohi Kitea or the 'seen face', which conveys the sense that being seen by the people – showing your face, turning up at important cultural events – cements your relationship with the community in an ongoing way and is part of how a person's credibility is continually developed and maintained."

Linda Tuhawai Smith

Undertaking a community engagement process is not a one-off event, nor is it another item to tick on a check list when it is completed. It is an ongoing long-term process where the building and reinforcing of relationships is both a fundamental principle and a key to success. There is also no 'neutrality' in that no one comes without their own personal and professional perspectives, perspectives that have been gained through living our lives that form much of how each of us has experienced and see the world. Cam Willet shares an Indigenous perspective on this writing that "we never make the assumption that our positionality is neutral. We never think to ourselves that we can treat each other the same, that there is some sort of generic Canadian person and that we can all be friends because we are not the same. Other people don't have an Indian Act. White people are not subject to funny looks or funny things that people say. We're not treated the same way."[1]

In Chapter 3 of this thesis I will be examining the engagement process by looking back at three design workshops, or 'charrettes' as they are known within the architectural profession[2], held in Indigenous communities that I have helped facilitate, and the designs I helped develop as one of the outcomes of this process, including some of the 'methods' that I used in these events and the experiences that I gained from them. These were, at times, remarkable and engaging experiences that furthered my belief in the importance of community engagement and the consequence of bringing people into the decision-making process; I came to admire and draw upon the knowledge, skills and wisdom of northern Indigenous peoples.

REVISITING KEY PRINCIPLES
In beginning to examine the engagement process it would be advantageous to take a brief second look at three of the key research principles that were outlined in Chapter 1; the principles of Location, Relationships and Knowledge, as these building could be seen as 'foundation' principles for working in communities. As I shared in Chapter 1 and 2 of this thesis, 'Location' is the starting point of the engagement process as it is the 'opportunity' to begin sharing with the community who you are and what has brought you to the community you are in. Though the process is often informal, the purpose behind it is not. Kathy Abolson provides

some context. "I think that as researchers when we put ourselves forward, when I say who I am and where I'm from, we have those exchanges where we identify ourselves. As a researcher in the community, when I'm done community-based research and I've talked to elders or people in the community about seeking answers or searching for something, I let them know who I am and what my intent is because they are suspicious of people extracting knowledge. We are suspicious of people misrepresenting us. We are suspicious of people who take knowledge and use it and we are suspicious of being exploited and used. That knowledge that we give sometimes gets turned around and used against us."[3]

Working in communities also requires the ongoing building and maintaining of relationships in both an informal and formal manner. It necessitates that you begin to understand the multiple layers of relationships and the significance of these. I remember one summer not too many years ago when my friend and PhD advisor Gavin Renwick was planning a trip to a Tlicho assembly in the NWT. When I asked him about the goal of his trip and what he was hoping to accomplish he responded saying 'Well Bill, I simply have not been there for some time, and it is important that I show my face'. Gavin Renwick's project work was not on the agenda, nor was he going because of some meetings he had to attend. This visit was about his ongoing relationship with people in the community and how showing one's face and spending time together, without an agenda, is of great importance. Linda Smith writes;

> "In the Maori language there is the expression Kanhohi Kitea or the 'seen face', which conveys the sense that being seen by the people – showing your face, turning up at important cultural events – cements your relationship with the community in an ongoing way and is part of how a person's credibility is continually developed and maintained."[4]

Understanding what 'knowledge' means within an Indigenous context is also an important perspective to bring to the design process. Replacing the western notion that knowledge is something that is observable, quantifiable and measurable, with an Indigenous perspective that knowledge is gained through personal observation and imitation, may be a significant challenge for some people. It is not easy to cast aside our favouring of empiricism and rationalism as these are the basis for western thought and philosophy. But when you enter an Indigenous community, you are leaving the western world, and entering a world that functions within a different philosophy; a philosophy that needs to be both respected and fostered.

Many Indigenous scholars and researchers also believe it is unethical to

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1   Aboslon and Willet, "Putting Ourselves Forward: Location in Aboriginal Research", 103

2   "A Design Charrette is an intensive, hands-on workshop that brings people from different disciplines and backgrounds together with members of the community to explore design options for a particular area. It differs from a traditional community consultation process in that it is design based. … The goal of the Charrette process is to capture the vision, values, and ideas of the community". Accessed From https://www.involve.org.uk/resources/methods/design-charrettes

3   Aboslon and Willet, "Putting Ourselves Forward: Location in Aboriginal Research", 103

4   Smith, *Decolonizing Methodologies: Research and Indigenous Peoples,* 15

Citizen control

8

Delegated power

7

Partnership

6

Placation

5

Consultation

4

Informing

3

Therapy

2

Manipulation

1

Degrees
of
citizen power

Degrees
of
tokenism
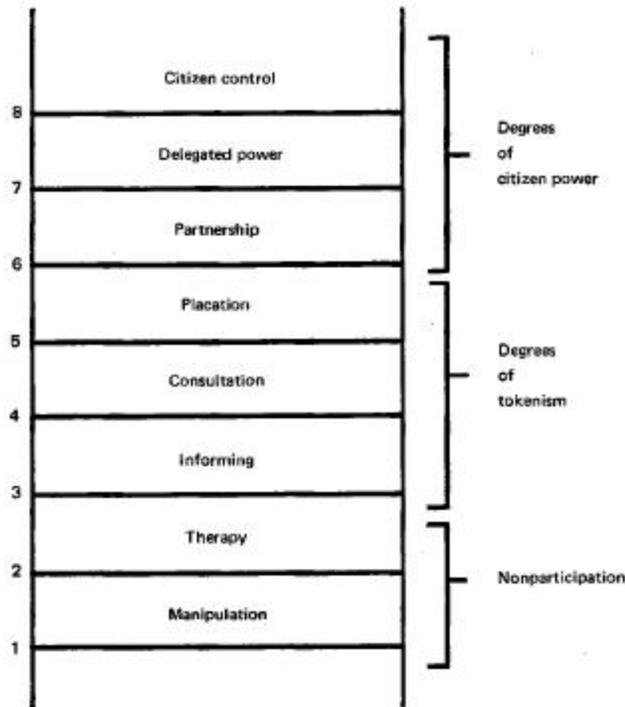
Nonparticipation

Figure 3.1: The Eight Rungs of the Ladder of Citizen Participation (Arnstein)

carry out research in a community where you have no stake or personal interest. For architecture, this would mean ensuring that our work reflects the needs of the community, both pragmatic and aspirational, with voices in the community defining those needs. Here, I am talking about changing the way that Indigenous communities are seen, are talked about and are cared for, with each project part of engaging with a community's identity and seeing this process as an integral part of what is produced. For architects and other design professions this may present a significant challenge as, in our education as architects, we are taught little about how to engage with people on the projects that we are working on. Throughout our education we are instead encouraged to develop our own concepts, and to 'defend' these ideas with our instructors and peers. It is a process that does little to foster understanding or inclusiveness.

I have witnessed a number of circumstances in Indigenous communities that, when the engagement process is not given a priority on architectural projects and budgets become tight , all too often the first thing that is dropped, assuming that it was there in the first place, is the community engagement component as it continues to be viewed as a luxury. Too often without this, projects remain disconnected from the community. (make sure that this has not been moved to another part of the thesis)

CONSULTATION IS NOT CONSENT

In recent years, the Government of Canada and its agencies have been acknowledging that there is a need to 'consult' with Indigenous communities, without defining what this means. Indigenous peoples themselves highlight that just because they have been consulted, this does not mean that they have given up their right to make decisions; that 'consultation does not mean consent'. This raises the question, 'what does consultation mean?' This question is born from the reality that consultation processes have often been used to provide the pretense that meaningful engagement has been carried out, while decision making remains largely outside the community. As Indigenous Professor Lewis Cardinal shares;

"Another commonality has to be the consensus-based decision-making process, which fundamentally has to happen within that community in order to move decisions forward. How do we apply it within our political structures and our First Nations today? That's a big challenge because our traditional decision-making processes are consensus-based, are community-based, are clan based. They are not being utilized in our decision-making processes anymore. But we need to go back there."[5]

The right to direct and meaningful access to the decision-making process is stated clearly in Article 18 of the United Nations Declaration on the Rights of Indigenous peoples (UNDRIP). Indigenous peoples "have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions."[6] These words move far beyond the notion of consent, speaking instead of the need for the exploration and development of effective approaches to community control of the decision making process.

In the early 1970's, while studying planning at the University of Waterloo, I came upon the highly influential 1969 article called *A Ladder of Citizen Participation*. Authored by Sherry Arnstein, a special assistant to the assistant secretary at the U.S. Department of Housing, Education, and Welfare (HUD), Arnstein writes that "citizen participation is a categorical term for citizen power. It is the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future. It is the strategy by which the have-nots join in determining how information is shared, goals and policies are set, tax resources are allocated, programs are operated, and benefits like contracts and patronage are parceled out. In short, it is the means by which they can induce significant social reform which enables them to share in the benefits of the affluent society."[7] As a marginalized people, Indigenous populations certainly qualify as 'communities of people' who have been left out of the political process.

Arnstein goes on to develop what she sees as eight levels of participation, beginning with 'manipulation' and culminating with 'citizen control', with each rung of the ladder "corresponding to the extent of citizens power in determining the end product"[8], as the further you are up the ladder, the greater the level of citizen involvement and control (Figure 3.1). Arnstein provides a framework for understanding the different levels of citizen control by situating them within three categories she has titled as Non-participation, Tokenism and Citizen Power. While somewhat of

5   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 110

6   "United Nations Declaration on the Rights of Indigenous Peoples", 16

7   Arnstein, "A Ladder of Citizen Participation"*,* 216

8   Ibid, 216

Figure 3.2: Eastmain Street – Typical of Street and Housing designs (W Semple)

a simplification, 'the ladder' underscores that there are significant gradations to the process of participation and its potential for impacting the decision-making process and that understanding these is necessary to evaluate when participation is meaningful and when it is not.

Historically the relationship between early 'white' settlers and native peoples fostered a disconnect between both people and place that continues to this day. In *Ceremony at Boundary Fire*, Narcisse Blood describes this divide bluntly stating that the "basis for our relationship with the new-comers was fear. The fear was in the form of the forts, and those big walls they put around themselves to keep them safe from the natives and thus the environment".[9] This divide continues today, carried forward, for example, through the use of organizing principles for the design and planning of Indigenous communities that give preference to transportation and services rather than relationships to place (Figure 3.2). As shared by Dr, Gavin Renwick, "For First Nation communities within the Canadian North, government design, planning, and social policies have created a cultural contradiction, they insulate First Nation people from the land – their homeland."[10]   (Renwick, p. 3) As shared by Harold Strub in his book '*Bare Poles: Building Design for High Latitudes*, "Community spirit must often survive in spite of settlement design. In Canada, the high latitude community that properly serves the needs and aspirations of its population has not been built."[11]

While speaking at the Sustainable Northern Shelter Forum held in Fairbanks Alaska in March 2016, Fort MacPherson Gwich'in businessman James Ross shared the perspective that Government of Canada policies had resulted in a 'ghettoization of the north' and that this brought about the design of housing and communities that do not reflect the values of Indigenous people. To James Ross, this process has yet to acknowl-

edge that Indigenous people have centuries of knowledge and wisdom, and that every village has people with vast knowledge about the land and how to live on it. Ending his comments James stated to all in attendance that 'We are here. We have never been asked.' The sharing of this perspective is not new, appearing during the MacKenzie Valley Pipeline inquiry of the 1970's, the truism of this reality was shared during the following testimony at the Berger Inquiry.

> *"Mr. Berger, do you think that this is the way the Indian people chose to have this community? Do you think the people here had any voice in planning this community? Do you think they would have planned it so that it would divide them, pardon me? Do you think they would plan it so that it divided them and gave them a poorer standard than the transient whites who come in, supposedly to help them? Take a look at the school here. Try to find anything that makes it a place where Indian values, traditions, and Indian culture is respected. ...Do you think Indian people would have chosen a building like this as a way to teach their children how to be proud of their Indian heritage? Do you think Indian people chose to have their children taught that the only way to survive in the future is to become like the white man?"[12]*

When housing policies were developed for Indigenous communities, not only were the opinions or views of northern Indigenous peoples not sought out, but the design and installation of housing became part of a conscious process of assimilation. While 'the rationale' for moving Indigenous people to communities was ostensibly to provide health care services as well as education for the young, the larger goal was the assimilation of Indigenous peoples.

VISUAL CLUES

Clues to this disconnect are not difficult to find. My first trip to the far north took me to Iqaluit, Nunavut to help facilitate a design charrette for a new 'sustainable subdivision' being planned for the city. It was early May, and after an orientation session for the opening of the charrette the next day, I left with my camera for the shoreline, to begin experiencing and photography some of this raw and striking land. While it was nearly 9:00 in the evening, the long hours of soft sunlight that come with the season were stretching out in front of me.

As I wandered the still frozen water front, encountering the numerous sheds, boats, snow-machines, and bench seats from old cars that lined the waterfront, my eyes were constantly drawn to the bay (Figures 3.3 to 3.5). The more I explored and photographed, the more obvious it became that the Inuit were a marine people and that much of their connection to the land, was a connection to the marine environment that was frozen for much of the year. Whether for fishing on the open

9   Adams, *Ceremony at Boundary Fire: A Story of Indigenist Knowledge,* 55

10   CMHC (2005), *The Land We Live on Is Our Home: The `Gameti Ko` Project Second Community-Led Workshop,* 3

11   Strub, *Bare Poles: Building Design for High Latitudes,* 92

12   Berger, *Northern Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry: Volume One,* 106

Figure 3.3: A Traditional Sled and a Boat sit on the Bay in Iqaluit (W Semple)

Figure 3.4 and 3.5: A old car seat and storage sheds along the shore of Frobisher Bay (W Semple)

sea in the summer, or hunting for seal in the winter along the frozen edge of the sea ice pack, the ocean itself seemed to be the place from which the people drew much of their sustenance and from where their culture draws its strength. While standing on the frozen shoreline and before I had begun to listen to ideas for the designing of the new 'plateau' subdivision, I was wondering why the subdivision was being located so far from the bay it was being located there and how the Inuit themselves would feel about living so far from the sea? I was aware of and understood there were 'planning constraints', limited land for development and a myriad of land title considerations that were in play. But I began to see these as part of an historical progression that was continuing to impose southern policy and planning constraints on the culture of the Inuit; and to see, if left to their own ways, how something quite different would likely have evolved.

I also began to see 'the disconnect' that had been created between people and place through the creation of permanent settlements where they once did not exist, and using approaches that never considered this reality or the transition that was being imposed on the Inuit who would live there. Writing on how this process was also being carried out in First Nations communities across the country, Dr. Cora

Weber Pillwax shares, "I watched new Alberta housing systems come in, new land tenure, new ways of holding land. That stuff destroyed our communities. Every community went through it, reserves included."[13]

In Nunavut, this cultural disconnect extended into housing with the design of housing that did not provide for the needs of a people who spend much of their time out on the ocean and the land, or for the spaces needed in the home to store the equipment and tools required for hunting and gathering, or for the preparation and storage of the fruits of these efforts. A booklet titled 'Living in the New Houses' is an example of this. Developed by the Education Division of what was then called the Department of Indian Affairs and Northern Development, the booklet was "prepared for Phase II of the Adult Education Program, Eskimo Rental Housing, to give factual information on living in the new rental houses. It is experimental and therefore subject to revision."[14] The drawings in the booklet; ranging from how to set a kitchen table, to making beds and organizing a kitchen, were clearly about the western sense of progress and the unconditional requirement that the past should be left behind. There was no attempt at interjecting aspects of the Inuit hunting culture or a life connected to the land. What is certain is that no one considered what this meant to the Inuit way of life and what was being lost. The Inuit were never asked if this was what they wanted. It would be difficult to not see this booklet as a part of a process of 'cultural assimilation' on the part of the Government of Canada.

Through contemporary eyes, 'Living in the New Houses' reveals a startling insensitivity to the skills and knowledge that the Inuit possess. For example, the section titled 'Foods for Health', describes why good food is needed for a healthy body and how to plan and shop for food. It sets the stage for the importing of the foods from the south; the very foods that have greatly contributed to the high obesity and diabetes rates that are found in northern Indigenous communities; and the integration of Inuit into western consumer culture. All of this while ignoring the much healthier and sustainable source of food that the Inuit harvested from the land. Diagrams in the booklet, showing Inuit women as 'homemakers',   how to do 'a place setting' with plates and cutlery, and Inuit families sitting around a table are compelling confirmations of this.(Figures 3.6 to 3.8)

In my own experience, many of the attitudes that have molded Indigenous housing policies and the development of manuals like Living in the New Houses still exist. Housing policy and programs have seen little if any alteration, with much of the decision-making process still in the hands of the Government of Canada. This includes the process of com-

13   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 108

14   Needham, *Living in the New Houses,* Foreword
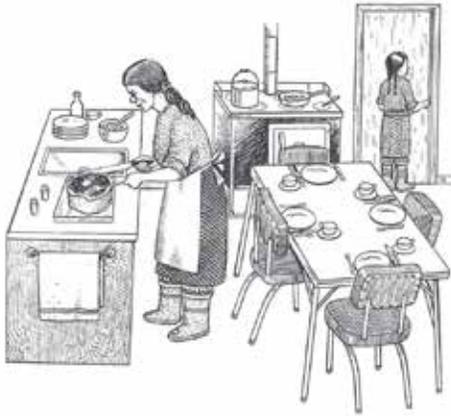
Figure 3.6: "Getting Food Ready". (Living in the New Houses)

Figure 3.7: "A Place Setting". (Living in the New Houses)

Figure 3.8: "Mealtime is Family Time". (Living in the New Houses)

munity engagement that is still not fully appreciated or understood. Most engagement exercises have not advanced beyond being mere information sessions, falling under what Sherry Arnstein would categorize as 'degrees of tokenism'. With little decision-making power being transferred to the communities themselves, 'outside interests' largely retain control over how the process unfolds and most of the decisions that are made.

When I began working on housing projects in the north with CMHC I came with the belief that returning control of decision making to Indigenous people should be one of the goals of each architecture project that is carried out in an Indigenous community, whether in the north or the south. I had learned a great deal about different non-western ways of knowing and being from my work with Tibetans in India and had a strong sense that there were things I could draw upon and apply to the work to be carried out in Indigenous communities in Canada.

To do this I launched a number of housing initiatives under the umbrella of what would be called the Northern Sustainable House, each with its own engagement process. The goal was to develop at least one housing prototype in each of the northern territories (Nunavut, Northwest Territories and the Yukon), with each to be designed the better meet the needs of the local Indigenous community, and to significantly improve the energy efficiency of northern housing. As I was hoping that the Northern Sustainable House projects would become examples and catalysts that other Indigenous communities could draw from, I was looking for a community where we would have the greatest chance of success, rather than the community where there was the greatest need. I had travelled to Whitehorse to begin building some northern relationships and to search for a community where I could launch the initial CMHC Northern Sustainable House initiative. To assist with this, I was meeting with Al Lyon and Juergen Korn, two contacts at the Yukon Housing Corporation (YHC), the territorial government

agency responsible for housing in the Yukon.

My time working with Tibetans in Asia had taught me a great deal about the challenges of bringing, what seem to be quite modest changes, to a remote community with limited skills and resources. It can be done, but takes a great deal of weaving between the technical and the social, of being able to be part of a number of aspects of the process for an extended period of time. As my position in Ottawa would limit this, I chose to search for the community that already had good construction skills, leadership that would be interested in trying to push the envelope and a 'champion in the community' who was interested in building a successful initiative. When I talked with Juergen and Al about this, they agreed that this was a good approach and suggested two communities; the Tr'ondek Hwech'in First Nation in Dawson City and the Champagne Aishihik in Haynes Junction. I visited both of these communities, meeting with the Director, the head of Housing and builders in the community, choosing to go ahead with the Tr'ondek Hwech'in First Nation. I share this little story as I think it important to impart how I considered, and continue to consider, the longer-term perspective, to try and see how projects can build upon themselves.

GAMETI KO: THE LAND WE LIVE ON IS OUR HOME

Early in my days of working in the north I was invited to attend a housing design workshop in the Tlicho community of Gameti, that came together quite unexpectedly through my involvement with the Tibetan community in India. In 1992, as part of my first foray into presenting my work at national and international conferences, I gave a presentation on Tibetan Architecture at the International Association for the Study of Traditional Environments (IASTE) Conference in Paris. Through this presentation I met my thesis advisor Dr. Gavin Renwick, a Scot who was interested in my work with Tibetans. We were both people who worked at the edges of our profession, and enjoyed sharing the perspectives we gained from that vantage point. Several years after the Paris conference, Gavin stayed at my house on his way to Yellowknife to carry out some research with an Indigenous community in the region. We lost track of each other for several more years, when, not long after starting my research position, a colleague at CMHC who had been north for some meetings mentioned to me that he met someone who was doing interesting work in one of the Dene communities. He thought we should meet and handed me a piece of paper with a name and phone number. It was Gavin Renwick's. Gavin was working with the Tlicho, also known as the Dogrib[15], in the community of Gameti in the Northwest Territories. In his work in Gameti, Gavin carried out a series of workshops as part of Gameti Ko, a project

15   "Tlicho, also known as Dogrib, fall within the broader designation of Dene, Aboriginal people of the widespread Athapaskan language family. Their name for themselves is *Dené*, meaning "the People." To distinguish themselves from their Dene neighbours - Denesuline, Slavey, Sahtu Got'ine and Kʼasho Gotʼine - they have come to identify themselves as Tlicho, meaning 'dog's rib', accessed Nov. 22, 2019 from https://www.thecanadianencyclopedia.ca/en/article/tlicho-dogrib

"Another commonality has to be the consensus-based decision-making process, which fundamentally has to happen within that community in order to move decisions forward. How do we apply it within our political structures and our First Nations today? That's a big challenge because our traditional decision-making processes are consensus-based, are community-based, are clan based. They are not being utilized in our decision-making processes anymore. But we need to go back there."

Lewis Cardinal

to address the Elders long term goal of designing and building a contemporary housing prototype that would reflect traditional Tlicho knowledge. Like elsewhere across the country, the housing that had been developed in Gameti did not reflect any aspects of Tlicho culture, nor did it produce any sense of propriety or ownership. The workshop was one of the first steps in trying to address this serious deficiency. I was not facilitating this workshop but was invited to participate in the sessions, to take in the process and to listen to what the elders had to share. I was also hoping to build some relationships as I was looking for communities for CMHC to partner with in the development of a northern housing prototype in the Northwest Territories.

The workshop was held in the Tlicho Council offices and followed a format that reflected Indigenous values and approaches. The session began with a prayer and an acknowledgement of the land and the Tlicho relationship to the land. While seated around the Council table, each person located themselves, providing an account of the relationships and the issues that brought them to the session. Each person had many opportunities to speak, with the shared words acknowledged and carefully documented. For myself, the Gameti workshop was about listening to the Elders and the perspectives that they shared on housing and the community.

The session provided a framework for examining built form and the creation of space from a Tlicho perspective. The Elders have a growing concern that the young are living a life that is 'foreign', and while not advocating a compete return to traditional ways, the Elders were searching for balance and a way that they could bring their contemporary and traditional lives together. In the words of the Tlicho Elders a broad definition of the Tlicho house includes:

- a place that is safe for elders and young people
- a place where people share: food; stories; knowledge; skills
- a place where people can observe other people working so they can learn
- a place where you learn and share stories, languages and skills because it is open enough
- a place to see and hear
- a place where both the traditional Dogrib and modern 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 skill. Thus, even if youth are not actually listening to stories they can still hear them."

• a place that brings peace and harmony
• a place that is comfortable enough to both talk about and solve the problems that family and community face
• a place that is easy for people to work together, both within and around the home
• a place that is flexible, because family is important and children come and stay for periods at a time, as do grandparents and grandchildren
• a home is a place that should have: outside storage; a smoke house; a place to prepare skins
• a house should include log construction and be made from local resources from the land
• a house should have at least two doors, one for the meat to come through and another for menstruating women to use. This latter door should be the backdoor, be near the bathroom and away from the meat.
• a house should be part of the environment; it should be easy for inhabitants to move between the interior and outside [16]

The words that the Elders used to describe the attributes of a Tlicho house speak of the relationships which make a house, qualities that are deeply reflective of Indigenous paradigm that Indigenous researchers like Shawn Wilson write about. Rather than listing objects, the Elders speak of qualities, about the spaces that are needed for family, for traditional practices and for cooperation and harmony. That the Tlicho Elders broad definition of house so easily contains and reflects the value of relationships (to others and to the land) and the importance of storytelling as a form of knowledge sharing and transfer, reveals much about the importance that Indigenous people place on these attributes.

As Architect Juhani Pallasmaa writes: "The greatest mental effect and emotion in architecture is concentrated in distinct aspects, or confrontations with the house. These are not 'elements' in the sense of clearly delineated, defined and preconceived objects, or forms, as they are situations."[17] The Tlicho Elders own descriptions of the 'places' needed in a house were the 'situations' that Pallasmaa speaks of. Designing a house is about creating places for relationships to occur and be fostered, and about the house as a place for rituals to be performed.

For the Dogrib being in a house also requires that a connection with the land is also maintained and enhanced.   "This illustrates the dichotomy between the western idea of a house as a spatial unit in the built environment and the Dogrib idea of a home. The "house" is a physical unit that

16   CMHC, *The Land We Live on Is Our Home: The `Gameti Ko` Project Second Community-Led Workshop*, 7

17   Pallasmaa, *The Embodied Image: Imagination and Imagery in Architecture,* 128

delineates space for the members of a household and provides shelter and protection for domestic activities. For the Dogrib, land use and occupancy are inextricably linked and home is not to be contained but understood as an expansive experience. Dogrib culture links the geophysical and cultural landscapes through oral tradition. This is the relationship joining camp and land. "In" and "out" are superfluous, since both are home. You are always "on" the land."[18]

"Pack ice to the white man seems like a barrier, something to fear. But to the Inuit it is their highway. It's their communication system, their freedom, their livelihood, their independence."

Mario Aubin

Much of the Gameti Ko project looks to the future and to young people in the community. As stated by the great Tlicho Chief Jimmy Bruneau on the goal of the Tlicho; "If we are to remain a strong people, we must educate our children and grandchildren in both the white and the Tlicho ways. They must be strong like two people."[19] It is a richly eloquent statement that has often been quoted in the presentations that I give on Indigenous and northern housing, one that I believe speaks to the aspirations of many Indigenous peoples in Canada.

NORTHERN DESIGN
Experience has taught me that many housing issues in Indigenous communities are reflective of a lack of community engagement in the design, construction and ongoing maintenance of housing; that in taking control over the lives of Indigenous peoples and in delivering housing 'that arrives like spaceships', we have stripped Indigenous people of their pride as well as one of the means for 'taking ownership' of their communities. Beginning each Northern Sustainable House with a design charrette was meant as a step in the direction of bringing more Indigenous voices into the design and decision-making processes. I have never felt that consultation and engagement is a luxury, but instead that is should be a part of a decision-making process where choices are made, as much as possible, by those who will be most impacted by those decisions.

To better describe the challenges and opportunities of this approach, I will share experiences from design charrettes that were held in three different Inuit communities from across the north (Arviat, Nunavut; Anaktuvuk Pass, Alaska; and Nain, Nunatsiavut, Labrador), and the housing designs that were developed from these. Each, in its own way reflects the Inuit principle of 'Quajimajatuqangit', 'the role of Indigenous Knowledge in Supporting Wellness'. In some ways each of these events was about healing, something that each architectural project has the potential to make a contribution to. And while each of these projects was undertaken before I was introduced to the principle of an IRM, I will share reflections on how each event exhibited some of the values of this 'paradigm', as well as reflections on the question of community decision

making and control. Each community was unique and each charrette brought its own challenges, insights and rewards, some of which were not initially obvious.

INUIT KNOWLEDGE

"Inuit Qaujimajatuqangit (IQ) is the term used to describe Inuit epistemology or the Indigenous knowledge of the Inuit. The term translates directly as 'That which the Inuit have always known to be true'. "[20] Inuit Qaujimajatuqangit is about knowledge that is embedded in process; a dynamic system that links Inuit philosophy and action in the evolving contemporary context. It is specifically about the "transfer of an ever-evolving set of knowledge and skills that are essential for producing a contributing member of family and society."[21] Like other Indigenous peoples, the Inuit have an indelible relationship with the land. The Inuit have a unique perspective on the northern environment and the place of humans in that environment. The Inuit IQ "encompasses knowledge and respect for the environment based on the belief that there is a 'protector' of all things and that there are consequences for behaviours that are disrespectful or harmful to others. Conceptually, Inuit see 'living' things as anything that has a life cycle. For example, the weather, the seasons, the rocks and waterways are included in this view."[22]

Living in what is arguably the coldest region of the planet, the Inuit relationship with the land is also indelibly intertwined with a relationship with the 'cold'. As Mario Aubin, of the Nunavik Arctic Survival Centre in Puvirnituq shares "Pack ice to the white man seems like a barrier, something to fear. But to the Inuit it is their highway. It's their communication system, their freedom, their livelihood, their independence."[23] This perspective has been highlighted through the efforts of Inuit leaders such as Sheila Watt-Cloutier when, in 2005, she filed a climate change petition to the Inter-American Commission on Human Rights to defend the Inuit way of life, and the 'right to be cold' that was being threatened by climate change. The petition sought "relief from human rights violations resulting from global warming caused by acts and omissions of the United States."[24]

As its philosophy includes 'working for the common good', Qaujimajatuqangit also addresses the important role that relationships play in Inuit society. "Inuit worldview is strongly grounded in social accountability and unity. All individuals have a responsibility to those around them. This includes sharing what they have, serving and caring for others and contributing to the collective well-being through their efforts and activities. Working for the common good is an expectation for all ages and is

18   CMHC, *The Land We Live on Is Our Home: The `Gameti Ko` Project Second Community-Led Workshop*, 4

19   Ibid, 2

20   Tagalik, *Inuit Qaujimajatuqangit: The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut, 1*

21   Ibid, 2

22   Tagalik, *Inuit Qaujimajatuqangit: The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut*, 4

23   Kendall, "Climate Forces Inuit Onto Thin Ice", Accessed March 26, 2020, https://theecologist.org/2006/jun/01/life-edge-warming-world.

24   Gordon, "Inter-American Commiaaion on Human Rights To Hold Hearing After Rejecting Inuit Climate Change Petition', Accessed March 21, 2020, https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1239&context=sdlp

central to why Inuit were such a successful society. Unity speaks to the importance of collective identity and collaboration across time."[25] Architecturally, the emphasis on the collective of the Inuit manifested itself in the open layout of the iglu. As described by anthropologist Edmond Carpenter,

> *".... visually and acoustically, the iglu is open; a labyrinth alive with the movements of crowded people. No static walls arrest the eye or ear, but voices and laughter come from several directions and the eye can glance through here, past there, catching glimpses of the activities of nearly everybody."[26]*

THE NORTHERN SUSTAINABLE HOUSE

In 2006, the first northern housing design charrette and the design for the first 'Northern Sustainable House' was carried out in partnership with the Nunavut Housing Corporation in the community of Arviat, Nunavut. To talk about northern housing issues and to share CMHC's perspective on northern housing research issues and housing needs, Jim Robar and I travelled together to Arviat to meet with the Technical staff of the Nunavut Housing Corporation (NHC). As part of this meeting I presented ideas on what we saw as ongoing northern housing issues that CMHC research could assist with. Included on this list was the Northern Sustainable House (NSH) project and the community engagement component that would be a component of this. We received positive input from the list of potential projects that I put together, with the NHC confirming that these were issues that were important to them and matched up well with their own priorities. When asked to prioritize the projects, the Northern Sustainable House was high on that list.

I knew from my own reading and research, that too many initiatives that had tried to foster innovative approaches to housing in northern communities had failed due to a lack of resources, a lack of capacity building and other challenges that come with remoteness and the extreme northern climate. And while I knew it was not possible or realistic to eliminate these I hoped, through better dialogue and planning, that we could, at a minimum, reduce the impact of these variables. Again, we asked the NHC where they thought we should focus CMHC's resources in order to best assist them with implementing the Northern Sustainable House project. Through a collective decision process making that was well received by our NHC partners, it was decided that CMHC would financially support and facilitate the design charrette, would lead the development of the design for the Northern Sustainable House, and would carry out the energy monitoring and evaluation of the project once it was completed.

"... visually and acoustically, the iglu is open; a labyrinth alive with the movements of crowded people. No static walls arrest the eye or ear, but voices and laughter come from several directions and the eye can glance through here, past there, catching glimpses of the activities of nearly everybody."

Edmond Carpenter

The Northern Sustainable House (NSH) projects had two goals. The first was to develop a house design that reflected the cultural needs of the Inuit families that would occupy these homes. The second goal was to improve the energy performance of housing across Nunavut, with the target of attaining an energy performance of 50 percent higher than levels that are specified in the Model National Energy Code for Houses (MNECH). While improving the energy performance of the house would reduce operating costs and, we expected, pay for itself over a lifetime of the house, increasing the cost of construction was an additional issue with the NHC as any increase in the costs of building each house would translate into fewer houses being built; an unacceptable scenario in a region with a dramatic housing shortage. As the CMHC research budget would not support the full cost of building the NSH, Jim and I proposed that CMHC pay for the 'additional' costs of the energy efficiency features: the thicker walls, added attic insulation, improved windows etc. As part of our research component we would do an analysis these costs in comparison to the energy savings gained, with the goal of providing a compelling financial reason for making the 'energy efficiency' features a part of every house that the NHC would build moving forward. While the commitments we made were crucial to the success of the project, our flexibility was also positively noted and commented on by our NHC partners.

THE NSH DESIGN CHARRETTE

Both the cultural and technical details were explored in the design charrette that was carried out to provide input and direction for the design of the NSH. As this was to be the first housing charrette that I would undertake in a northern Indigenous community, I wanted to do my best to ensure that the event would be successful, with success ultimately being judged by the people who would attend the event. Knowing there would be cultural and language challenges that I was still to learn about, I contacted Joe Karatek, an Inuit facilitator with the Department of Education in Arviat, to engage him as the principle facilitator. Joe agreed to participate and brought with him both his skills as a facilitator, as well as his deep understanding of Inuit culture.

When Joe and I talked about the goals of the charrette, he recognized that the participants (including elders, students, builders, hunters and stay at home mothers), would bring a variety of communication skills. Joe inherently understood how demanding it might be to make some design concepts understandable to all members of the community as Inuktitut, the only language spoken by many of the elders in the community, had inherent limitations. "How could I talk about the kind of gas between window panes," Joe Karetak wondered, "when there's only one

25   Tagalik, *Inuit Qaujima-jatuqangit: The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut*, 4

26   Dawson, *An Examination of the Use of Space by Inuit Families Living in Arviat, Nunavut,* 78
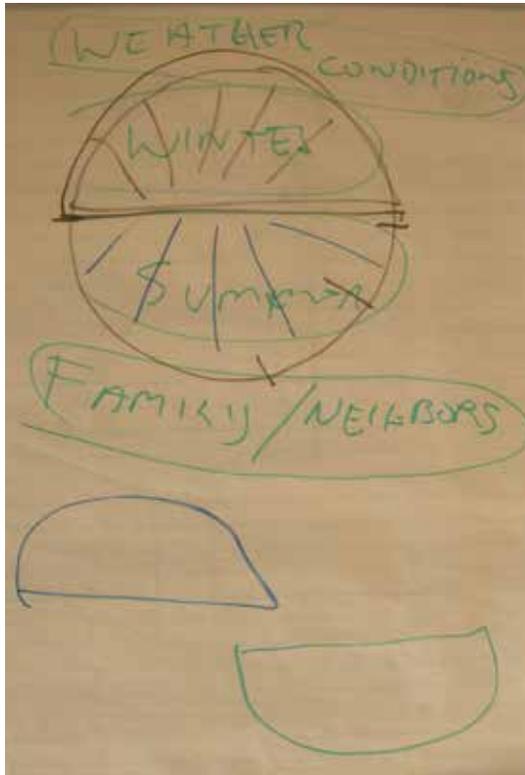
Figures 3-9: Seasonal Housing (CMHC, P. 14) and Figure 3-10: Nomadic land patterns (Nabokov, p. 202)

1	Midwinter (seal)	4	Midsummer (fish)
2	Late winter (seal)	5	Early fall (caribou)
3	Spring (seal)	6	Late fall (fish)
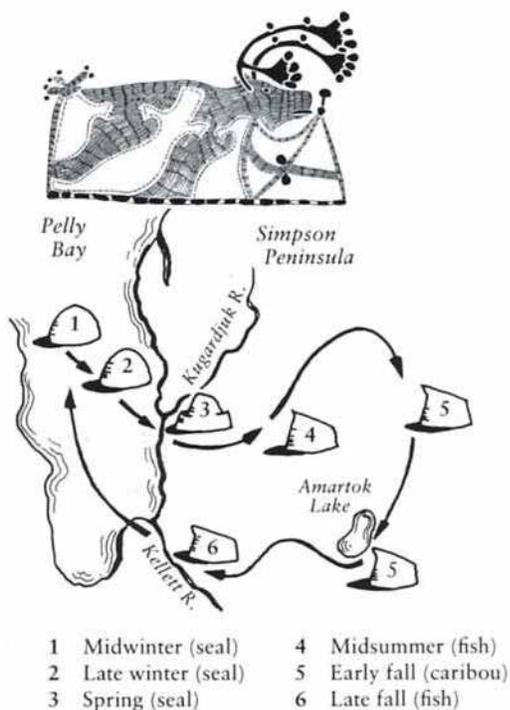
word for gas in our language?"[27]

SEEKING COMFORT

It was the goal of both Joe and I that everybody in attendance be as comfortable as possible. We wanted this to be a collaborative process that would encourage the open sharing of ideas. Joe knew and I was to learn that the Inuit, like other Indigenous peoples, speak more openly when they feel comfortable with the social situation they are in. Jean Guy Goulet shared a similar viewpoint of the Dene writing that "since Dene 'avoid conversation except when the point of view of all participants is well known', it follows that they are more talkative in contexts 'where there is no threat to the speakers view of himself or the world.' To the Dene, it follows that the outsider attempting to establish rapport through talk appears aggressive: the more the researcher relies on talk to negotiate this 'rapport', the more aggressive he or she is felt to have become and the greater the resistance in general taciturnity become."[28] The Inuit, I was to learn, had a similar perspective. While I had not been acquainted with the notion at the time, the Inuktitut word 'Piliriqatigiingniq', the 'concept of collaborative relationships' or 'working together for a common purpose'[29] is a fitting description of the process that we used and how the charrette evolved.

Our group included Elders, women, builders from the community and staff from the NHC. Following introductions, Joe began discussions on the idea of housing and what it meant to the Inuit. We talked about Arviat and how the settlement came established in this location as this was a seasonal location for the Inuit and not a place where they, as a nomadic people, would have remained year-round. Observations shared by the Inuit participants provided a number of unique perspectives on the relationship to the land, with that relationship being defined differently in the summer and in the winter. A simple diagram drawn by Joe Karatek (Figure 3.9) on summer and winter needs soon highlighted one of the challenges for Inuit housing; the idea that one house in one location could provide for a family's housing needs for more than one season.

SEASONAL HOUSING NEEDS

To Joe, one of the biggest challenges for the design of existing housing is that, to Inuit eyes, it assumes that the seasons do not change. To nomadic peoples, the concept of a fixed house is unknown, with the sites where they would live and their shelters changing with the season; from snow houses (iglus) in the winter into skin tents in summer. "The Inuit think of winter housing and summer housing differently. If you ask a design question in the wrong way, you might get stares instead of answers."[30] This is because to the Inuit a single question may have two answers, depending on what season is being referred to. While life in the summer involved frequent migrating across the land to different hunting, fishing and berry picking locations, winter migration and hunting patterns were largely carried out over the frozen ocean waters. (Figure 3.10)

The relationship with the land and the importance of hunting and gathering were also highlighted in the input that was provided. Ideas included.

- A house should allow for the lifestyles of two seasons:
- There should be a place to skin animals.
- There should be storage areas for such items as outdoor clothing (skins).
- There should be different storage and work areas (cold, cool and warm).
- There should be a place to make small crafts—a partially heated area with access to tools and a vice.
- There should be a summer and a winter entrance. Doors should be sheltered from the prevailing winds.

A discussion on seasonal housing needs led into one of the more fascinating and pertinent conversations that occurred during the charrette; a conversation on 'temperature' as a significant consideration in the design of a houses. The Elders often spoke of spatial needs in terms of temperature and how this related directly to their traditional hunting culture and their relationship with the land. Skin clothing, which was still preferred by a number of local hunters, and other hunting gear was best left in a cold space; working on skins and crafts, and butchering was best done in a cool space; while day to day life and family gatherings would situated in the warm spaces of a house. The need for cold, cool and warm spaces and of marking the transition from cold to warm, from the land into the home, began its development with these conversations.

Traditionally the lifestyle of two seasons would have impacted the Inuit with families becoming more scattered during the summer months and

27   CMHC, *The Northern Sustainable House: An Innovative Design Process*, 13

28   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha*. 57

29   Tagalik, *Inuit Qaujimajatuqangit: The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut*, 2

30   CMHC, *The Northern Sustainable House: An Innovative Design Process*, 13
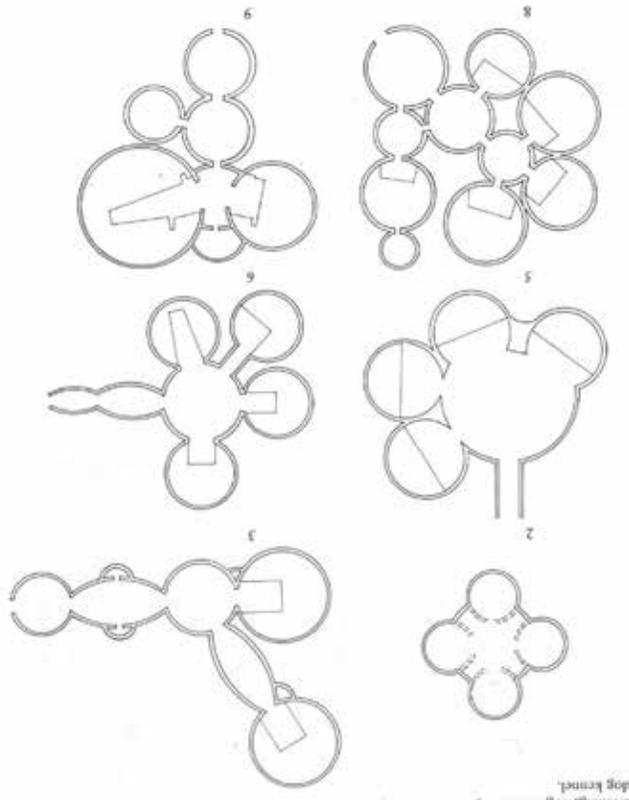
Figure 3-11: Iglu Configurations (Nabokov, p 197)

clustering together during the winter months. The modular nature of the construction of iglus, the common winter shelter, also provided for easy expansion, allowing the addition of spaces to accommodate the extended family while providing privacy for each family unit within an enlarged dwelling (Figure 3.11). "The traditional snow house used to expand to suit the changing family, and the clustering of snow houses reinforced the connections of the extended family. Now, however, housing, communities and families have changed, with stress sometimes resulting when large extended families are brought together in a single house."[31]

We also talked about changing family patterns, issues of overcrowding and the impact that fixed housing had on family dynamics. The traditional snow house, for example, was easily expandable, if needed, to provide space for a returning family member, or, upon marriage, to make room for a young woman to join her in-law's household. Today with the ongoing and often severe housing shortage, the same dynamic results in large extended families being brought together into a single house, with the resulting overcrowding and family stresses. Joe Karatek shared "that the family–neighbour hierarchical structure in the traditional Inuit hunter-gatherer society is fundamentally different from that in a permanent village or town. When the Inuit moved to towns, they abandoned their own laws before they gained an understanding of new laws that were being imposed on them, or of the expectations of town life. "[32]

WORKING WITH THE BUILDERS

As we moved into discussions on what these insights meant to designing and building houses, we ran into our first significant challenge. The builders in the room wanted to talk about technical issues, construction details and challenges of keeping costs down. From their perspective It was fine to talk about accommodating extended families in bigger houses, but who would pay for these? Design discussions were becoming overpowered by costing concerns and technical questions before we had an opportunity fully list and consider the design options that participants wanted to explore. I made a couple of attempts to convince the builders

that we would get to the technical issues but that, for the moment, we needed to put them aside so we could explore some of the design ideas more deeply. I soon realized that this was not working for them, that the builders had apprehensions that their concerns were not being heard and that the issues that were important to them would not be addressed.

I shared with the builders that I too had been a builder and understood their concerns. I told them about the challenge I faced when I began to design buildings; of having to learn to put my technical brain aside so that design ideas could be explored more fully, knowing that I would address the technical issues later. When the builders remained skeptical, I took a different tact and asked them whether they could return the next day, when we could have a session where we would specifically address the technical and costing issues related to each of the design recommendations through the lenses of cost, performance and buildability. This had not been planned but all the builders agree that this was a good idea and that they could do this. With this agreement I was able to insist that no other technical issues be introduced that first day, that this was a day to focus on family needs and cultural design issues.

On Day 2 of the charrette, I gathered with the builders and the technical staff at the NHC to continue the discussions on construction issues in greater detail that we had put off the day before. We considered "a number of factors, including water supply, sewage trucking and disposal; appliances; mechanical systems (including heating and ventilation); and lighting. (We) zeroed in on areas (number of bathrooms, shelving, light switches) that were felt to be insufficient in current housing, and also pointed to some areas in which improvement was needed, such as kitchen counters and sinks, door knobs, cabinets, steel doors, ventilation and light switches. Much of the attention in this specialized charrette was given over to issues related to water and foundations."[33] The technical session highlighted the need for more technical research on challenging northern housing issues, and the importance of using the prototype house as an opportunity to evaluate new systems, and to understand the cost-benefit of the energy efficiency features we were going to introduce. There was clear support for monitoring the building's energy performance once built.

LISTENING TO WOMEN
During the first day, while the builders who came did not hesitate to share their ideas and concerns, the women who attended were quiet and appeared hesitant to speak. There was a moment when I was reminded of my time with the Tibetan Nuns, and how I needed to try different meth-

31   CMHC, *The Northern Sustainable House: An Innovative Design Process*, 15

32   Ibid, 15

33   Ibid, 15
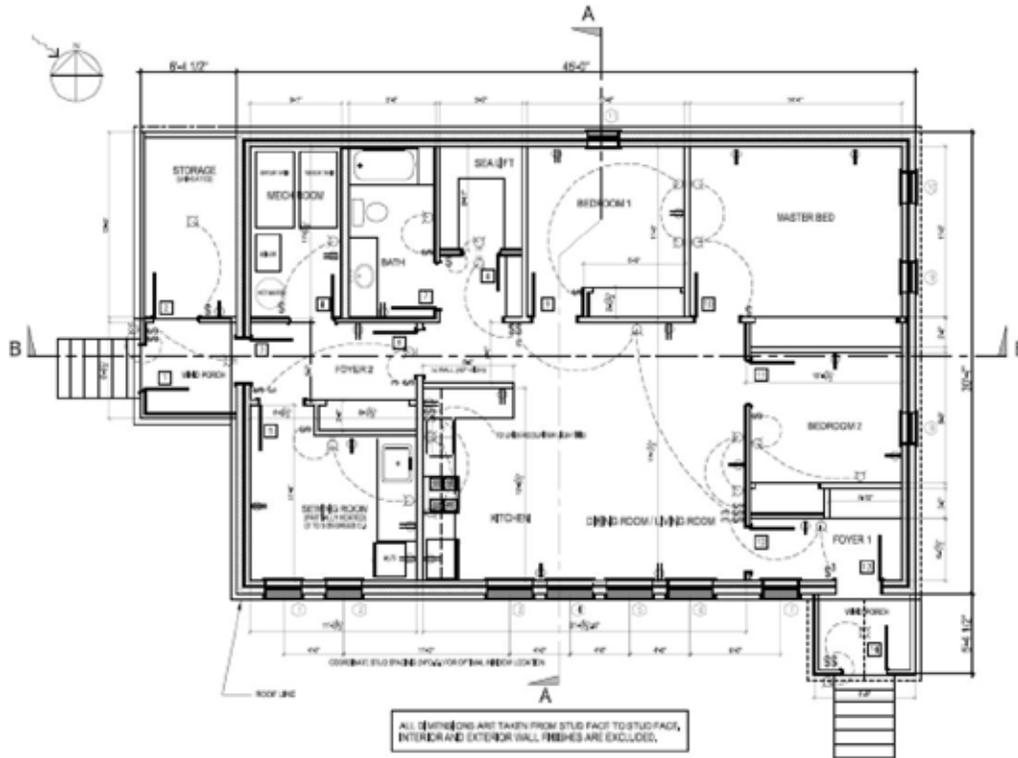
Figure 3-12: Arviat Northern Sustainable House: Floor Plan (Design: W Semple)

Figure 3-13: Arviat Northern Sustainable House: South Elevation (Design: W Semple)

ods so that the Nuns would feel comfortable sharing their thoughts and ideas with me. The Nuns were not comfortable in more formal situations and naturally deferred to those they saw as being higher on the social hierarchy than they were. As the architect on a project they, quite naturally, placed me in that category. For the Inuit women it was reflective of their deference to leadership, and of their need to feel comfortable and safe in order to share their views. The elders who lead the Inuit community were themselves constrained from expressing their opinions by an ingrained respect for the people who led the workshop. As a result, the elders spent lots of time listening. Women in the opening session showed the same reticence.

But, I wondered, how we could possibly design a house without input from women who, in most circumstances, spent more time in the home then men? At the end of the first day, with this in mind, I approached Patsy Owlijoot, who was then the vice president of the NHC, with the suggestion that we add a third day to the charrette, a day for Inuit women. Patsy thought this was an excellent idea and agreed to organize a group of Inuit women to talk about housing in effect, effectively becoming my intermediary in approaching women she knew for this event.

The women's session shared many perspectives on Inuit home life and the significance of the kitchen as the heart of that. The women underscored a number of features that became significant design features in the house, including work and storage spaces. In one of the discussions, the women went into great detail on how they rarely had space in the house for sewing skin clothing, and when they could make some space the temperature inside houses was too warm, causing the skins to lose their fir prematurely. For sewing skin-clothing they needed a cool room. When I asked what temperature would be best for this, I was told about 5 degrees C., the temperature when skins begin to be pliable. Building upon the discussion of cold, cool and warm spaces, the decision was made to incorporate a skin sewing room in the house and to locate this room in the 'cool 'space of the house, formally acknowledging 'temperature' as a design feature for the house.

The needs of the extended family and the importance of gathering were highlighted in the input that was provided in the charrette sessions. Important ideas included.

> • A house should meet the needs of family and encourage community.
> • A house should take into account the differing needs and desires of young and old people.
> • An Inuit house needs to be able to adapt to the changing needs of a large extended family.
> • Spaces should be attached in such a way that they provide a connection to shared common space while providing individuals with privacy.
> • There should be a place for children to play and study as part of the common area.
> • There should be room for the aged and disabled, and more bedrooms and bathrooms.
> • There should be a place for large groups to get together to eat copuntry foods.[34]

34   CMHC, *The Northern Sustainable House: An Innovative Design Process*, 17
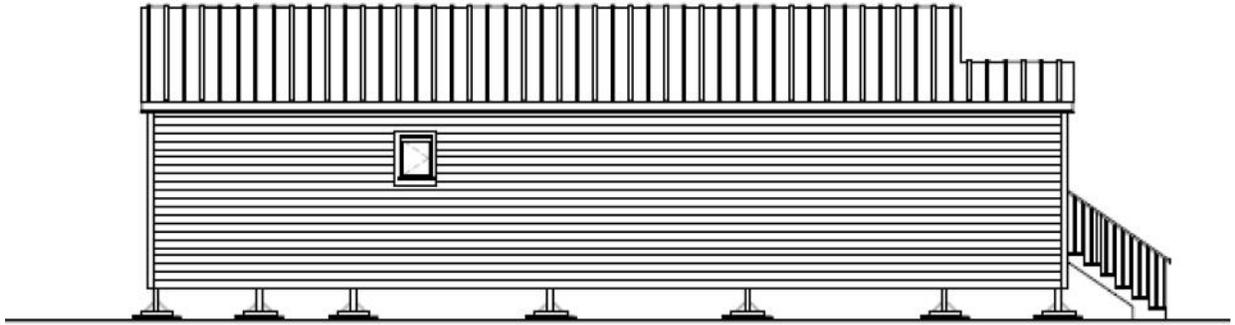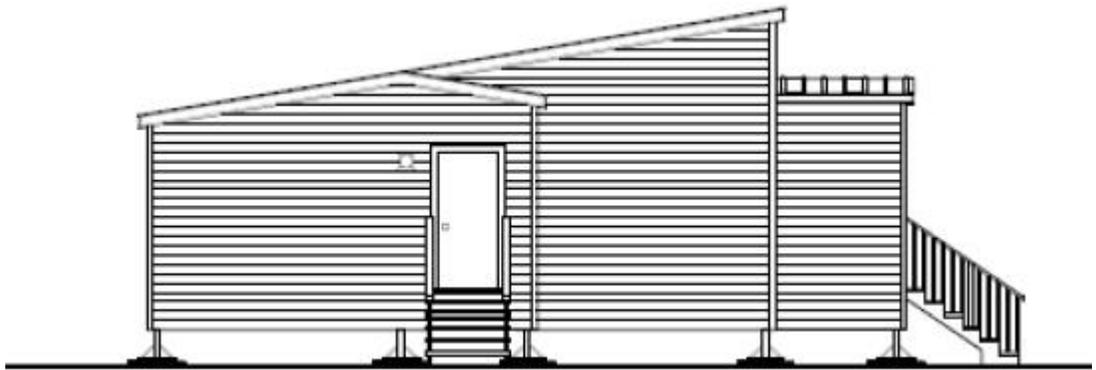
North

West

Figure 3-14 to
3-16: Arviat North-
ern Sustainable
House: Eleva-
tions (Design: W
Semple)
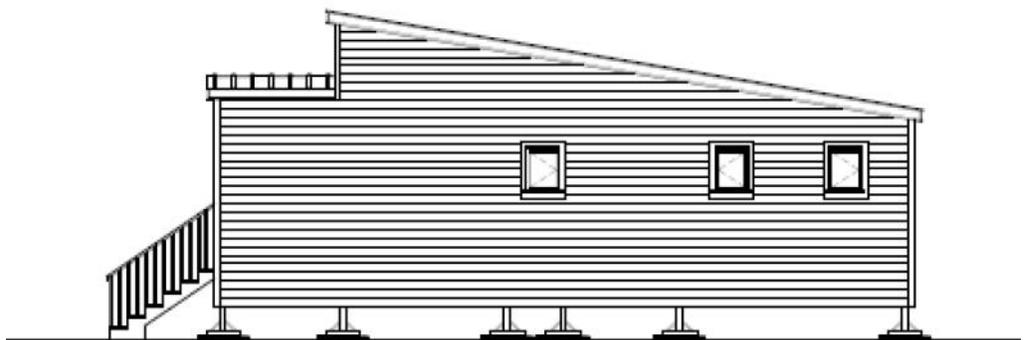
East

DESIGNING

As part of CMHC's commitment to the project I led the design team for the house, which included Michael Dragnea, the NHC Maintenance Management Coordinator and Michael Alousious, the NHC Architectural Technologist. The design that was developed for the Arviat Northern Sustainable House was created from the ideas put forward by the Inuit participants at each of the three days of the design charrette. Cultural features of the house included.

- A large central open space (serving as living room, dining room and kitchen), which provides enough room for eating country foods.
- Two entrances (summer and winter) oriented for local weather conditions.
- A "cool room" for sewing skins
- A cold storage area to accommodate skin clothing.
- A large laundry tub for soaking skins.
- An isolated mechanical room with easy access of the main entrance for maintenance.[35]

The final design incorporated the traditional knowledge that was shared, while developing this within the context of the contemporary building practices that were employed by the Nunavut Housing Corporation. As part of developing the construction details required to meet our energy efficiency target, I had extensive energy modeling carried out on different building systems, technologies and components; evaluating the cost of these against the energy savings that would potentially be made. The energy modeling was used to confirm that the building system we designed and technologies we proposed for the project would meet our energy targets.

WHAT PEOPLE SAID

We received many positive comments on the design. "Participants acknowledged that the house effectively addressed the needs of the Inuit family in a modest footprint. The benefits for large families impressed Dorothy Aglukark. 'Inuit people have lots of family gatherings in the house. The large living room and kitchen makes it easier for families.' Patsy Owlijoot was pleased with a number of features that had been mentioned at the charrette, including the cool room for storing and preparing country food and skins and the south-facing windows, which take advantage of sunlight in the living areas."[36] In November 2006, I returned to the community to present the design to the original charrette participants. Based on input from the participants, the plan was revised (Figures 3.12 to 3.16) and presented to the NHC head office in Iqaluit

35   CMHC, *The Northern Sustainable House: An Innovative Design Process*,, 20

36   Ibid, 21

Figure 3-17: Approaching Anaktuvuk Pass by air (W Semple)

Figure 3-18 and 3-19: Dinner in the Anaktuvuk Pass, and Jack Hebert and Bill Semple talk about the project (CCHRC)

on December 3, 2006, and at the Nunavut Climate Change Workshop: Adaptation Action for Arctic Communities held in Iqaluit, December 6 to 8, 2006.

The openness and inclusiveness of our process made the design charrette a great success. As consultation on northern housing had been a rare commodity, participants expressed appreciation the opportunity to be involved. The realization that this was such a rare event was perhaps the biggest surprise that came out of this process; that this was unique and not a common process. As shared by the participants:

"To Patsy Owlijoot, the fact that the charrette "involved many people" was one measure of its excellence. Dorothy Aglukark said that as far as she knew, "this was the first time the Inuit have been asked to participate in the design of their housing.

Donald Uluadluak described the process as "a success as soon as the people of Arviat were allowed to participate. There were good results because the participants were willing to work together." He added that the process left him with the feeling of being in a newly built igloo, with "the smell of new snow and sense of accomplishment that comes with building it.

Joe Karetak stressed that the key to success in Arviat was mutual respect. "Letting people say what they want, right to the end, even when you disagree, takes a lot of time up front," he said. But it's important to take the time so that everybody can work as a unit afterward. He described the process of putting all the ingredients together as "like making a spaghetti sauce.

Donald Uluadluak called the workshop "exciting" because it gave him a unique opportunity to participate in planning for the Inuit. "There were good results because the participants were willing to work together. We should have been participating in a process like this all along. I am thankful for the risk that Bill took." Yet he said that he could have done more with the occasion. 'After the charrette was done, I realized I should have said more. The process showed me that we can work together, because we need to.'… All in all, he said, designers must ask themselves how a house will make you feel when you have to be in it all the time. Joe Karetak agrees, saying "It is important for families to be comfortable in their own environment."[37]

REFLECTING ON PROCESS
In reflecting back on the process, it is possible to appraise the process with respect to how well it addressed the principles of an IRM. Traditional knowledge was given prominence and relationships were carefully considered and fostered in both the design and in the process. Proper protocols and methods were used to bring the group together and ensure that every voice was heard. Yet, while we were able to develop the design of a new prototype, the decision on when and where to build this house remained with the Nunavut Housing Corporation, not with the community itself. The decision on whether to use the building system or the design in the future also remained with the NHC. And while this is far preferable to the decision being made in Ottawa, it did not give any greater control of housing to the local community. If evaluated through the principles laid out in the *Ladder of Citizen Participation*, this exercise would fall into category number 4, Consultation, the middle level of Tokenism, where participants in the process have a voice, but all the decision-making power rests elsewhere. While the participants were heard, "they lack the power to ensure that their views will be heeded by the powerful."[38] While CMHC played a positive role, there was no plan for a follow up housing project to build on either the technical or design lessons learned. Lasting skills were not established, funding for follow up projects was not committed, and many of the lessons learned were not engrained into the system. How or whether this process will evolve over time remains to be seen.

While the final plan of the house was well received by the occupants, it is important to note that designing a more 'culturally appropriate' house did nothing to address the inadequacies of the design of northern communities as a whole and the impact this has with regard to the relationship that the Inuit have with the land. There are three particular realities being shared here. The first is that northern communities have not been

37   CMHC, *The Northern Sustainable House: An Innovative Design Process*, 26

38   Arnstein, *Ladder of Citizen Participation*, 2

Figures: 3-20 and 3-21 Traditional earth houses in Anaktuvuk Pass (CCHRC)

Figure 3-22: Western Arctic Sod House (Nabokov, p. 203)
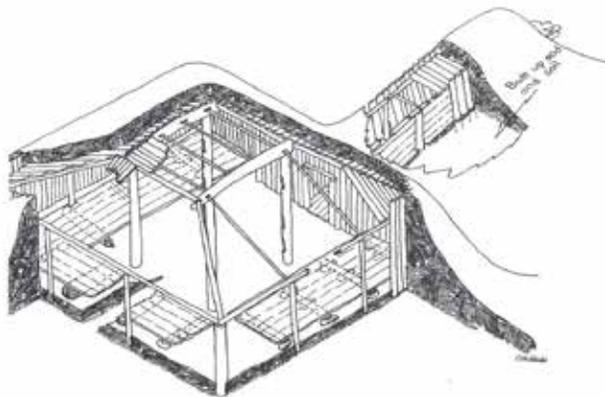
designed to maximize southern orientation or wind direction. The planning of communities has yet to give much recognition to the idea that community design and layout should consider orientation as a standard feature, so that solar gains and other weather considerations such as prevailing wind direction would be considered as significant requirements to address when planning the layout of a community. The southern suburban concept of the street façade as a driver in the design of northern communities demonstrated, once again, how 'southern' conventions drive the design of northern communities.

The second is the reality that beyond the design of housing for a single 'nuclear family', a model that is also deeply reflective of southern housing, neither single family or multi-unit housing has addressed the relationships of the extended family. As acknowledged in the report on the Arviat Northern Sustainable House, "the extended family was once almost always clustered together, but this is no longer the case. As the allotment and distribution on housing throughout communities seldom takes the extended family into account, these families are often scattered throughout the community."[39]

The third reality is that the the 'cultural sustainability' of the community will not be fully addressed until the relationships of the extended family, of the clan, and the land are considered and brought into the design and implementation of both housing and communities. The organization of housing into extended family or clan clusters, in combination with the conscious re-assigning housing so that extended families are brought together into the same location are two approaches that would foster this; both of which were outside the realm of what could be consid-

ered in the design of a single-family house.

NORTHERN SUSTAINBLE SHELTER PROJECT

One of the most innovative projects that I worked on was the development of a prototype house that was designed specifically for the Inupiat community of Anaktuvuk Pass, Alaska. The Inuit phrase Iqqaqqaukkaringniq, 'deep thinking that leads to innovation', describes the project well. This was a project that stretched the imagination, offering up another example of a successful collaborative northern housing project.

The housing challenges that persist across the Canadian north, are also prevalent in the State of Alaska. For many years there has also been a strong tradition of sharing northern housing research findings between the Canadian north and Alaska. Early Alaska programs such as 'Alaska Craftsman Home Program' were built upon Canadian experience with the R2000 program in the early 80's. Canadian builders and researchers were also consulted on the development of the Cold Climate Housing Research Center (CCHRC) in Fairbanks, Alaska, a center established and dedicated to developing sustainable housing for the wide-ranging climatic regions of Alaska. [40]

During my early days as the Senior Researcher responsible for northern housing, the CCHRC reached out to CMHC, inviting me to become a member of the Board of Directors. The CCHRC, like CMHC, was interested in northern collaborations, in sharing research and learning from each other's projects and processes, and in drawing upon each other's expertise. Each organization had its strengths and we shared the same mandate with regard to northern housing; an interest in promoting, developing and advancing sustainable housing through technical research and developing northern housing prototypes. My early years on the Board corresponded with my launching of the Northern Sustainable House initiatives and the community engagement process (charrettes) that I had begun to develop. At the time of the publication of this thesis I remained a member of the Board of Directors.

Established in 2008, the CCHRC's Sustainable Northern Shelter (SNS) program was developed to provide a format for working with Alaskan Indigenous communities to develop house designs and housing prototypes that address sustainability, affordability, and health[41]. The Anaktuvuk Pass SNS House was the first to be developed under the initiative. The community had been identified by Sidney Kelly of the Tagiugmiullu Nunamiullu Housing Authority (TNHA).[42] Sidney's responsibilities included

39   CMHC, *The Northern Sustainable House: An Innovative Design Process*, 15

40   "The Cold Climate Housing Research Center (CCHRC) is an industry-based, non-profit corporation created to facilitate the development, use, and testing of energy-efficient, durable, healthy, and cost-effective building technologies for people living in circumpolar regions around the globe. Located in Fairbanks, Alaska, the Research Center was conceived and developed by members of the Alaska State Home Builders Association and 90 percent of CCHRC's charter members are general contractors from across the state…. On September 23, 2006, the CCHRC Research and Testing Facility opened, on land leased from the University of Alaska Fairbanks. The building contains research facilities and allows staff to work closely with students, faculty, and researchers at the university." CCHRC, www.cchrc.org.

41   *CCHRC: Sustainable Northern Shelter*: Anaktuvuk Pass, Accessed March 24, 2020, http://cchrc.org/

42   "Taġiuġmiullu Nunamiullu Housing Authority, or TNHA, was established in 1974 as a public corporation under state law to address the considerable housing needs of the Arctic Slope. The villages we serve are distributed across a region about the size of Minnesota, stretching over 600 miles from east to west and a third of that distance from the Arctic Ocean to the Brooks Range. Taġiuq means ocean and nuna means land; our name, derived from the beautiful Inupiaq language of the region, means "for the coastal and inland peoples.". Accessed March 21, 2020, https://www.tnha.info/about-us/

Figures 3-23 and 3-24 : Existing Houses in Anaktuvuk Pass (W Semple)

Figures 3-25 and 3-26: Retaining Heat, not consuming more food, is the most important part of an arctic animals survival (CCHRC)

working in several communities in northern Alaska. He was a participant in some of the Board meetings of the CCHRC and was interested in seeing the development of some innovative housing projects in northern Alaska. He remained, throughout the project, an ally and proponent of better housing in the communities. Through Sydney, connections were made with the mayor of the Anaktuvuk Pass who extended an invitation to come to the community to assist with the design and construction of the new housing prototype.

ANAKTUVUK PASS

Anaktuvuk Pass is a remote community located on the north slope of the Brooks Range in central Alaska, about 250 miles northwest of Fairbanks. It is a dramatically beautiful area and the gateway to the Arctic National Park and Reserve. It is home to the Inupiat, also known as the Nunamiut, a semi-nomadic people who are culturally and linguistically Inuit and have lived in northern Alaska for millennium. The Inupiat are one of the few inland 'Eskimo' communities, as they are still referred to in Alaska, with Anaktuvuk Pass being the last remaining inland Inupiat community in Alaska. The Inupiat originally established themselves at Anaktuvuk Pass to take advantage of the great Caribou migrations that moved through the pass. With its isolated location, the community has neither road nor sea access, with the movement of all supplies, materials and people occurring exclusively by air. It is one of only a handful of communities across the north that are faced with this reality (Figure 3-17).

With all goods moving in by air, the cost of building new houses was running between $500 - $800 (US) per sq. ft. at the time of the project. While Anaktuvuk Pass needed new houses that better met the needs of Inupiat families, they also needed to dramatically reduce the cost of construction, while also significantly improving the energy efficiency of their houses. To address this challenge the CCHRC, under its Sustainable Northern Shelter initiative, were invited to work with the community to develop a new housing prototype; one that was culturally appropriate, and affordable to build and operate.

The goal of the CCHRC, and one that I fully supported, was to work directly with the community to develop the design for the house and the construction system that would be used. Our process would begin with the gathering of ideas and perspectives from the Inupiat themselves, using this input to bring additional cultural features into the design of the house. We wanted to learn the thoughts of the Inupiat on what was needed in their houses and how we could reduce construction costs and operating (heating and electrical) expenditures. As this was the

CCHRC's first foray into community engagement, Jack Hebert, the CEO of the CCHRC, invited me to join the design team and bring my experience of facilitating northern design charrettes, as well as my design and technical experience to the project.

DESIGN CHARRETTE

While ongoing discussions had been held between the CCHRC and the community of Anaktuvuk Pass, our arrival in the community to carry out the design charrette was to be our first visit to the community. We were concerned that we did not know anyone in the community, that we had not built any relationships in Anaktuvuk Pass and wondered how we would be received. We knew we needed to connect quickly with people in the community and, without forcing any of these connections, we reflected on different ways of doing this.

Sitting in Fairbanks and sharing ideas with Sydney we considered, amongst other things, what we could bring that would be seen as a contribution to the community. It was our intention to connect with as many people as we could, and that we wanted to hear from anyone who wanted to meet with us and share ideas. We came upon the notion of hosting a dinner for the whole community. As we were going to take over the community hall and make it our home for a few days, we saw this as an opportunity to invite people over to share some food and to hear about why we were in Anaktuvuk Pass and what we hoped to accomplish. Arriving with enough food for the event, we invited everyone in town to a free dinner that we prepared with the help of a cook in town who we hired to assist us. In addition to the free meal, the TNHA provided an additional incentive to join in by offering a door prize; a draw for a barrel of home heating oil. We were delighted when about 180 of the towns approximately 320 people came to the dinner, this is how our discussions began (Figures 3-18 & 3-19).

With the dinner as our introduction we began to share 'our story' with the people of Anaktuvuk Pass. Jack Hebert, the president of the CCHRC, and I began by telling everyone about the CCHRC and its mission of delivering better housing to remote Alaskan communities. We shared our concern with the challenges that Anaktuvuk Pass, like other remote northern communities, was experiencing; poor quality, often overcrowded housing that did not meet the climatic realities of the north, nor the cultural needs of the people who lived there. We shared project examples from Alaska, Canada and other parts of the circumpolar region. We told about our ongoing efforts at developing models for housing that delivered dramatic improvements in energy efficiency, as well as housing designs

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WARM COOL COLD
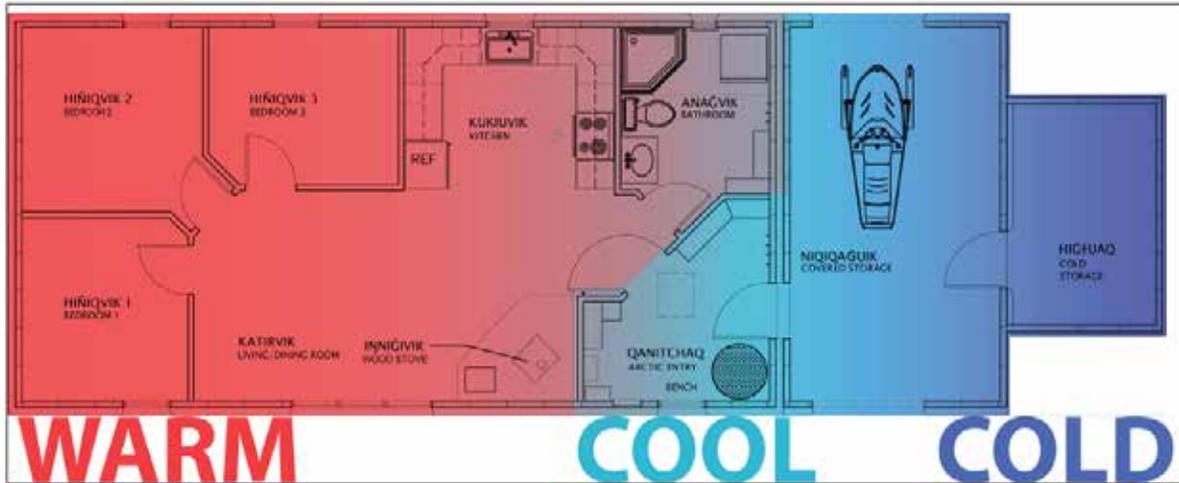
that better reflected the needs of Indigenous peoples. We shared that this was our goal here as well.

We let everyone know that, for the next two days, we would be at the community center to talk about housing with anyone who wanted to join us and that this was an informal event where everyone was welcome to come for the whole time, or part of it. We were there to listen and gather input – input that would drive the design of the prototype house that we would develop for the community. We also made it clear that before any house was built, we would return to community to share the design that would be developed, and that the people of Anaktuvuk Pass would have the final say. By the end of the evening when the prized barrel of heating oil was claimed, we had made numerous connections and had begun to

hear the hopes that the Inupiat residents had for housing in their community.

Our decision to go with informal discussions reflected our inclination to let the residents themselves introduce the topics they wanted to share and/or explore. We did not want our technical minds to interfere with local perspectives. At the community center, people dropped in and began to share their thoughts. The Elders shared perspectives on housing and survival in the area, prior to the community being formally planned and constructed. The traditional dwellings of the region were sod houses that sat low to the ground, with this lower profile enhanced by the excavation of a few feet of earth that would provide space for a partially sub-terranean entry tunnel where cold air from the entrance would settle on the ground, keeping it from main living area (Figures 3.20 and 3.21). Inside the living area, raised sleeping platforms took advantage of the rising heat generated from the oil lamps used for lighting. Across northern Alaska, where the trunks and branches of shrubs and small trees are available for framing the interior structure, this was a common form of housing (Figure 3-22).

BUILDING ON TRADITION

As Elders began imparting their thoughts on contemporary northern housing they shared with a unique perspective; where buildings once hugged the tundra, northern Alaskan settlements now consisted of gymnasium sized objects. With foundation systems designed to lift the buildings off of the Arctic permafrost, they appeared to be almost unattached to the ground and suspended in air. Where people used to 'stand tall' against their structures, they now seemed like dwarfs. One elder shared the comment that "we once lived in the ground and were buried in the sky. Now we live in the sky and are buried in the ground. We have been cold ever since."[43] The poor construction techniques and inadequate insulation levels in contemporary housing had ensured that the houses in the community always seemed to be cold. The strategy of using more and more heating oil to keep warm was not only expensive and self-defeating but did not reflect arctic 'ways of knowing' (Figures 3.23 & 3.24). In a presentation that Jack Hebert gave at the opening community dinner, he reminded everyone that we needed to look back at what we can learn from arctic animals; that the most important part of an arctic animals survival is how they put their energy into high-quality fur and fat to maintain their body temperature, not in trying to consume 'more fuel' (Figures 3.25 & 3.26).

We knew of the traditional sod houses of the region and talked with the

Figures 3-29 and 3-30: Students from Ilisagvik College are trained in home construction (CCHRC)

Figure 3-31: Prototype Home during construction in June 2009 (CCHRC)

Elders about what there was to learn from these dwellings. While these houses were generally warm and provided spaces for families to be together and thrive, there were times of year when living in them could be problematic. Perhaps the worst time, was the spring, just before the transition from the more permanent shelter of the sod house into to the summer tent and a more nomadic lifestyle. During these times, when the snow was melting and the permafrost was beginning the thaw, the sod houses could be damp and uncomfortable. They were also dark.

As we were cognizant of the sod house tradition, as part of our presentations to the community we shared examples of contemporary earth houses that were bright, warm and inviting and shared these. The question arose as to whether this was the type of house that should be (re)introduced to the community. We wondered, 'Should we promote a return to houses that sit lower on the ground, that respect the landscape and work with the snow and wind?' With significant interest expressed at seeing this, we began to work on some design ideas for the house.

As in the community of Arivat, discussions on housing needs also considered the idea of temperature as a quality that was needed in the house. Similar sentiments to those in Arviat were expressed; that there was a need for cold, cool and warm spaces in the prototype housing to be designed for the community (Figure 3-27). Other recommendations included:

- An open concept floorplan that would promote family gatherings
- A place to repair snowmobiles and other equipment
- A cold storage for traditional foods
- A ventilation system using the traditional qingok (ventilation stack)

FINDING A SITE

While in the community we began work on the design for the house and to look for sites for where the prototype could be built. We were drawn to a south facing sloped area at the edge of town; the perfect place for a contemporary Inupiat earth house. Surprisingly, when we met at the site with the Chief and a

representative from the housing agency, we discovered that we could not build on this site as it had not been surveyed, nor was it serviced with the water and sewer system that supplied the rest of the community. Sensing that the services were the bigger issue, we shared that we were not going to hook up the house to the community services as we planned on using the house to test out a small-scale water and waste water system designed for use on an individual house. The shocking cost of water and waste infrastructure in the community and across the north compelled us to use this house as a testing platform for this technology.

To our surprise, the planning argument won the day as the TRHA could not support funding for the project to be constructed unless it was to be built on an approved lot. We were offered a flat serviced lot in the town and decided it was best to go with this rather than delay the project while we continued negotiations for 'the perfect site'. To build right on the ground in this location we would take advantage of a somewhat unique geological situation. Anaktuvuk Pass was built on the remnants of an old river bed and the deposit of more than 20 feet of river rock; a circumstance that removed moisture from the soil andeffectively eliminated the effect of permafrost, allowing the house to be built directly on the ground without a standard northern foundation system. We could still learn what we all were hoping to glean from this project. We started to evaluate the potential for berming up the sides of the building with soil so that we could create, in effect, a contemporary version of an earth house.

CONSTRUCTION SYSTEM

The most significant innovations came with the design and development of the construction system for the house. When we examined the cost of construction, we were able to determine that our best chance of reducing costs was to address the massive cost of moving materials and equipment to the community by air. The large air freight planes being used for this were adding hundreds of thousands of dollars onto each project. Research on air freight options and costs uncovered air shipment options such as the use of smaller DC 9's, planes that could be hired for a fraction of the cost of the large freight planes. While affordable, there were implications as it meant that the building system would need to be designed so that all the materials would fit into the smaller capacity of the DC9 (Figure 3.28). Within this framework, the construction system for the house uses a light steel frame with an interior plywood skin that is encased in soy-based spray foam with an R value of 60. Using this system, the complete materials for one house could be shipped on one plane, saving tens of thousands of dollars.

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Figure 3-32 and 3-33: Berming the house, and Installing sod on the roof (CCHRC)

In addition, "Earthbanking and a sod roof are used to buffer the structure from strong winds and drifting snow. The home makes use of natural lighting, water conservation, amd ptjer emergy saving techniques. [44] To further bring down the operating costs of the house, solar panels and a wind generator were added to the house. Staff from the CCHRC worked on the construction of the house, using the project to train students from Ilisagvik College on the building system and the technologies that were being introduced. (Figures 3.29 & 3.30).

The final construction cost was approximately $250,000 as compared $750,000, the cost of building the last new home in the community. At the same time heating cost were reduced by nearly 90%. But the most impressive aspect to the project was the positive atmosphere created by the collaborative model that was used to design and build the house, and the significant cultural considerations that were incorporated into the project (Figures 3.31 to 3.33). The completed house, with solar panels and a windmill is shown in Figure 3.34.

Figure 3-34: Completed Prototype Home with solar and wind installations (CCHRC)

EVALUATING THE ENGAGEMENT PROCESS

While the community engagement process was more informal than the process used for the Arviat Northern Sustainable House (NSH), many of the principles of an IRM were used as part of the community engagement process. Traditional knowledge was given prominence and relationships were carefully considered and fostered in both the design and in the process. Yet, as with the NSH, while we were able to develop the design of a new prototype, the decision on when and where to build this house remained with the TRHA, the regional housing agency and not with the community itself. The decision on whether to use the building system or the house design in the future also remained with the TRHA.

If evaluated through the principles laid out in the *Ladder of Citizen Participation*, this exercise would likely fall into category number 5, Placation, the top rung of Tokenism. While the participants were heard, they still lack the power to effectively control the decision-making process. While the process moves close to the level 6, Partnership and Citizen Power, particularly with the TRHA being an Inuit run housing agency, much of the process was still controlled outside of the community. To move beyond level 5, a partnership with local citizens that enabled them to participate directly in the decision making process through negotiation of trade-offs, for example, woud need to be in place.

HEALTHY HOMES IN NUNATSIAVUT

"InosiKatigeKagiamik Illumi (Healthy homes in Nunatsiavut) is an action-oriented housing program that builds on existing knowledge of the current housing situation to forge new housing directions that are adapted to changing climatic realities. This project aims to provide housing solutions that are actionable across Nunatsiavut and applicable across Inuit Nunangat. Through the construction of culturally relevant, affordable, climate adapted housing, we hope to slow the rapid pace of infrastructure deterioration currently experienced in the region, reduce the burden of overcrowding and mould, and by extension, contribute positively to the mental and physical health and wellbeing of residents.
… The overall goal of the initiative is to inform best practices and provide guidance for community sustainability in the coastal subarctic under changing environmental, social and economic conditions. The initiative addresses issues that are central to community wellbeing and sustainability in the context of a changing northern climate." [45] Housing is one of the four priority areas to be addressed by the initiative. As in other northern Indigenous communities, housing is one of the most crucial issues in Nunatsiavut, with housing shortages and overcrowding, poor quality

44   CCHRC, *Sustainable Northern Shelter: Anaktuvuk Pass House Completed,* 1

45   Nain Research Centre*, "Sakkijanginnatuk Nunalik. The Sustainable Communities Initiative".* Accessed November 12, 2018, https://www.nainresearchcentre.com/the-sustainable-communities-initiative

Figure 3-35: Winter in Nain
(W Semple)

construction, mold and high operating costs all affecting the supply and quality of housing in the region.

The objectives of 'InosiKatigeKagiamik Illumi' include:
   • To inform best practices and provide guidance for community sustainability in Nunatsiavut under changing climatic and environmental conditions.
   • Build a pilot housing project employing best practices in energy efficient sustainable northern housing
   • Create a culturally relevant multi-unit housing design that is shaped by the needs and preferences of the Nunatsiavummiut, the Inuit of Labrador.
   • Monitor the completed project charting building costs, energy use and resident satisfaction
   • Use the findings to develop new, affordable replicable housing designs.[46]

The project concept, developed and submitted by the Government of Nunatsiavut as an entry into the Arctic Inspiration Award, was selected as one of the winning projects for 2014. Quoting Sima Shaifi and Arnold Witzig, the founders of the prize, the purpose of the Arctic Inspiration Prize "… is to recognize excellence and encourage teamwork among diverse groups in order to use or expand Arctic knowledge and bring it into action for the decisive benefit of the Canadian Arctic, its inhabitants and therefore for Canada as a whole."[47]

In November 2013, I was approached by Alain Fournier of EVOQ Architects (then FGMDa Architects) from Montreal to work with him on this housing project, starting with the development of the response to the

RFP that was released by the Nunatsiavut Government. The project was to include:

- A housing risk assessment
- A housing Design Charrette
- A prototype design for a culturally appropriate, affordable, energy efficient, multi-unit housing building that would reflect the design needs and preferences of Nunatsiavut residents[48]

HOUSING RISK ASSESSMENT

After submitting the winning proposal to the RFP process, we travelled to Nain, Labrador in March 2019 to carry out the Housing Risk Assessment, and the initial housing design charrette. The Housing Risk Assessment (HRA) focused on undertaking detailed assessments of the condition of a list of houses in the communities of Makkovik, Nain and Hopedale. Using a team of architects, engineers and technicians we carried out in-depth surveys of existing houses that included a thorough visual inspection, a blower door test and an infrared scan to assist in measuring the energy efficiency of each home. The inspections were intended to identify widespread and prevalent housing issues, the probable causes of these issues, and to make recommendations for solutions. It was envisioned that 'InosiKatigeKagiamik Illumi' be used to inform the development of building codes designed to advance climate resiliency and to inform discussions in the design charrette to be held in Nain.

The cost of housing and the need for affordable housing solutions was also one of the key drivers of the initiative. Rising labour and materials costs, in combination with dramatic increases in the cost of land development and infrastructure, were making the cost of new housing almost prohibitive. Across the north, increases in these costs have resulted in moves by the housing corporations in each of the northern territories in support of the design and construction of multi-unit housing units; with the goal of significantly reducing infrastructure costs by increasing housing density. While the technical considerations of the project were important drivers, I will be focusing on the social/cultural side of the discussions that were highlighted in the charrettes.

Undertaking the Housing Risk Assessment (HRA) was truly a northern experience that began when we arrived at the airport in Nain. While not as isolated as other sub-arctic regions of the country, the northern coast of Labrador is known for its severe weather (Figure 3.35). It is, for example, much damper than Nunavut, with high winds, and driving snow that can accumulate into massive snow drifts throughout the winter season. Because of the level of snowfall and the prevalence for drifting, the

46   FGMDa, *Nunatsiavut Housing,* 5

47   Arctic Inspiration Prize. Accessed March 24, 2020, https://www.arcticinspirationprize.ca/.

48   FGMDa, *Nunatsiavut Housing,* 1

Figure 3-36: Our transport in Nain – preparing for another house (W Semple)

roads throughout Nunatsiavut are not plowed in the winter, with everyone relying on snowmobiles and four-wheel off-road vehicles for transport. We arrived at the airport to be greeted by a small fleet of snowmobiles, each pulling a Qamutiik, a traditional Inuit sled. For our team, this was our transport to the hotel and would be the way we and our equipment would be moved from house inspection to house inspection throughout the three communities.

We began the HRA prior to the charrette in order to bring our initial observations on the condition of the existing houses to the charrette. As it is common to see the same building practices and construction details throughout a community, it was no surprise to us when we were able to observe patterns very early on in our inspections. From the design flaws (poor construction detailing), construction defects and improperly installed and/or operated household equipment, we were soon able to predict where we would find problems in each of the houses. For example, by the third house, Alain and I would head immediately for the crawl-space/foundation where we would confirm that the same system had been used, and from there, where we would find corresponding problems in other parts of the house.

The HRA was a tremendous way to begin building our relationships with the community. The people of Nain were very welcoming and friendly. Residents of each of the houses knew we were coming and were prepared to welcome our team of six people and all of our equipment into their small homes (Figure 3.36). They were curious, finding our blower door and thermographic equipment both interesting and entertaining.   In response this we would show some of the thermographic images we had

taken of their walls and ceilings, explaining what we were finding. This further added to the intrigue and as the word soon got out that about our work, people were ready to welcome us when we arrived.

I have sometimes wondered whether some of the positive reception were the result of accounts from the young Inuit men who drove us from house to house with their snowmobiles. We had great fun with our young drivers and shared a great deal of laughter with them. Our drivers could see how much we were enjoying travelling across the community in a Qamutiik and what a unique experience this was for us. While we installed our equipment and did our analysis, our young drivers were also observing what we were doing and learning about the equipment we were using to evaluate each house. Each time the blower door was to be installed, for example, one of the young men would be there helping unload the equipment, intently watching as it was installed. By the time this had been done a few times, he was helping with the process. In the truest sense of Indigenous process of gaining knowledge, this learning had been done through observation with few words exchanged. We all valued the time we had with these young men.

The HRA proved to be an extremely valuable exercise, bringing to light a significant number of 'technical' problems and issues that were consistently found throughout the houses in all three communities. The insights gained through the Housing Risk Assessment were the first step in the development of a broader 'understanding' about the condition of housing in the community, providing information and perspectives that would inform the design of the climate resilient, culturally appropriate multi-unit housing complex. The HRA uncovered a common reality across the north; how poor construction details and building methods can lead to establishing patterns for 'the way it is done', effectively bringing about the duplication of problematic details throughout the community. Some of the overall observations of the HRA that would be addressed in the design of the new multi-plex include,

- Significant problems with design and construction of the shallow preserved wood foundations (PWF's) in use throughout the communities have resulted in serious damage to the structure, fixtures and/or finishes in the majority of houses - Insulation levels in the exterior walls and ceiling have not changed in many years and are considered to be inadequate for the climate of Nunatsiavut.
- Windows that are generally of low quality and do not provide the thermal performance (energy efficiency) required for the climate of Nunatsiavut and have not been installed to maximize energy

Figure 3.37: Proposed 4-Plex (Design: EVOQ Architects and W Semple)

performance
- Issues with attic insulation and ventilation that has resulted in minor to extreme frost build up on the underside of the roof sheathing.
- Problems with ventilation equipment and what appeared to be the lack of consistent strategy for addressing the ventilation issues of the house contributed to high humidity levels and significant mold issues in some houses. In a number of houses the build-up of mold was being kept in check by constant cleaning of the affected surfaces.
- The houses tested do not meet the Canadian R-2000 standard of a maximum 1.5 ACH50, with some houses exceeding by a factor of 25. The older houses in the group tested had a lower airtightness level. - The airtightness in houses decreased significantly when structural and foundation problems were found. Leakage around construction joints that can be attributed to shifting of the houses due to structural and foundation problems.
- Thermal bridging in the construction system due to outdated building techniques
- Cold spots in the ceiling insulation due to inadequate attic ventilation combined with moist air leaking in from the living spaces below resulting in melting ice and moisture damaging of the batt insulation.[49]

DESIGN CHARRETTE

In addition to addressing technical issues in existing houses, the Healthy Homes in Nunatsiavut initiative was being carried out to help ensure that the new multi-unit housing prototype is more culturally appropriate in its design. A design charrette, organized by the Nunatsiavut government, would be used to "inform the creation of sustainable housing designs

adapted to a changing climate as a necessary first step to the future implementation of housing developments that are designed and built by Inuit for Inuit. We aim to design and build a pilot sustainable home, informed by the outcomes of the housing risk assessment and the design charette and then evaluate the performance of the home over time."[50] The design charrette was carried out to ensure that the design for the sustainable multi-plex would meet the physical and mental health needs and provide for the well-being of the Nunatsiavummiut, the Inuit of Nunatsiavut.

While there has been little research or documentation done on multi-unit housing in northern communities and how these housing units are perceived as a housing form for Indigenous communities, common perceptions and complaints often come up when the topic of multi-unit housing has been raised for housing in Indigenous communities. Common negative perceptions include:

- The feeling that multi-story housing removes people further from the land. Particularly in many First Nations, being on the land means being closer to the earth. Permafrost construction that lifts houses off the ground, and two-story buildings, are both examples of this.
- A lack, and at times the complete absence, of outside areas and facilities for storing and parking the equipment that each family needs for hunting, fishing and other activities related to the land
- The problem of noise transfer between units. While this is often the result of poor construction techniques or lack of attention to the proper detailing on working drawings, it is viewed as one of the most negative features of multi-unit housing
- A lack of privacy
- The problem of conflicts that can occur between families of different clans when they are housed in the same multi-unit building.
- Concerns with fire and its ability to spread easily between units[51]

Reflecting upon these perceptions and building upon the HRA, Alain and I facilitated a two-day design charrette in the community of Nain. While 'design charrettes' have been used to inform the design of single-family houses this was, to my knowledge, the first use of a charrette for the designing of a multi-unit housing complex for an Indigenous community in the Canadian north. To focus discussions on identifying issues and generating ideas, the design charrette was organized into three half day sessions including sessions on cultural and functional considerations for housing design; Multi-Unit Residential Housing in Northern Communities;

49   FGMDa, *Nunatsiavut Housing,* 1

50   Nain Research Centre, *"Sakkijanginnatuk Nunalik. The Sustainable Communities Initiative".* Accessed November 12, 2018, https://www.nainresearchcentre.com/the-sustainable-communities-initiative,

51   These concerns have been raised in other northern housing design charrettes and while working on multi-unit design projects in other northern jurisdictions. Similar concerns were raised in the Nunatsiavut charrette.

Figure 3-39: SixPlex section
showing basement units (De-
sign: EVOQ Architects and W
Semple)

and Energy Efficiency and Alternative Technologies for Northern Communities. Each session raised a number of ideas and issues that needed to be considered.

We began the charrette by introducing ourselves, sharing our perspectives and experience as part of 'locating' ourselves within the project. The charrette participants, who were brought together by the Nunatsiavut Government and reflected a broad range of perspectives on housing in Nain, each shared information on their backgrounds and their experiences with housing in the community. The group included decision makers, long time home occupants, Elders, young people on the housing waiting list and some experienced maintenance staff. The group engaged in discussions on housing needs in the community and the cultural features that were needed in the design of the prototype multi-unit housing model. While the charrette participants acknowledged that reduced housing costs made multi-unit housing attractive, they also demonstrated a strong attachment to single family housing. Many shared the view that a direct connection to the land was imperative and that features that would provide for this was one of the more significant challenges for this type of housing; providing space for hunting and fishing equipment, easy access to the outdoors and the land, and greater privacy were all highlighted.

The group also engaged in a broader discussion on different models for multi-generational housing, expressing an openness to the idea of clustering housing as an alternative to multi-unit buildings. Discussions included:

- Supporting the extended family by promoting the construction of multi-unit housing by a family (e.g. parents + a son and daughter and their family).
- Designing homes for seniors where they could live with grandsons and children i.e. a multi-unit house that would gather different generations under the same roof.
- Saving on services by clustering housing on the same lot as an alternative to multi-unit housing and using this to develop new approaches to providing services and energy

Building on these discussions, the conversation turned to the subject of housing needs. When the charrette group considered the question of what group in the community was in the greatest need for housing at that time, the participants felt this new multi-unit project should target groups in the community who presently fall through 'the cracks'; the people in the community who are presently not served by the limited resources
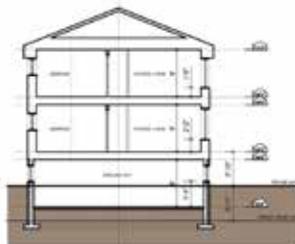
available for housing. This list included Elders, single parents and young people. Everyone agreed that the proposed model, a four-plex with two units on the ground floor and two on the second, could lend itself to this by having the ground floor units designed for seniors and the second-floor units designed for young people. Charrette participants were attracted to the potential this had to foster relationships between Elders and young people.

With the importance of relationships, and the needs of the young and old on everyone's mind, I turned the discussion to the question of caregiving and what this meant to the needs of Elders. For a small project like this is there seemed to be two options: that of providing an additional unit in the building for a caregiver to stay in, or the option of providing an extra room in each apartment unit where a family member or caregiver could stay. Consensus was soon reached that the better option for Elders would be for each housing unit to be designed to include a second bedroom, and while this would add an additional expense to the building, it would help ensure that the extended family could be a part of providing for both the physical and 'relationship' needs of the Elders. One of the participants soon pointed out that one of the relational needs of the Elders was the relationships that they have with their own grandchildren, who would often come and stay with them. Another participant concurred, adding that grandparents are also often responsible for caring for and raising their own grandchildren; the outcome of overcrowding as well as a sad legacy of residential schools, and the impact that both of these has had on families. A second bedroom would give elders the ability raise their grandchildren is this is needed. .

From here, the conversation took a compelling and unexpected turn as we explored the issue of overcrowding and its outcomes of further. In many remote Indigenous communities, one of outcomes of overcrowding is the issue of fostering children from troubled homes. With housing shortages this meant that, all too often, the child to be fostered would have to be sent out of the community, as this was often the only 'housing' option available. As the conversation progressed, a younger Inuit woman soon shared that if she lived in one of the second-floor units and had an extra bedroom, that she would happily foster a child from a family in need rather than have that child sent to another community to find safe shelter. This opened a discussion on community responsibility for children, the importance of the extended family and how the design of housing and the implementation of housing policy needed to change in order to address this reality. This became a very powerful point in the discussion and highlighted what became the most significant 'cultural

Figure 3-40: Proposed 6 Plex with basement units (Design: EVOQ Architects and W Semple)

component' for this project; providing service to the community through the collective caring of children in need. It was a reminder that culture is a broad term and can manifest itself in many different ways.

Throughout the charrette we encouraged people to share their own stories while also sharing our own. Alain and my stories often focused on similar projects we had carried out in other northern Indigenous communities, what we learned from these and the ideas that had evolved from them. It is important to note that in each situation sharing information from other projects and communities needs to done with care and sensitivity in order to emphasize that this is about sharing thoughts and experiences of other people and other projects; that these other projects are not templates to be reproduced, but lessons and experiences to draw upon, with cultural differences in communities noted and discussed. I learned this lesson giving a presentation to a First Nations community in the NWT where I shared an example from an Inuit project in Nunavut. Hearing the response that 'we are not Inuit', I understood this as a reflection of the reality that Indigenous people in Canada are, rather than each being seen as a different people with their own specific culture and customs, continually lumped together as 'one people'. When I share examples now from other Indigenous communities I carefully 'locate' each project as representing the views of that particular Indigenous community, sharing the process that was used to gather those ideas and how those ideas manifested themselves in the design of the house. When the concern that work in another community was going to influence the design is removed, participants are generally fine with considering the merits of the ideas being shared.

The discussions in the three sessions raised a number of ideas and issues that would inform the design of the new multi-unit housing complex for Nunatsiavut. These included,

52   FGMDa, *Nunatsiavut Housing,* 2

- Designing a home for seniors where they could live with grandchildren and children
- As Elders often require outside care from a caregiver or family member, a one-bedroom unit would not provide anywhere for a caregiver to stay if that level of care was required. Two ideas to address this were raised to address this, included providing:

1- A two-bedroom unit. This would also provide space for elders who are raising or taking care of grandchildren in their home

2- A separate unit in the complex for a visiting family member or caregiver for one of the elders living in the multi-plex

- A second bedroom unit in housing for young people would provide also the potential for young couples to have a baby or foster a child.
- The importance of larger entrance porches and for more storage space - Private entrances and privacy for outside uses for each unit
- The importance of wheel chair accessibility for Elders' apartments
- The need for a separate laundry room or laundry area
- Support for an open concept design for the living room/dining room/kitchen area
- A kitchen with adequate counter space and a double sink
- The need for large pantries for the storage of bulk food
- While eliminating hallways was supported, providing some privacy for bedrooms through the use of an indirect connection to the living room/dining room/kitchen area
- The importance of larger bedrooms that would allow doubling up (i.e. bunk and/or second beds)
- The need for larger bathrooms that do not 'feel claustrophobic'
- A utility/service room for cleaning and maintenance
- Maximizing both passive and active solar heat gains by the proper orientation of the building.[52]

It was the task of the design team to take these ideas and develop them into a proposed design for the building. Over a period of three months, a draft design was developed along with the plan to return to the community to present the design to the group that had participated in the initial design charrette. The second charrette would be used to gather input on the design and to ensure that the design successfully addressed the issues and ideas that were raised. This process was also important

Figure 3-41: Six Plex: Basement Floor Plan (Design: EVOQ Architects and W Semple)
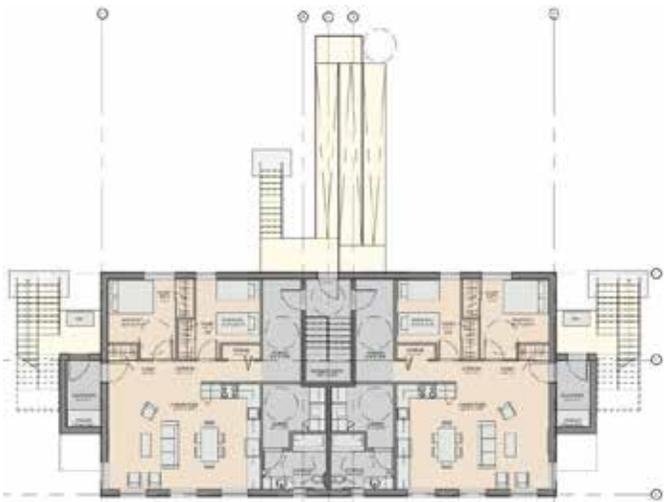
Figure 3-42: Six Plex: First Floor Plan with wheelchair ramp (Design: EVOQ Architects and W Semple)

Figure 3-43: Six Plex: Second Floor Plan (Design: EVOQ Architects and W Semple)

for project 'relationships' by ensuring that participants would see us again, would listen as we shared 'what we heard' and provide community members with the opportunity to approve of what we had done. This represented, in many ways, a step in the process of returning 'agency' to the community.

Ultimately this would necessitate more than a process of engagement, requiring the Nunatsiavut decision makers to support for the process and approve the ideas and input that was raised. This would according to Linda Smith, move the project out of the context where the community has 'no ownership' over the outcome, and avoid the status of tokenism that was defined by Sherry Arnstein. This does not imply that we were able to address all of the issues in this one project, but rather that important and significant steps were made, and were seen to being made. Every project needs a champion, and the Government of Nunatsiavut was the champion for this project.

DESIGN OF THE NAIN SIX-PLEX
Drawing from our experience from the HRA and the insights that we gained carrying out the charrette, the design team began developing the preliminary design for the multi-unit housing complex for Nain, beginning with some of the technical issues. From the HRA the design team had developed a particular concern with the way that foundations were being designed and constructed throughout Nunatsiavut. The HRA had unearthed a long list of structural problems (many of them quite significant) in almost all of the houses that were inspected. As a result of our house inspections the design team concluded that a different foundation system was needed for housing in the community, and that this project provided an

opportunity to introduce a different approach. We began to consider op-
tions, including the advantages of using a full basement for the building.

Nain is one of the areas in the sub-Arctic where, due to the absence of
permafrost, full basements are possible. A full basement, installed using
insulation details that would protect it from the deep frost penetration that
occurs in the region, was technically feasible. With the growing housing
shortage, we saw this as an opportunity to provide two additional hous-
ing units as basement apartments, while addressing the technical issue
of suitable foundation design; changing the building from a four-plex to a
six-plex. Culturally, we were not at all sure how this would be received,
and whether this 'technical solution' would be seen as a positive design
innovation. Uncertain as to how the community would react to this, we
developed designs for both a four-plex and a six-plex and brought these
to the second charrette.

In July 17, 2014 we returned to Nain to carry out the second charrette
and began by presenting the findings of the HRA and the significance of
foundation issue. We shared the perspective that, in wide range of areas
we had worked in across the north, we had never seen this particular
method being used, nor had we seen so many structural problems that
could so easily be traced directly to a foundation system. We noted that
while the present foundation system was effective in terms of reducing
construction costs, the instability of this method was, in too many cases,
causing a dramatic increase in maintenance costs as the houses as they
aged. We noted that, in a number of cases, this was significantly reduc-
ing the lifespan of the houses.

We presented the drawings for both the four-plex and the six-plex, high-
lighting our own preference for the six-plex and the two additional apart-
ment units this would provide (Figures 3.37 to 3.40). We proposed that
the additional basement units would be for young people and showed
how private access, similar to the upstairs units, would be provided to
each basement unit. We also showed how the basement units would
have the same features including an emphasis on the use of south facing
windows for bringing natural lighting into the units. Our proposal to
address the ongoing technical issue relating to foundation design, while
also providing additional housing in the community, received the unquali-
fied support of the participants.

The basement 'innovation' was not without challenges. In adding base-
ment units, we were proposing to raise the first floor of the building off of
ground level in order to increase the height of the south facing windows

Figure 3-44: Six Plex: South Elevation - Final design Design: EVOQ Architects and W Semple)

Figure 3-45: Six Plex: West Elevation - Final design Design: EVOQ Architects and W Semple)

Figure 3-46: Six Plex: North Elevation - Final design Design: EVOQ Architects and W Semple)

in the basement apartments. As wheelchair access was required for the Elders apartments, raising the building would result a significant increase in the length of the wheelchair ramp that would be needed to provide access to the Elders apartments on the first floor. From both a cost and ongoing maintenance perspective we suggested that a small elevator could be alternative, though this meant introducing another piece of equipment that could potentially break down. We noted that, as the capital costs of each strategy (the ramp versus the lift) were comparable, the decision was one of comparing the challenge of keeping ramps free of snow in the winter as compared to the potential for breakdowns and repairs for the lift. In the end, the group supported the idea of the lift, seeing this as an opportunity to try out the technology as the building was to be a prototype that would be used again in Nain as well as the other communities in Nunatsiavut (Figures 3.41 to 3.46).

The layout of the building reflects the contemporary lifestyle of the Inuit. Each unit has two bedrooms providing potential space for Elders to raise their grandchildren and for couples to potentially care for foster children. "Large enclosed porches, accommodate deep-freezes, offer plenty of storage, and provide ideal conditions for preparing skins. The double sinks in the kitchens, along with large stainless-steel tubs in the laundry rooms, make it easier to clean fish and preserve food. Each

unit has multiple bedrooms, including those meant for elders, who might have live-in caregivers, or foster children to raise."[53]

In the design we were able to consider the important connection to the land through the use of several small but important gestures. The first of these was to include an individual storage shed for each of the apartments. We proposed that these each storage unit be given a different colour of door. and that this colour also be used on the detailing of the building itself where each corresponding apartment unit is located, giving something of an individual identity to each unit. We also ensured that the first and second floor units would have small balconies for barbeques (an idea raised by the charrette participants) and direct access to the outside. Giving emphasis to the south orientation and its' views of a small wooded area on the river, a suggestion that was also highlighted in the charrette, was also intended to better connect residents with the land. (Figure 3.47)

Significant design ideas that were incorporated into the design include,

- Two-bedroom ground floor housing units that provide home care and child raising options for elders
- Handicapped access and features for the senior's units
- Two-bedroom Second Floor and Basement housing units that provide foster caring options for young people/ couples
- Private individual entrances to all units
- An open concept living/dining/kitchen area
- A separate laundry area
- Outside storage sheds for each of the housing units
- Cold porches (Arctic Entrances)
- Southern orientation with passive solar design features (large south windows, overhangs and potential for the installation of photovoltaics)[54]

THE BUILDING ENVELOPE

As sustainability features and reducing operating costs continued to be project priorities, a number of design and technical features were used on the building. Throughout the consultation and design process, lower heating costs remained one of the top priorities. "As a result, the design constitutes a simple form that helps minimize thermal bridging, and the units are configured such that open concept living spaces with large windows face south, whereas bedrooms with smaller windows look north. Furthermore, passive brise-soleils have been designed to work with seasonal solar angles, letting in as much winter light as possible while providing summer shade, both of which help reduce energy consump-

53   FGMDa, *Best Practices for Northern Multi-Unit Residential Buildings. Nunatsiavut Six Plex.* 6

54   FGMDa, *Nunatsiavut Housing,* 4

55   FGMDa, *Best Practices for Northern Multi-Unit Residential Buildings. Nunatsiavut Six Plex.* 4
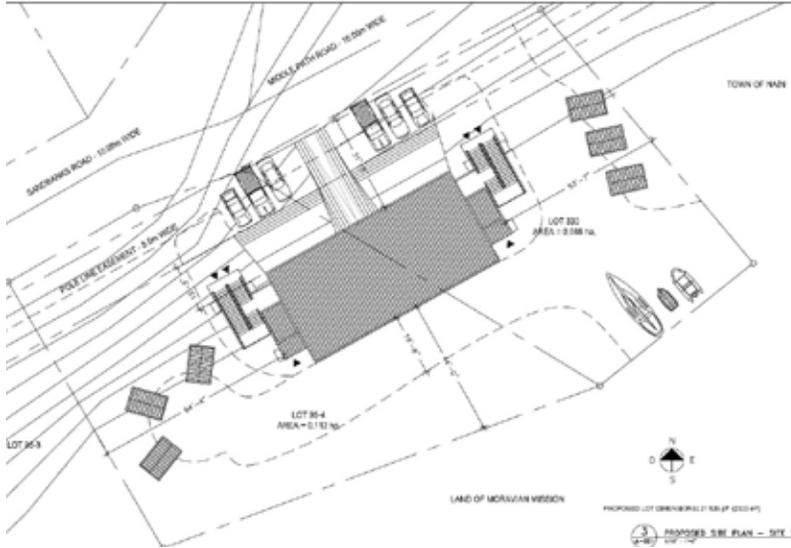
Figure 3-47: Site Plan with storage units and boat parking area (Design: EVOQ Architects and W Semple)

tion."[55]

A number of considerations were incorporated in developing the technical details and specifications required to attain the sustainability goals for the building. These included,

- A High Performance Building Envelope. with an energy performance target of ERS 86 (NRCan) and an air tightness standard of ≤ 1.5 ACH @ 50Pa that would be confirmed through the use of a blower door test during construction.

- High-Performance Windows using of triple-glazed panes with double low-e coatings, argon gas fill and insulated spacers. Natural ventilation would be enhanced during the warm summer months through the use of operable windows on the north and south elevations.

- High-Performance Ventilation and Indoor Air Quality through the installation of a high efficiency mechanical ventilation/heat exchanger (HRV or ERV)

- An Efficient Building Shape to enhance the energy efficiency of the building envelope through:
  - Maximizing the simplification of building form and the exposed perimeter of the building
  - Achieving an optimal building shape ratio (footprint/volume)
  - Locating all cold porches outside of the heated envelope

- Solar Design Features including.
  - Maximizing solar gains through proper building orientation and the use of south-facing fenestration
  - Minimized north-facing fenestration
  - Minimizing overheating during the summer months through the use of shading devices to control solar gain
  - Providing the opportunity for the use of solar technologies in the future (solar ready design) to allow photovoltaic or solar thermal panels to be easily added at a later date

- Active Renewable Energy. The potential for the installation of photovoltaic panels and the promotion of solar technologies to:

- Build upon skills in the community using solar in cabins.
- Resolve solar connecting issues and explore the potential to supply surplus solar generated electricity to the grid

- Reduced Electrical Consumption.
  The electrical load of the building will be reduced through the use of Energy Star rated appliances and low-consumption lighting

- Materials and Interior Finishes.
  To further promote the sustainability objectives of the project the FSC standard (Forest Stewardship Council), and the use of sealants, paints and adhesives rated as low-VOC (volatile organic compounds) were specified for the project.[56]

REFLECTING ON THE PROCESS

There were many positive aspects to the design process that was used for the design of the Nunatsiavut House. In many ways the small size of the territory itself and the close relationships this fostered between decision makers and residents provided a greater sense of control over the process. Decisions to move ahead with this process and to develop a housing model specifically for Nunatsiavut was made by the neighbours of those who would ultimately live in the building.

The close proximity of decision makers to users and a strong commitment on the part of the decisionmakers to ensure a broad range of participants that included both young and old, men and women resulted in a number of important topics being raised. Perhaps the most important of these was the discussion on caring for the young and using the design of the complex to assist the community in providing for the needs of foster children. This aspect of the discussion was a very moving example of community engagement stepping beyond the parameters of a single issue to consciously shift that to another level of community responsibility.

Yet the same discussion also revealed a desire by the residents to explore other housing models such as clustered housing, and other approaches to housing that went beyond the needs of the nuclear family. Ultimately the limitations of resources, both human and financial, limited these conversations and the ability of the community to address many of the core housing needs of the community. When evaluated against Arnstein's Ladder of Participation, the project would likely fall within Step 5, Placation, the top level of Tokenism, as the participants remained advisors with the power still in the hands of the decision makers. Yet the scale of Nunatsiavut and the desire of the decision makers to examine alternative approaches to housing was laudable, often limited by the very limited resources that are made available to northern communities for

56   FGMDa, *Nunatsiavut Housing,* 4

Figure 3.48: Exposed wall assembly with Insulation (FG-MDa Architects)

addressing their ongoing and significant housing shortages. Trying to develop an innovative housing program while also addressing what are often staggering housing shortages, and the significant housing issues that accompany these, remains a daunting task.

ON HOUSING AND RELATIONSHIPS

The three projects that I have shared offer some significant insights into 'housing and relationships' and the important role that engagement can play in a design process, particularly one which focuses on Indigenous voices and ensuring that Indigenous people are involved in the design of their own housing and communities. The projects are not meant to be 'design solutions' that are applicable to all communities, but rather as reflections on the needs and ideas that each community shared and how the process of engagement was used to foster these and bring these ideas forward. The projects are also tangible examples of how the design of housing and communities can foster traditional relationships and support traditional values, acting as an alternative to design as 'cultural assimilation'.

In moving forward from here I believe it is important to highlight the importance of formally establishing consultation as a part of the design process of every new architectural project while highlighting that the unique features of each project would not have been understood without this process. I believe there is a sense of propriety, of 'ownership', that also advances from this process, an attribute that is dramatically missing when housing solutions are 'imposed' from the outside. Different examples of the engagement process and what it can accomplish need to be developed further. The often-raised point, by both First Nations and Inuit, that 'consultation does not mean consent' is a principle that I will reflect on in more detail in Chapter 5 of this thesis. The charrettes also exposed policy issues that could not be addressed through the process of consultation. It would do little good, for example, to use housing clusters or multi-unit housing with the intention of rebuilding the relationships of extended family if the system for allotting housing is not addressed.

There is a need to move away from the 'silos' of thinking that separates, for example, the design of housing and communities, from its social and cultural function in the community. Silos of thinking have greatly contributed to the fragmented approach to problem solving where design, skills development, project financing, technology development, and a long list of other aspects of northern housing and communities are being addressed in isolation of each other. In Chapter 4, *MAKNG: visioning new ways*, I will examine an Indigenous housing project that was carried out

with the intent of weaving together the pragmatic and symbolic under the umbrella of a community wide housing initiative. The famous American architect Louis Sullivan coined the phrase 'form follows function', referring to the belief that the shape of a building or object should be primarily based upon its intended function or purpose. Drawing from this phrase we also need to carefully consider what qualifies as function as this has, to date, been limited to a list of physical requirements that fall far short of the cultural considerations and relationships that should be part of the 'function' of Indigenous housing.

There is an emancipation aspect to enhancing the engagement process in Indigenous communities. Emancipation is based on the principle that "those who live their lives in marginal places of society experience silencing and injustice. Within the realm of research and its relationship to the production of knowledge, this absence of voice is significant and disturbing. … emancipatory research seeks to counter the epistemic privilege of the scientific paradigm …"[57] When applied to the design process, this means giving a voice to those who have not been heard and to move decision making and power back into the hands of the communities themselves. It would be fair to say that each of the three projects shared in Chapter 3 of this thesis represent important steps in this direction, but none signify that effective community control was fully attained. As shared by Marie Battiste, "As discussions develop regarding the ethics governing indigenous research, issues of control and decision making reverberate as the most important principle. Indigenous peoples must control their own knowledge and retain a custodial ownership that prescribes from the customs, rules and practices of each group."[58]

SOME LESSONS LEARNED
In the three examples of housing projects that were shared, there are a few Lessons that stayed with me and that I have watched for and tried to address in the engagement sessions that I facilitate. These include:

Listening to the Elders: It is both important and necessary to take the time to let the Elders speak, and to listen carefully and thoughtfully to what they share. If you do not, there will be resentment from others as the Elders are the voice of wisdom and of the community's values and ethics.

Understanding Tradition: It is important to understand what falls under 'tradition' in each community as aspects of tradition are very local and sometimes surprising.
Using Intermediaries. Especially in the early parts of a project, in-

57   Kovach, *Indigenous Methodologies: Characteristics, Conversations, and Contexts,* 21

58   Battiste, "Research Ethics for Protecting Indigenous Knowledge and Heritage: Institutional and Researcher Responsibilities"*,* 506

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termediaries are important for assisting in that making connections with people you do not know. The first relationships you build may become your intermediaries. Kindness and generosity of spirit will go a long way in establishing them.

Finding a champion: It is important, and in some ways essential, to have a 'champion' in the community; someone who is dedicated to the project, influential in the community and who is able to take the time needed to assist on the ground.

Using Small Groups: It is often necessary, to set up and use small groups as there may be a reluctance to speak about issues in larger forums. There are many reasons for this and some or all of them may influence the process at any moment. These include, social hierarchy, shyness, the non-confrontational nature of Indigenous cultures, and the desire for consensus in decision making. "Donald Uluadluak, one of the elders who participated at Arviat, referred to the housing representatives as "leaders," and he stressed. "I generally follow community leaders. When you have an opportunity to participate in high-level planning, it's hard to figure out what people do."[59] The women who attended the opening session in Arviat demonstrated the same reticence.

Watching for Surprising Issues: There is, more often than not, an unexpected lurking issue that will surprise you and have the ability to move attention away from the issue being discussed. Although they may seem unrelated to the discussion at hand, in the minds of those bringing it up, it is related. These need to be acknowledged and addressed.

Design charrettes that are carried out in Indigenous communities offer continual opportunities to learn from the local community. Participants value the opportunity to partake and contribute, particularly on events that have an impact on their lives. In Arviat, "Many participants expressed their appreciation for the unique opportunity to be consulted. To Patsy Owlijoot, the fact that the charrette "involved many people" was one measure of its excellence. Dorothy Aglukark said that as far as she knew, "this was the first time the Inuit have been asked to participate in the design of their housing." Donald Uluadluak described the process as "a success as soon as the people of Arviat were allowed to participate. There were good results because the participants were willing to work together." He added that the process left him with the feeling of being in a newly built igloo, with "the smell of new snow and sense of accomplish-

"As discussions develop regarding the ethics governing indigenous research, issues of control and decision making reverberate as the most important principle. Indigenous peoples must control their own knowledge and retain a custodial ownership that prescribes from the customs, rules and practices of each group."

Marie Battiste

ment that comes with building it."[60]

59   CMHC, *The Northern
Sustainable House: An Innova-
tive Design Process*, 13

60   Ibid, 26

4 MAKING

... exploring new ways

"In place of measuring the good life in terms of products, many Indigenous traditions recognize and express the good life as a process – active and complementary participation in natural processes not of our design. Consequently, their focus was on finding ways to live in environments, or, let us say, within environments, instead of expending the energies modern humans devote to changing environments."

Danial Wildcat

In March 2015 Indigenous Architect Douglas Cardinal, a friend and colleague, and I gave a one-day workshop at Carleton University on 'Indigenous Housing and the Integrated Design Process'. A federal election was coming in Canada and Indigenous issues were beginning to receive more attention as we were coming out of ten years of Conservative Party rule and the Liberal Party was proposing to increase the government's efforts at the process of reconciliation with Indigenous communities.

The workshop was being organized by the Integrative Solutions Group (ISG); a Carleton University based organization that promoted 'green building'. ISG wanted to raise the profile of Indigenous architecture and design issues at the University, with the workshop providing an introduction to the process of working in Indigenous communities in Canada. The session would provide an overview of how the values and the methods of indigenous peoples differ from those of mainstream Canadian society, and for architects and others who wished to work and/or engage with Indigenous communities in Canada, what this meant for the design process. Using architectural projects and design processes that had been adapted to the needs of Indigenous communities, Douglas and I provided the attendees with significant insights into the values of Indigenous peoples, how we identified and worked with these values, and through project examples, how this was brought into built form. Our goal was to generate discussion on 'Indigenous Architecture' and how the role of the Architect changes when working on projects in Indigenous communities.

The presentations that Douglas and I delivered in the workshop led to several engaging discussions on what it meant to interact with Indigenous communities. While many of the attendees had looked at examples of 'Indigenous Architecture', few had spent much time considering the ways in which the architectural design process might differ when working in this context, or the 'understanding' that would be needed to revise the design process to reflect Indigenous values and ways. For this reason, Douglas and I both placed a great deal of emphasis on identifying and highlighting Indigenous values and worldviews. While Douglas drew upon his own perspective as an Indigenous Architect and his vast experience in bringing these perspectives into his designs, I focused on what

I had learned from Indigenous scholars and researchers (the principles laid out in Chapter 2) and the experiences I had gained in facilitating design charrettes in Indigenous communities (such as examples those laid out in Chapter 3). As the workshop was attended by architects, instructors, construction firms, consultants, government officials and students in architecture and engineering, we also shared some of the construction details and building systems we used, as well as the logistical, capacity, climatic and technical challenges of that we had to address in these projects.

The presentations led into several engaging discussions about these projects and the challenges we encountered as well as the rich experiences that they provided. Throughout the his presentation and the discussions that followed Douglas was adamant that we not lose sight of the patriarchal nature of western society, how this influences the processes that we use and how this needed to change, as the very values it fosters are a danger to Indigenous people as well as to the planet that we live on. He challenged everyone to look beyond western rationalism and embrace the Indigenous holistic view of the world. Building upon this, I expressed the viewpoint that Indigenous values and philosophies supported everything that the green building industry spoke of; that Indigenous people in Canada and throughout the world quite naturally embrace the overarching 'sustainability' ethic that the green building industry hoped to construct. We both shared the perspective that we have much to learn from these communities, and in not being willing to listen and learn from Indigenous people, Euro-western society was letting a great opportunity pass by.

One of the people who attended the workshop was Wendy Pollard, a Housing Consultant at CMHC. Wendy had several Indigenous communities as 'clients' who she assisted through CMHC programmes that supported technical research, capacity building and community engagement. Wendy understood the importance of the ideas that we were being presented and approached me with a proposal to bring me north to some of the Indigenous communities that she works with, proposing that I give some presentations on the community engagement I used on housing projects in different northern Indigenous communities, the designs that were developed and the technical solutions that were tested. She was particularly interested in the community engagement process that both Doug and I were promoting, and wanted to introduce that into some of the communities that she worked with. Wendy knew of my work from my time in the Research Division at CMHC and had confidence in the message that I was sharing, and my abilities to successfully share these

Figures 4-1 to 4-3: Eastmain Streets (W Semple)

ideas with people in the communities. This would prove to be a tremendous connection as Wendy took me to several different Indigenous communities that she worked with. These trips led to my being hired to facilitate a number of housing design charrettes in different communities and to develop the design of a number of different housing prototypes.

HOUSING CHALLENGES IN 'EEYOU ISTCHEE'

In June 2016, Wendy and I travelled to the Cree Nation of Eastmain[1], a community part way up the east coast of James Bay in the province of Quebec. We were going to participate in a meeting of the Housing Directors of the Quebec James Bay Cree communities, the Cree's of Eeyou Istchee[2], where I was to give two presentations: one on technical issues and building systems, with a focus on energy efficiency and the challenge of meeting these targets in the north, with the second on community engagement, and the design of culturally appropriate housing and communities. All of the information I would share was acquired on research and design projects that I had worked on in Indigenous communities. I would be speaking from the 'experience of doing', an attribute that is respected by people in these communities, and by Wendy: it is why she had brought me there.

The first afternoon I gave an extended presentation on technical issues and building systems that I had used on a range of housing projects across the north. The presentation generated a great deal of discussion, and also uncovered something that I had missed. Towards the end of this dialogue, Sydney Chewanish, the Housing Director for the Cree Nation of Chissasibi[3], pointed out that I had not talked about durability, a significant issue with housing in all the communities. Acknowledging that I had not addressed this issue, I thanked Sydney for bringing this up. But, as it was the end of the day and we were about to leave, there was no longer time to discuss this.

In reality, durability (or the lack of it) was measurably reducing the lifespan of northern housing. And while I had been addressing durability on my own projects, through my own enthusiasm with issues such as energy performance

and my focus on the design process and the design more appropriate housing, I had not talked about durability issues and how these were also being addressed in this process. Nor had I taken the time to expose the 'roots causes' that resulted in the durability of houses becoming such a crucial issue in Indigenous communities. I felt it important and necessary to speak to Sydney's question, both to show that durability was being addressed but perhaps more importantly to ensure that the Housing Directors could see that I was being responsive to the issues and ideas that they raised. This was an important part of the process that I would bring to the community. I returned to my room and put together a short presentation on durability.

The next morning, before beginning the presentation on the design process and the design of Indigenous housing, I gave a short presentation on durability, starting this by talking about construction details that were contributing to the premature deterioration of homes. I shared that many of these details were being carried out based on building principles that had evolved, and materials, building systems and equipment that have changed. These were things that I could assist with. This included the construction detailing required in the design of housing, and the capacity building needed to establish the skills in the community to do this work. I also spoke about what I felt were the two 'inherent' problems with the system in which the federal government, through INAC and CMHC, assigns and funds housing in Indigenous communities. There were the issues of the overcrowding that has resulted from chronic underfunding for housing and the inadequate levels of funding provided for each house. I noted that without changes in this system, we would continue to struggle with making housing better. These include:

• *Funding per Unit*: The amount of funding for provided for an individual house is based on INAC's estimation of the up-front cost of building a house in different communities. Using the lowest priced materials and components that would meet the minimum requirement of the Building Code, this process has ensured that the lowest quality materials and products would be installed, virtually guaranteeing that components such as windows, doors, hardware, siding and other materials that were designed for production building in the south, would be used in remote northern communities. When compounded with a lack of oversight due to a shortage of building inspectors in most of these communities, this too ensured the premature deterioration of many houses. .

• *Underfunding for Housing*: The underfunding of housing has

1   "Eastmain is located on the east coast of James Bay and on the shore of the Eastmain River. Eastmain is named after the Hudson Bay trading post that was originally located on the north shore of the Eastmain River. It is home to approximately 833 residents.", Accessed March 21, 2020, https://www.cngov.ca/community-culture/communities/

2   "Our land—Eeyou Istchee—which means the People's Land, comprises eleven Cree communities and over three hundred "traplines," or traditional family hunting and trapping grounds. Our traditional territory, an area of over 400, 000 square kilometres, or two-thirds the size of France, is located primarily in northern Quebec and includes the lands on the eastern shore of James Bay and south-eastern Hudson Bay, as well as the lakes and rivers that drain into them. In addition, our traditional territory includes lands which we have historically occupied in Ontario, across the Ontario-Quebec border. Eeyou Istchee is home to over 18,000 people." Accessed March 21, 2020, https://www.cngov.ca/community-culture/communities/

3   "Cree for *Great* or *Big River*, Chisasibi sits on the south shore of the La Grande River on the Coast of James Bay and is the second northernmost Cree community in Eeyou Istchee. The current population of Chisasibi is nearly 4,981 Cree and 283 Non-Cree people." Accessed March 21, 2020, https://www.cngov.ca/community-culture/communities/

Figures 4.4 to 4.7: Backyards and traditional Cree structures (W Semple)

resulted in the dramatic overcrowding of many housing units; with houses that were designed for a single family of five sometimes being the home for 2 to 3 times more people. Having being built to meet the minimum of the building code (and often falling short of that), the level of wear and tear from overuse has dramatically reduced the lifespan of many houses, further compounding the issue of housing shortages.

As I continued on to give the presentation on Housing design and the community engagement process, the Directors grew more comfortable with the message that I was sharing. They could see that I had experience in the field and appreciated that I was willing to point to the inherent flaws in the system and how this prejudiced Indigenous people. While I had given this type of presentation many times, I had never done so in this kind of context; addressing the housing decision makers in several communities at the same time, with each looking for alternative approaches to addressing housing issues and needs in their own community.

But perhaps the most revealing aspect of this, were the responses that came from this. When I left the meeting on the second day, Sydney, who had initially kept his distance from me and seemed somewhat wary of another 'white guy' with answers, stopped to talk, asking me for my card and sharing his. This is an example of the small indicators, of the visual clues to peoples' reactions that I have used to understand whether the process was a success. I always listen carefully and answer honestly with the knowledge that I have. If I don't know I admit to that, often noting that I do know someone who does, offering to explore this question and to get back to them with an answer.

Within a few days of these meetings I was contacted by the Housing

Directors for two of the Cree communities; the Cree Nations of Eastmain and Whapmagoostui. And while the conversations and discussions at the meeting were dominated by technical concerns, it was the community engagement process and the design of culturally appropriate housing that had piqued the interest of both of the Directors. To be sure, both wanted to be certain that I had the technical background and knew about the challenges of building and maintaining northern houses. But they were both looking for a new approach, something that would help the community become more involved in the process and break out of the patterns that had become established. Both wanted me to come to their community to initiate a community engagement process. My work with the Cree Nation of Eastmain was to start of a course of action that would progress into the development of a community wide housing initiative. I will share that story.

CREE NATION OF EASTMAIN
In April 2017, I made my second visit to Cree Nation of Eastmain (CNE) and began what would be work on developing several housing proto-types for the community. I began with a meeting with Stanley Gilpin, the Housing Director, beginning with a discussion on the housing prototypes that Stanley would like to have developed and the different consultation sessions that would be needed for support the development of these pro-totypes. This was the beginning of the extensive community consultation process that I would begin to carry out, a process that would include events and initiatives that would involve conferring with a large portion of the population of Eastmain. It is important to note that this would build upon the housing consultations that the community had already carried out with its members, consultations that were used to inform the deci-sions of the Chief and Council.

Following meetings with Stanley Gilpin and the Chief and Council of the Cree Nation of Eastmain, the decision was made that the first housing prototypes to be developed would be an Elder's House and a Starter Home, beginning the process with a 'design charrette' for the Elder's House. To expedite this, Stanley organized a room at the Band Offices and put up some posters and sent out a message on the local radio sta-tion advertising the session.

HOUSE FOR CREE ELDERS
It was a cold snowy evening in Eastmain, and no came to our session. Some of this was due to the fact that the Elders, who are less mobile than other segments of the community, have a tendency to stay closer to home at night, particularly when the weather is poor. It may also have
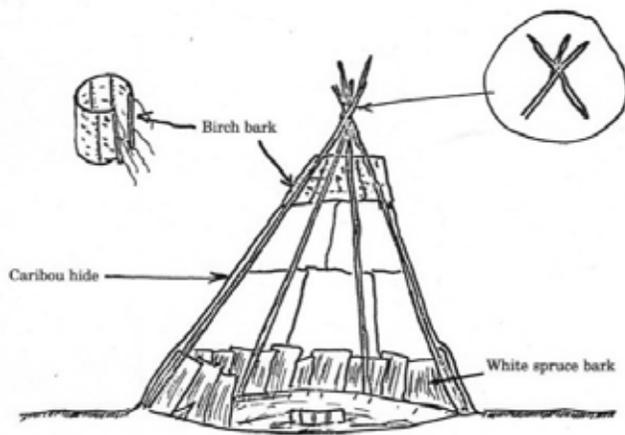
Figures 4.8: Summer miichi-
waaph (tipi). (Georgekish)

been due, at least in part, to the approach that Stanley had taken to connecting to contact people. Experience has taught me that making personal invitations, particularly face to face, is more effective in ensuring that invitees will come to a session. In addition to affording a more personal connection, this provides the opportunity to share the reasons behind the session, the role that the invitee would play at the session, and the importance of their attendance. Making time for these conversations is one of the first stages of relationship building for any project. As I did not have a relationship with any of the Elders, I could not do this myself, needing an intermediary, such as Stanley, to contact people. In contacting people directly, as well as a providing a personal connection to the event being held, Stanley could have provided more information than was found on the poster he made.

But the evening became a great opportunity to meet Stanley and get to know more about him. When others did not show up, we spent a couple of hours talking and sharing perspectives. I shared with Stanley how much of a privilege it was to get to know him more and to discover the extent of his involvement in the revival of Cree culture. We began to learn from each other and continued to work well together throughout the housing initiative.

Finding that the Elders were hesitant to come to a meeting, Stanley and I decided that we would go to the Elders and would meet with them in their homes and in the Elders Centre. In each of the homes we visited we were able to spend time with the Elder of the household, listening to their impressions of housing and how it could be improved for them. We sat in living rooms and kitchens and talked about what worked and what didn't, taking whatever time was required to do this. We also spent time

Figure 4.9: Cree Nation of Eastmain Entrance sign (W Semple)

at the Elders Centre, talking with a group of Elders about their present housing and what they would like to see in new units that were built. We talked about the 'Elders community', an area for Elders housing that they wanted to see developed next to the Northern Store. This was an area where they would be able to look out on the Eastmain River and 'the land' where they had spent most of their lives, and that they retained a deep connection to. The

Elders also spoke of wanting to be able to see the community from their house as they liked to observe the activity that was going in the town as this connection gave them a sense that they were still a part of daily life. They also wanted to be able to look out at the homes of other Elders, to see each other when they sat outside or went for walks. From these discussions it was highlighted that Elders housing should include.

- A place where they could see the River and look out on the land.
- An outdoor area where they would be able to see others and to feel engaged
- Space for large family gatherings
- Two entrances, one from the east and one from the west, that would be used for ceremonies
- Design features that would better reflect Cree culture
- Locating Elders housing within an 'Elders Community'

We also spent time with caregivers, gaining a better understanding of their perspective on Elders needs, who shared with us a number of practical design considerations that were important for consideration and incorporation where possible. We met with the First Responders in order to get their input on the challenges they have with access and the movement stretchers through the typical small home when there is an emergency. We talked about entrances, hallways, and movement, about the best location for electrical panels and how simple design considerations could be revised to make their work easier, and in doing so, make each house a safer place for its occupants.

As part of the discussions on housing Stanley also organized a session with the local builders. I wanted to meet the builders and get their perspective on housing challenges. It was in this session that we began discussion on a number of technical issues, with one of these being basements. Eastmain and the other Cree communities (except for Whapmagoostui) are south of the line of permafrost, and have been building houses with full basements since the communities were first established. But though basements have sometimes been converted into living spaces such as bedrooms, they are often the location of numerous problems such as mold outbreaks that are the result of dampness and poorly designed and/or operating ventilation systems. Stanley and I were both proposing to eliminate basements and instead to move towards using a slab on grade or a crawl space. The builders were supportive of this idea, requesting that if this is done, that good frost protection details be developed in order to ensure that other structural and mold related problems are not recreated. Collectively, we decided to

Figure 4.10 to 4.12: Cree
Cultural elements on Eastmain
Buildings (W Semple)

Figure 4.13: The Eastmain
Culture Camp (W Semple)

remove basements from the new houses, agreeing that more information (costs, performance etc.) was needed in order to make the decision on whether to use slab on grade or a crawlspace. The builders expressed their appreciated that we had asked for their input on this.

I also used this time to begin examining how the town was designed and the state of housing in the community. While a view from the street spoke of southern suburbs and their rows of sameness and conformity (Figures 4.1 to 4.3), the back yards of these same houses spoke of the hunting culture of the Cree, their relationship with the land and the need for outdoor spaces where one could carry out activities that are related to this relationship (Figures 4.4 to 4.7). In Eastmain, as I have observed in other remote Indigenous communities where I have spent time, what people add to their houses and build in their yards speaks volumes about local traditions. Throughout Eastmain the tipis, smoke houses and storage sheds in the backyards of houses are poignant examples of the spaces that are missing in houses. These structures speak of the variety of building forms that the Cree once utilized in different locations during the different seasons of the year. The Cree term miichiwaahp, which can be used to mean any dwelling, specifically refers here to tipis or conical lodges.[4] These are summer lodges, structures that were traditionally covered with either birch bark or caribou skins (Figure 4.8).

Prior to beginning the development any house design, I spoke with people in the community about how, from my own perspective, the designs of houses in Eastmain did not evoke Cree tradition in any way. I asked them about the sign at the entrance to town that stated 'The Cree Nation of Eastmain. A culture Rich in Traditions. A Cree Community for all to See' (Figure 4.9), sharing my observation that there were only small examples of Cree culture on any of the buildings in the community and that Cree cultural elements were virtually non-existent when it came to housing. If Cree culture was to gain prominence on houses, I suggested some new design ideas needed to be explored.

I also visited some of the community buildings that are clustered in the core of the town. While these buildings revealed some attempts at bringing Cree culture into the local architecture, the few examples spoke volumes of how little Cree identity was being reflected in their buildings. Examples include the extended sabtuan pole details on the Cree Hunters and Trappers building, window details on the RCMP building, and a mural on the exterior of the Public School (Figures 4.10 to 4.12). Perhaps the most 'authentic' Cree area in the community is the culture camp created near the Eneyaauhkaat Lodge, the new hotel in town (Figure 4.13). The culture camp has examples of the three of the most prevalent traditional building forms – the 'sabtuan' (or shaapuhtuwaan), the eight-sided Kichihchaaukimik and the tipi.

The building form and floor plan that I developed for the 'House for Cree Elders' draws upon the traditional sabtuan, or the shaapuhtuwaan as fully spelled out in Cree. The main open living and kitchen areas exhibit the sabtuan in both the plan (Figure 4.14) and the section of the house (Figure 4.15). Two wings, on the east and west are added to provide bedrooms, bathrooms and storage, as well entrances from both the east and the west, reflecting a Cree tradition where ceremonies are carried out using each of the two 'directions'. In plan the house is oriented to provide a view of the river to the north, evoking the desire of the Elders to be able to view the river to the north and the land (Figure 4.16); and a view to the south, in order to foster greater interact with the rest of the Elders community. The house is designed is to be fully 'wheel chair accessible', including low door thresholds, wider doorways and hallways, and five-foot turning radiuses throughout the house. Kitchens and bathrooms include wheelchair accessible counters, sinks, appliances, showers and electrical switches and outlets. The building system for the house, with the addition of solar panels and an air source heat pump, was designed to attain net zero ready performance.

While addressing cultural aspects of the house in plan, I also began to explore two design ideas that would impact the aesthetics of the house. The first of these ideas involved expanding the 'saptuan', in plan view, to provide an outdoor sitting area with a raised fire pit on the south side of the house. To create 'the feel' of the sabtuan for the Elders, tipi poles would be used to envelope the area and create the sabtuan form as part of the elders outside sitting area. This is where the Elders would be able to sit and enjoy the outdoors while interacting with the rest of the community (Figures 4.17 to 4.20).

Through my house visits I had met and seen the talent of some of the

OUTDOOR SITTING AREA

HRV/ ELEC.

BATHROOM

KITCHEN

MASTER BATHROOM

W/D

STORAGE

HWT

BEDROOM

ELDER BEDROOM

LIVING ROOM

29'-6"

8'-6"

14'-8"   16'-0"   14'-8"
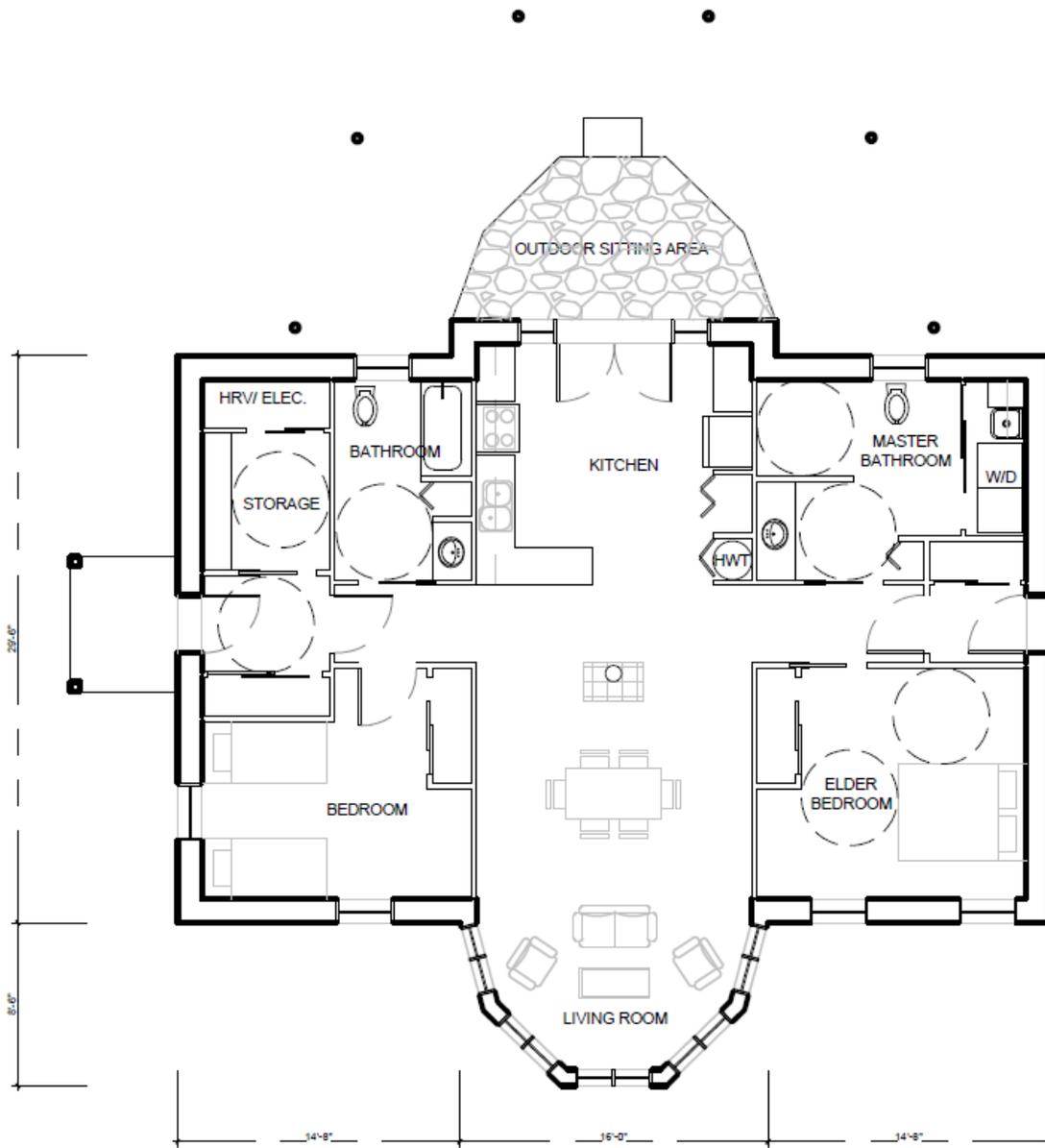
Figures 4.14 and 4.15: Floor Plan and Section of the 'House for Cree Elders' (Design: W Semple)

Figure 4.16: A View to the Land (W Semple)

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local artists and saw this as an opportunity to bring some work to the
the local artists and saw this as an opportunity to bring some work to
the artists, while also giving each Elder the opportunity of sharing their
own story. These encounters inspired the second cultural design ges-
ture that I introduced into the community. Throughout my international
travels, I have photographed and studied the traditional architecture of
many cultures, observing many wonderful examples of the application
of cultural design elements onto housing, with decorative window details
being one of the more prominent examples. On Tibetan architecture, for
example, the traditional details on windows and doors, symbolic features
that reflect fundamental aspects of Buddhist tradition and practice, have
become iconic features on contemporary Tibetan buildings (Figures 4.21
& 4.22). As people overwhelmingly wanted to honour the Elders and
their importance to the community, I suggested that a local artist be hired
to work with an Elder on the painting of small murals that would depict
something about the Elders life, their story, or their clan (see Figure 4.20,
North Elevation). I had made room for this on panels that would be in-
stalled between the windows on the north side of the house. The gesture
would honour the importance of the Elders while also applying elements
of Cree culture onto housing in the community.

I also carefully considered all of the technical design requirements for ac-
cessible houses, drawing upon CMHC research reports, CSA standards
'on 'Accessible Design for the Built Environment' and some of my own
experience with accessibility issues. When laying out the floor plan for
the house, I was also reminded of the discussions at the design charrette
in Nain on the role that Elders often play in the raising of children. As
in Nain, while the second bedroom in the Elders House was ostensibly
included as a room for a caregiver, it is also a room where, if the need
should arise, that the Elders can raise their grandchildren. As many of
the social problems in communities are the result of overcrowding, the
inclusion of a second bedroom and bathroom is intended to allow for a
number of possibilities, with childcare being one of those. Overall, the
design features of the house include:

- Building form & plan that reflects the traditional Cree 'sabtuan'
- Two entrances (east and west) to provide for traditional ceremo-
   nies
- A second bedroom for care-givers/ grandchildren/family
- A large central 'sabtuan' area for family gatherings
- Outdoor sitting area with raised fire pit and tipi poles
- The Elder's Story – paintings to be done by local artists
- An Elders Community based on the traditional healing circle

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NORTH

SOUTH

EAST

WEST
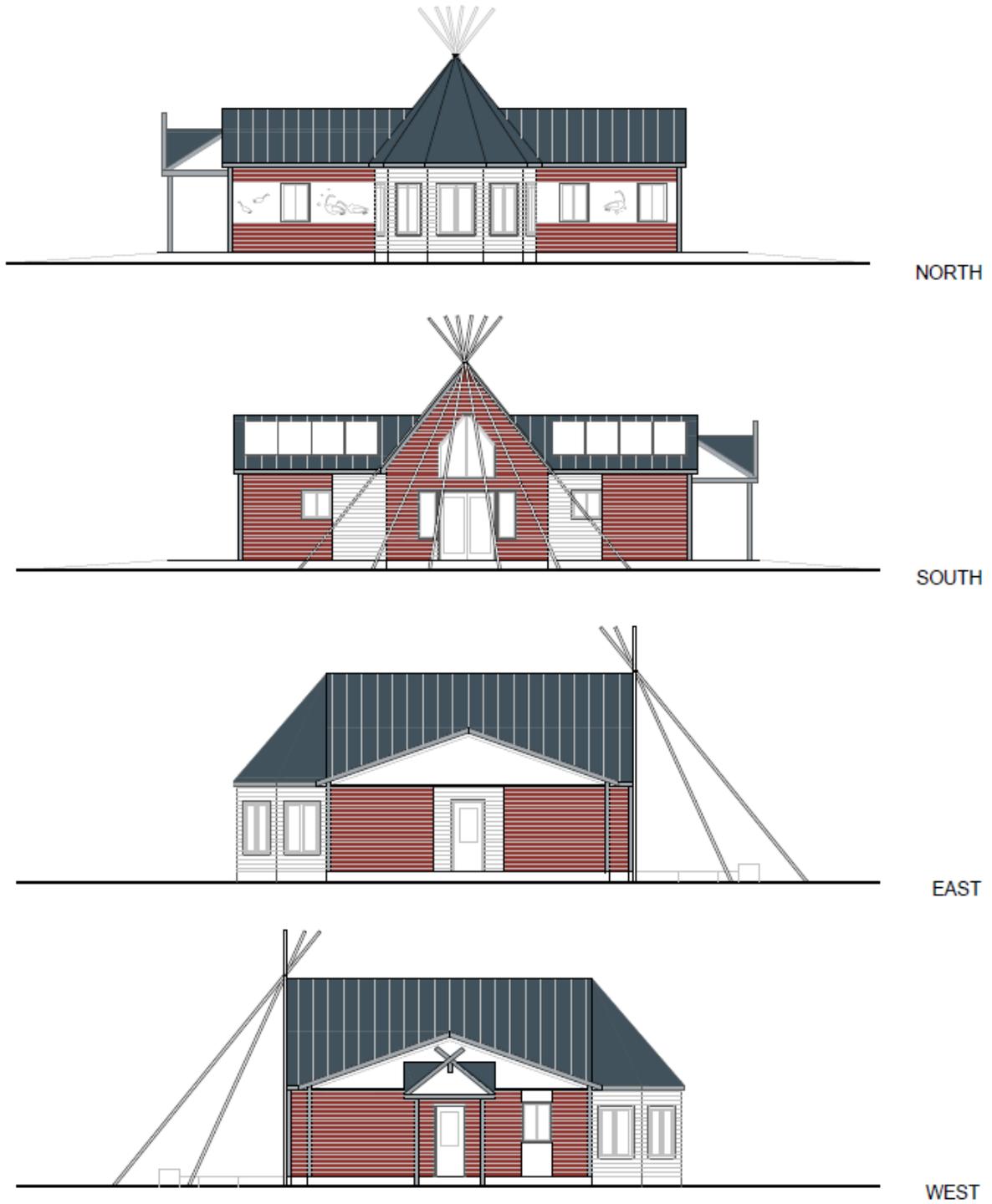
Figures 4.17 to 4.20: Elevations of the 'House for Cree Elders' (Design: W Semple)

- The colour of houses reflecting each directional quadrant of the healing circle
- An outdoor raised fire pit
- Views of the river reinforcing the Elders connection to the land
- An Elders common area for reinforcing the sense of an Elders community
- Accessible walkways to the central common Elders gathering area
- An entrance from the east reflecting Cree culture and connection to place
- Super energy efficient building envelope with wall/ceiling targets of R50/R80
- A Photovoltaic system with battery storage
- Back-up wood stove
- Southern orientation for maximizing solar Locally manufactured-wall and roof trusses Site built construction using local builders

STARTER HOUSE

In addition to developing the design for the House for Cree Elders, I also began working on the design for a Starter Home, a smaller house that was intended for young couples and small families. This was an import-ant model to develop as a survey of housing needs carried out in the Eastmain highlighted small two-bedroom units as the leading housing need in the community. Drawing once again upon Cree tradition, I exam-ined examples of traditional Cree building forms for ideas and inspiration. As the Cree often spoke of feeling that the rooms in their houses were too small and the ceilings too low, I was attracted to the interior volume that was created with the square kichiihchaaukimikw (Figures 4.23 and 4.24), deciding that I would try and incorporated the square kichiih-chaaukimikw into the main living area of the house. Like in the House for Cree Elders, this additional volume would give aesthetic importance to the common space of the house, an important aspect of Cree culture that could be reflected in the plan and section of the house (Figures 4.25 and 4.26). Design features on the Starter House include (Figures 4.27 to 4.30).

- A large open concept living/kitchen area within the volume of the square kichiihchaaukimikw
- Access to bedrooms directly off the living area
- An outside storage area at the rear entrance
- Southern orientation with solar panels installed on the walls and the roof.
- A large interior pantry/food storage area

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ANNUAL ASSEMBLY 2017

In September 2017, I returned to Eastmain to present the preliminary designs for the Elders and Starter Houses to the community at the Eastmain Annual Assembly, and to facilitate a design charrette that would begin the development of a multi-unit Six Plex. Eastmain, like other Indigenous communities and the northern housing agencies, was beginning to explore the development of additional examples of multi-unit housing, in order to reduce construction and land development costs. My initial discussions with the community on housing had exposed some resistance to this idea of multi-unit housing due to concerns sound transmission and privacy, as well as concerns with room for the storage of hunting and fishing equipment.

Stanley, Mark Tivnan (the Eastmain Director General), and myself had talked about this, sharing the belief that this was a necessary step; one that needed to be done carefully if the project was to gain community acceptance for developing this type of housing on a wider scale. I suggested it was important that we engage with the community and use this as an opportunity to bring more cultural features (spatially in plan and in architectural details on the building) into the design of a multi-unit housing prototype. If we addressed many of the concerns that people have with multi-unit housing, incorporated more Cree identity into the building, and used the process to gather more input from initial tenants on their impressions of living in the units, we could begin to develop some positive energy about the building and the processes that we were initiating.

Figures 4.21 and 4.22: Tibetan Window Details (W Semple)

Mark had already given some consideration to these very ideas, making the decision that the Six-Plex would be a row house, thereby eliminating the significant sound transmission detailing challenge that occurs when housing units are stacked on top of each other. He also hoped to use the Six Plex to address some of the different housing needs in the community and to further develop Eastmain's homeownership programme, an initiative that envisions families moving out of social housing and with this removing the financial burden of social housing has on the community.

In initiating the 'multi-unit housing initiative', I facilitated discussions at the CNE Annual Assembly about the types of features that were needed in these units. Rather than set up a separate building design charrette, I decided that we would use the Eastmain Annual Assembly to start discussions going on the Six Plex, then move into breakout groups at the Assembly using what the CNE calls the 'Cree Café'. The Cree Café involved setting up formal breakout sessions, each with a local Cree as facilitator, with each session considering the housing design questions

and issues that had been raised in the Assembly discussions. I had not used the Cree Café, but understood, from the accounts of Stanley and Mark, that these were always very well attended.

The incorporation of culturally-appropriate features, the installation of solar panels and the use of thicker, better insulated walls became the starting point for discussions that centered on making houses more sustainable, both environmentally and culturally. Concerns with noise transmission, and a loss of connection to the land (e.g. where will I store my snowmobile/where will I butcher my hunt?) were also reflected in the comments that were received. In spite of concerns with multi-unit housing there was an openness to the idea of the Six Plex, particularly if it meant that the housing backlog could be reduced or better still, eliminated. In the breakout groups, members expressed the desire to see more durable and energy-efficient homes built in the community.

The presentations of the Elders House and the Starter House at the Annual Assembly went well, with both designs being well received. People liked the idea of the Elders House as it gave signal to the important position and role that the Elders play in the community, expressing gratitude for the contributions that the Elders have made during their long lives. There were very positive responses to the cultural features of the Elders House. The outdoor sitting area with the tipi poles and fire pit, and the main living area that recreated the interior of the sabtuan were well received, as was the cultural importance the east and west entrances. People were intrigued by the idea of having a local an artist work with the Elder to paint their story on each house, and hoped to see this happen as it would begin the incorporation of cultural elements onto the design of housing in the community.

People were also well aware of the Elders desire for a special area for Elders housing and the proposal to utilize a site that is adjacent to the Northern Store. I wondered if there wasn't a need to develop a more culturally appropriate design the Elders community, sharing again that the design of the town did not contribute to Cree culture in any way. I suggested that the 'Elders Community' provided an opportunity to change that. When people asked me 'what would this look like?', I began working on ideas for the design of the Cree Elders Community.

ELDERS COMMUNITY
The decision by the community to support the design of an Elders community as well as the Elders House is a reflection of the important role that Elders play within Indigenous communities in Canada as the keep-
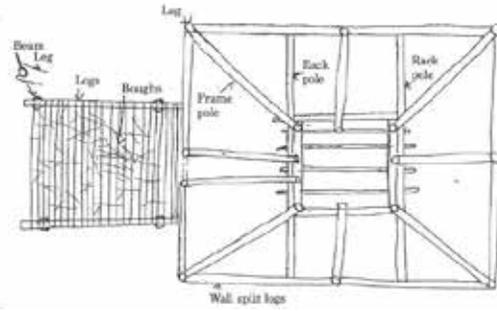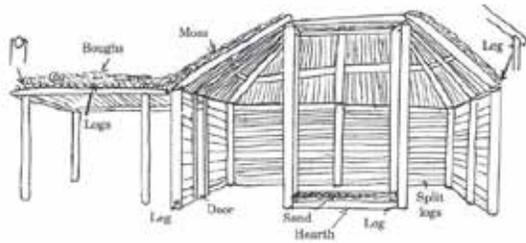
Figures 4.23 and 4.24: Section and Plan of the Square kichiihchaaukimikw (Georgekish, p. 80)

Figures 4.25 and 4.26: Section and Floor Plan of the 'Starter House'. (Design: W Semple)
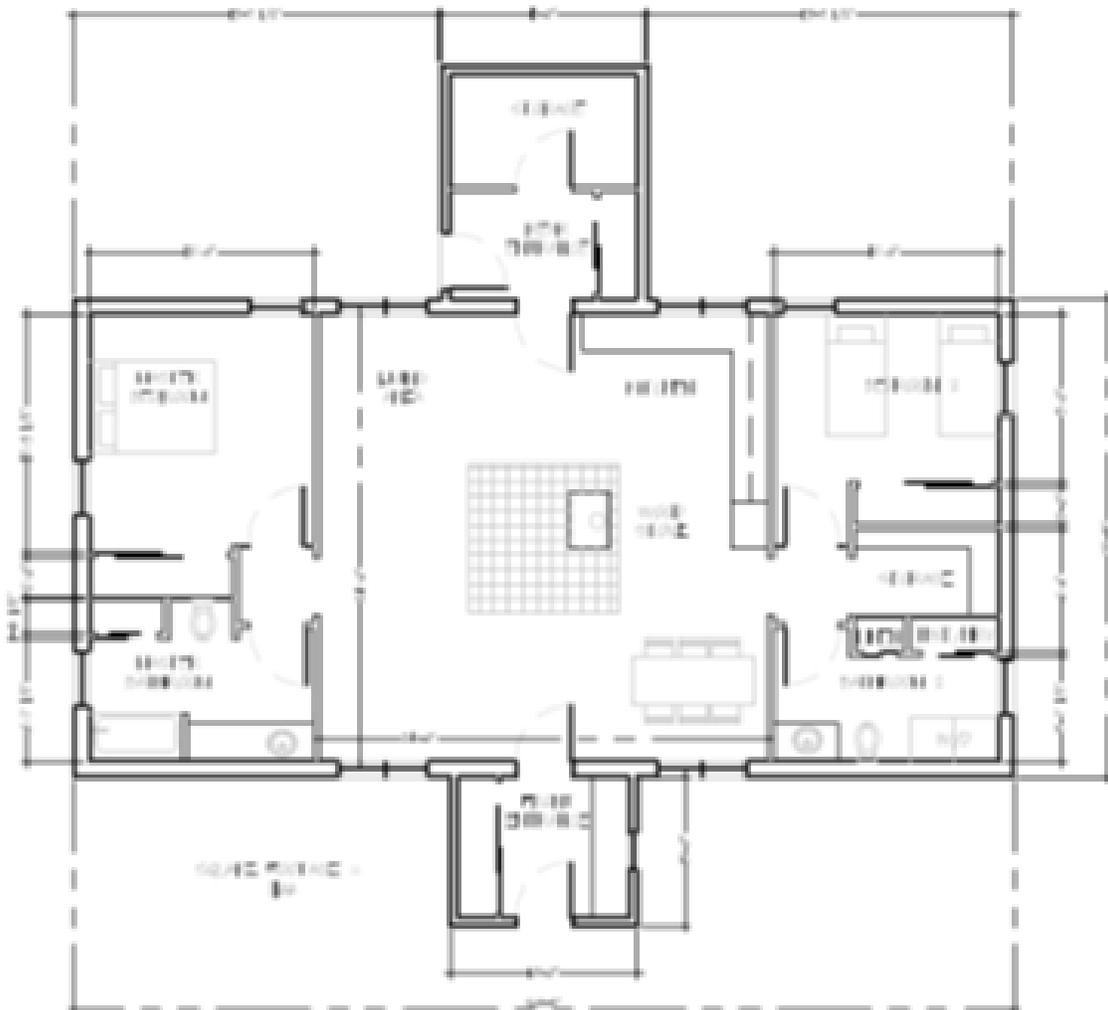
ers of traditional knowledge, customs and traditions. As George Barnaby shared at the Berger Inquiry, "Respect for the old people is another law, since all the laws come from the teaching by our elders, from stories that give us pride in our culture, from training since we are young; we learn what is expected of us. Without this learning from the elders our culture will be destroyed."[5]

I returned to my office in Ottawa and began developing the design for the Elders community. In addition to the direction that was given by the Elders and the community, I saw the potential that the design presented as a beginning point for exploring the role that healing could play in Indigenous design. Like the Cree and their fondness for the tipi and other circular forms, I was attracted to the idea of using a circular form for the design of the Elders community, deciding to use the Healing Circle (Figure 4.31) as a mark of respect for the Elders. The layout of the Elders community (Figure 4.32) developed from this with features that include:

- A circular form that places cars to the outside and 'living areas' to the inside
- A walking path and a central area for gatherings
- A southern orientation for each of the houses to maximize for passive solar gains and the potential installation of solar photovoltaic panels, while the northern orientation reflected the relationship with the river and the land
- The use of the four quadrants of the healing circle, with the houses in each quadrant using siding colours that reflect the colour of that direction of the healing circle
- The ability to add additional housing circles as the community develops. When this was presented to the community, it was suggested that these would be like a string of beads.

BEAR MEAT

While we were at the community assembly, Stanley received a message via the community Facebook Page that someone in Eastmain, while out berry picking, had come across a bear and had shot it. The bear had been brought back to the family home and cooked in their smokehouse, and everyone in the community was invited to come and share some bear meat. I had never tried bear, nor had I been able to attend an informal gathering like this in Eastmain, and immediately decided that I would go. It was not difficult to find the house as other people were both coming and going. I arrived at the front door, and like others, I simply opened the door and walked in. This act was not due to the casualness of the situation, but rather was a reflection of Indigenous ways and a reminder

5   Berger, Northern Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry: Volume One, 97

South
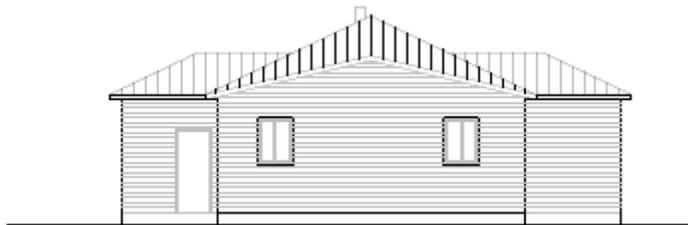
North

East
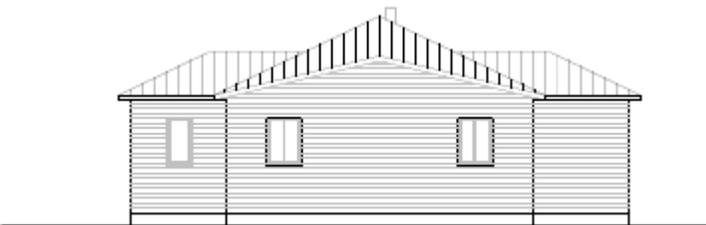
West

Figures 4.27 to 4.30: Elevations of the 'Starter House'. (Design: W Semple)

of my first experience with visiting homes in an Indigenous community.

During my first trip to the Iqaluit and the north, I had wanted to meet some local Inuit families in the community. One of the people attending the design charrette that I was helping to facilitate was an Inuit man who was one of the local police officers, who had been invited to come and share aspects of Inuit culture. After his talk, I approached him, asking if he could introduce me to some Inuit families so that I could visit some houses. He smiled at my request, sharing with me that Inuit were both friendly and open and that all I needed to do was to knock on any door and introduce myself as people would be happy to meet with me and invite me into their homes.

While this seemed like good advice, I was to learn later that this was not what most Inuit would recommend. Inuit friends that I would later meet suggested that I simply open the door and walk in. As one of them shared, 'as soon as you knock on the door, the people inside will assume you are from the police or the government'. That gesture I knew would create an immediate divide between me and them and was something I wanted to avoid. As shared by Jean Guy Goulet when writing of the Dene; "They opened the door to my house without knocking, much as I do when visit them at their house, because knocking suggests that you have something to hide."[6]

Once in the house in Eastmain I stood and waited with others for a place at one of the tables that filled the small living area of the house, where piles of

roasted bear meat and bannock were being consumed. While I was the only non-Cree there, I was welcomed and given a plate and a place to sit at one of the tables. I could not help reflecting on the design of this house, and how poorly it accommodated this event. I started a conversation with the owner of the house, who was intrigued as to how I had gotten there, and whether I liked the bear meat I was trying. I told him that I was enjoying it, and wondered where it was butchered and cooked. He shared with me that the bear had been cooked outside in their smokehouse and that it had been butchered in the basement of the house where there was one more bear that still needed to be butchered. I imagined the wrestling match that getting the bear into the basement must have entailed, seeing this as another example where Indigenous housing has failed to meet the needs the families living in them. The design of the house did not reflect the inherent relationship that the Cree and their hunting culture have with the land.

SMART CITY CHALLENGE
In November 2017 the federal government launched the Smart City Challenge (SCC). As imparted on the Smart Cities Challenge website, the SCC was "a pan-Canadian competition open to all municipalities, local or regional governments, and Indigenous communities (First Nations, Métis and Inuit).   The Challenge empowers communities to adopt a smart cities approach to improve the lives of their residents through innovation, data and connected technology."[7] The SCC was to be a two-stage process with submissions for the first stage due in April 2018. The SCC hoped to:

- Realize outcomes for residents
- Empower Communities to Innovate
- Forge New Partnerships and networks
- Spread the Benefit to all Canadians [8]

The Cree Nation of Eastmain made the decision to enter into this competition and to focus on the issue of housing; using this as an opportunity to develop more housing prototypes, to improve the energy performance and durability of housing, and to provide a source of long-term funding for housing in the community. The Cree Nation of Eastmain's Chief, Kenneth Cheezo, wanted to find a comprehensive solution to the housing crisis in order to improve community well-being. This included ways to:

- Improve the quality and durability of housing;
- Dramatically decrease the housing backlog;
- Reduce the current costs for construction and home ownership;

6   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha*, 53

7   Smart City Challenge, Accessed in https://www. infrastructure.gc.ca/cities-villes/ index-eng.html

8   ibid
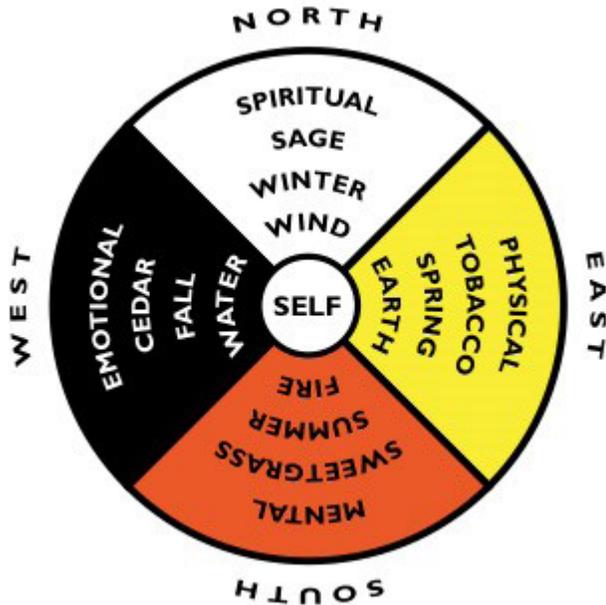
Figures 4.31 The Traditional Healing Circle

Figure 4.32: Plan for the 'Elders' Community'
(Design: W Semple).
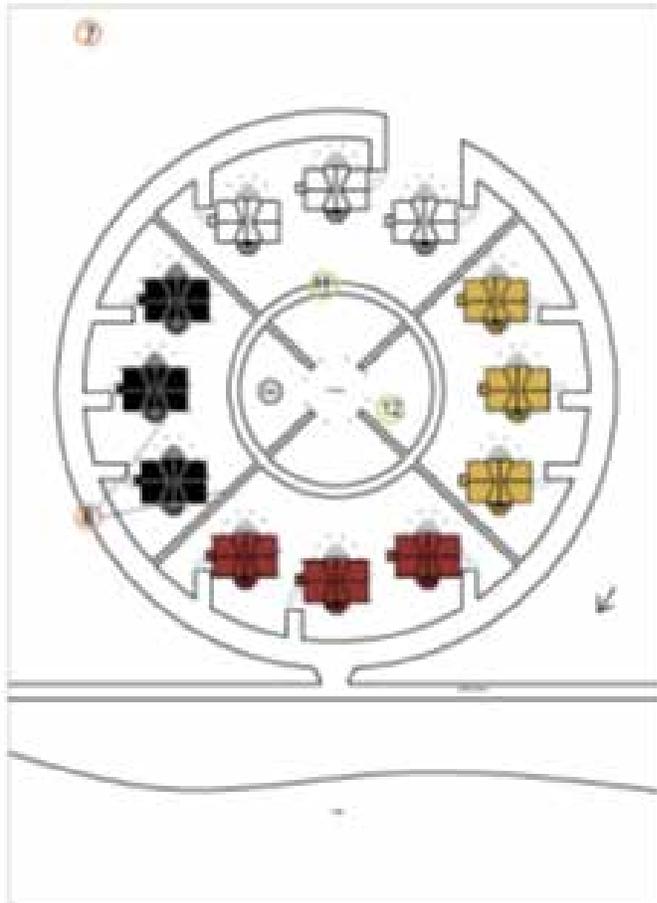
and
• Ensure that Cree culture and traditions are respected.

CREE NATION OF EASTMAIN'S NET ZERO ENERGY HOUSING PROGRAM

In many ways, addressing the issue of housing shortages within the SCC was a logical challenge for the community of Eastmain to take on. Numerous studies have drawn attention to the significance of housing issues in the north[9] and were highlighted by Andy Moorhouse, President of the Kativik Municipal Housing Bureau, when he stated "Housing is not the only issue, but all issues relate to housing."[10] In spite of this, little consideration has been given to the development of architectural designs or design processes that reflect northern cultural realities. As Yellowknife architect Gino Pin wrote, "The transition from the basic nomadic settlement (a coming together of family), to the contemporary settlement (orchestrated by the planner), has not been a success."[11] Northern research has also identified that Euro-Canadian forms of housing are incompatible with the social structure of Inuit families.[12] The significance of this vital subject was highlighted in Bill C-304, a private members bill before Parliament that proposed the development of a National Housing Strategy when stating "It will provide a First Nation perspective in a long-term strategy that addresses the need for more culturally-appropriate social housing …"[13]

In its report on *On-Reserve Housing and Infrastructure: Recommendations for Change the Senate Committee on Housing* highlighted "the need to examine current initiatives to addressing housing on

reserve."[14] Citing one example of the challenges, the committee noted that though $300 million had been set aside by the federal government in a trust fund for the First Nations Market Housing Fund in 2008 and this was expected to result in 25,000 new homes in 10 years, the most recent data provided to the committee was that only 99 homes had been built by May 2015.[15] The Senate highlighted that new approaches to housing, including innovative designs, alternative programmes and new methods of implementation are needed. Research on northern housing has also recognized that Euro-Canadian forms of housing are incompatible with the social structure of Indigenous families.[16]

In addition to high construction costs, the high cost of operation and maintenance remains as a significant deterrent to home ownership and the development of home ownership programs in First Nations communities, including Eastmain. New homeowners are often challenged to keep up with the high operating costs of home ownership, costs that are often significantly subsidized in the rental and social housing programs that are provided by the government and the communities.

Adding to the ongoing concerns with housing shortages and affordability are the issues of energy efficiency, energy security and community resilience. Remote communities such as Eastmain are subject to frequent power blackouts that can extend for days at a time. During these power outages, the vast majority of houses (most of which have been constructed to meet the 'minimum' requirements of the building code) will freeze up within a matter of hours. Due to the severe northern climate, these same houses use significantly larger amounts of energy than houses in the southern part of the country, markedly contributing to climate change. In addition, in order to undertake hunting activities, an important cultural practice for the Cree and the source of a significant amount of food for the majority of families, many houses can be left unoccupied for considerable stretches of time, leaving the homes vulnerable to equipment failure, break-ins, and other unforeseen problems.

To address the wide range of housing issues that exist in the community and to take advantage of the Smart City Challenge, the community of Eastmain initiated the development of the Eastmain's Net Zero Energy Housing Program (ENZEHP).[17] From its' beginning the ENZEHP had two major components: the design and construction of a culturally appropriate 'smart' net zero energy houses, and undertaking net zero energy retrofits on existing houses in the community with the intention of developing the 'next generation' of housing. As I had initiated the process of

9   Knotsch and Kinnon, If *Not Now ... When: Addressing the Ongoing Inuit Housing Crisis in Canada,* 1

10   Ibid, 1

11   Strub, *Bare Poles: Building Design for High Latitudes*, 1

12   Dawson, *An Examination of the Use of Space by Inuit Families Living in Arviat, Nunavut.*

13   Assembly of First Nations, *Bill C-304 – An act to ensure secure, adequate, accessible and affordable housing for Canadians*

14   Standing Committee on Aboriginal Peoples, On Reserve Housing and Infrastructure: Recommendations For Change, 2

15   Ibid, 2

16   Dawson, *An Examination of the Use of Space by Inuit Families Living in Arviat, Nunavut*

17   Cree Nation of Eastmain, *The Cree Nation of Eastmain's Net Zero Energy Housing Program*.

Figures 4.33 to 4.35: The construction of a new sabtuan (W Semple)

developing some new housing designs that reflected aspects of Cree culture, I would continue to engage people in the community in developing the designs for the culturally appropriate net zero energy housing proto-types that would serve as models that would be used throughout the community. This included revising the plans for the Starter House and the House for Cree Elders in order to meet the net zero energy perfor-mance levels, and developing the designs for the Accessible House, a Home Owner-ship prototype and the Six Plex Row House. This process was well underway at the time of the SCC application.

In addition to the designs being developed, the SCC team would create a detailed costing regimen that would apply the funds from the Smart Cites Challenge towards the subsidization of home ownership by using these funds to pay for the cost difference between the construction of a similar sized 'Code House' versus that of the Net Zero Energy House. This would enable more families to move into affordable and sustain-able home ownership, freeing up existing housing stock and reducing overcrowding. This effort would also significantly increase the number of net zero energy houses in the community, dramatically improving commu-nity resilience.

The second component would involve carrying out a net zero energy retrofit on an existing home in the community. This would involve identifying a house and carrying out a detailed plan to develop a 'building system' for undertaking net zero energy retrofits on existing houses throughout the community. Overall, the Eastmain Net Zero Energy Housing Programme has the goal of creating the most energy efficient communi-

ty in the Canadian north, setting a standard that dramatically raises the bar on what is possible in remote Indigenous communities in Canada. In addition to the benefits to the Cree Nation of Eastmain, it was strongly intended that the Net Zero Energy Housing Programme be directly applicable and useable in other remote Indigenous communities in Canada.

As one of the principle members of the CNE's SCC team, my focus would include community engagement, design development of the housing prototypes, identifying the building methods and technologies required to meet the net zero energy technical and performance levels, and the proposed capacity building and training requirements of the project.

SIX-PLEX
As noted earlier, multi-unit housing, while not new to the north, has begun to gain some favour with both northern communities and housing agencies as a way of providing more affordable housing. From a social and cultural perspective however, due to social and cultural issues, multi-unit housing remains unpopular in remote Indigenous communities. By utilizing an extensive community engagement process, we hoped we could dissuade some of those concerns. The design process for the Eastmain multi-unit Net Zero Housing prototype would identify and make significant efforts at addressing the social and cultural needs of the families who would live there.

In the autumn of 2017 as part of developing our submission for Stage One of the Sustainable Cities Challenge, I started up some initial work on the preliminary design for a six-plex. The six-plex would be designed to provide for social housing units, rent to own units as part of a community led rent to own programme, and affordable home ownership units for families interested in entering the housing market. Home ownership was to be a key component of the SCC submission and was being promoted by Mark Tivnan and the Chief, Kenneth Cheezo. The CNE leadership hoped that the rent to own units would be part of a programme that would transition families out of social housing and into homeownership, while the homeownership units would be part of the market for first time homeowners.

In January 2018, I initiated the engagement process for our SCC submission, beginning with a design charrette for the Six Plex. For the one-day charrette, which was held in the large meeting room at the Band Offices, we invited several couples with housing interests that included home ownership and social housing, as these were the Eastmain residents that the housing units in the six-plex were being designed for. I shared the
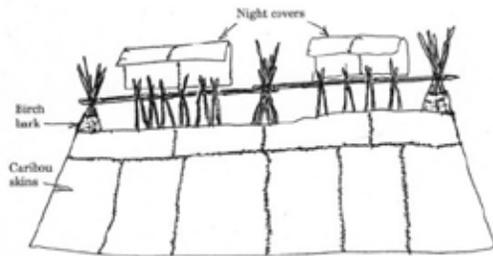
Figure 7: *Shaapuhtuwaan with three hearths*
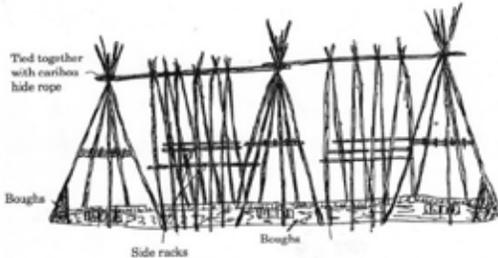
Figure 8: *Shaapuhtuwaan with three hearths*

Figures 4.36 snd 4.37: The traditional Cree Cree shaapuh-tuwaan with three hearths

(Source: Georgkish, p.14)
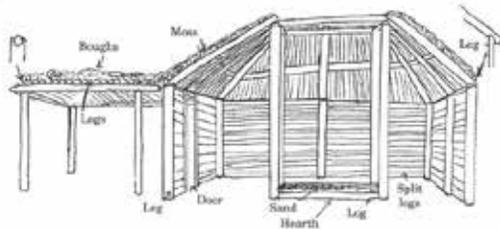
Figure 53: *Square kichuhcheaukimiche: interior/side view*
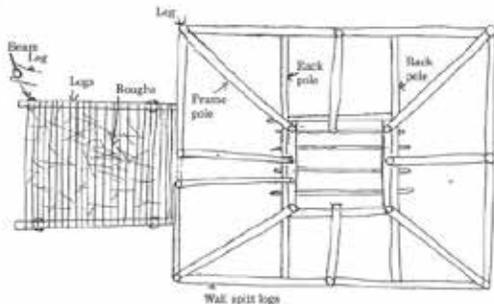
Figure 54: *Square kichuhcheaukimiche: top view*

designs of the House for Cree Elders and the Starter House as these were models that were already completed and demonstrated different examples of how cultural elements can be integrated into housing design. As it was a small group, with each idea raised, I would go around the room and make sure that each person would have the opportunity to speak to that idea. This kept the event informal while also ensuring that all voices were heard. For this the group of young couples, there was consensus on the need for:

• Affordable units for first time buyers
• More social housing units, particularly for young people and young families
• More spaces for activities related to the land
• More storage rooms
• More house design options

They also shared thoughts on issues they felt were important and needed to be better addressed in East-main's housing projects. This included:

• Concerns with soundproof walls
• The need for training in the maintaining of houses
• The need for training in keeping household budgets

They also expressed an interest in more contemporary designs in contrast to the emphasis on tradition that Cree adults and Elders spoke of. As I considered this, I found myself in somewhat of a dilemma; should I develop more contemporary designs that generally take a more modernist approach with minimal detailing, or continue to explore more traditional building forms that incorporate more cultural elements into the design of houses? It was not a surprise that 'needs' were changing and while the views of the Elders and older residents are honoured and respected, it is the young who had the greatest requirement for housing, and the houses designed and built for them needed to meet their needs.

I spent several days after the charrette talking with different people, both young and old about my dilem-

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ma, asking each person to share their thoughts on this. The conclusion that emerged was likely expressed best by Stanley Gilpin, the Housing Director and father of six Cree children. Stanley shared that each of us goes through different stages in our lives. When we are younger, we are spreading our wings and looking for new things, often rejecting our past. But as we grow older, we begin to look at our past and our traditions differently and begin to draw more from them as they are needed for our growth as people. From Stanley's perspective, while this may be the way that young people see things now, this will likely change as they get older, have children and begin to reflect more of what it means for their children to be Cree. Traditionally, it was important to think in terms of generations, not just of the moment. Stanley pointed out there will come to a time when the young people of today will be looking towards their tradition, and we must ensure that tradition is there to see. This was Stanley's experience and it was the experience of others as well.

Through the conversations on culture and housing, it was concluded that Cree cultural elements were needed on the six-plex and should that perspective change in the future, house designs could be developed to reflect that change. I was encouraged to move ahead. Throughout these conversations there were reminders that the efforts to bring more culture into the design of buildings in the community were in keeping with the image of a traditional community that Eastmain is trying to project and hopes to use in its promoting of tourism in the community. That this six-plex would be the first building you would see as you enter the town, passing the sign that says 'Cree Nation of Eastmain – A culture rich in traditions, a Cree community for all to see', added to the significance of this exercise in reflection.

But this did raise questions that would need to be addressed by the community with regard to young people. Some of these include:

- How do we balance tradition with contemporary approaches in the design of houses and the community?
- How do we get the youth to be interested in the Cree cultural aspects of this project?
- As young people feel left out, how do we get more young people involved?
- As the project develops, how do we ensure that the jobs and capacity building are directed towards the young?

In developing the design for the six-plex I began by initiating work on the floor plan, consulting with Mark Tivnan on each of the three housing
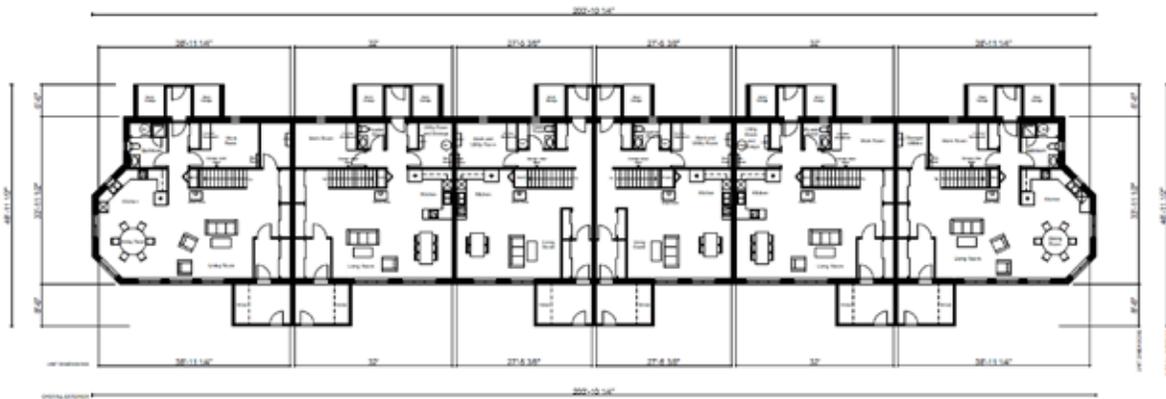
First Floor

Second Floor

South

North

Figures 4.38 to 4.43: Six
Plex Drawings (W Semple)

West   East

types (i.e. Social housing, rent-to-own, and home ownership models) that would be incorporated into the six-plex. As part of this exercise, I began to consider and address the recommendations that were raised in the Cree Café, with extra bathrooms, working areas, storage areas, wider halls and doorways, and larger bedrooms dominating the list.

While working on the floor plans, I also started work on the elevations and the aesthetics of the building, once again turning to the sabtuan as a potential traditional Cree building form to utilize (Figures 4.33 to 4.35). In many ways, the sabtuan was a natural fit for a multi-family building. Traditionally, the sabtuan was often built to house a number of families and could contain numerous hearths (Figures 4.36 and 4.37). While the six-plex being designed would not incorporate the communal aspects of housing that were how families would have lived in the traditional shaapuhtuwaan, the imagery of multiple hearths was still appropriate for this project as this reflected the strong support there was in the community for installing a wood burning stove in each unit. While the woodstoves would pragmatically serve as a back-up heating system to address the power blackouts that commonly occur in the winter months, this gesture also served as a symbolic connection with the land, linking culture and the environment with the building contributing to the sustain-ability of both (Figures 4-38 to 4-45).

Knowing that the federal governments funding for housing was both unpredictable and almost always inadequate, I began to work in a flexibil-ity that would allow the six-plex to adapt to funding constraints as they arose. The use of a row house would provide one level of flexibility, providing the potential for any future multi-plex to use any combination of three housing types being used in the six-plex. The second level would involve providing an option of reducing the size of the units if adequate funding was not available. To do this, I included all of the elements that were raised by participants who joined in the conversations at the Cree Café (i.e. storage areas, work areas and second bathrooms) into a single-story addition that was added on to the north side of the building (marked in yellow on Figure 4.46).

The funding guidelines used by CMHC and ISC (Indigenous Services Canada) specify, for example, the maximum square footage that houses with different numbers of bedrooms can have as well as the maximum size of each of the rooms. It should be noted here that small bedrooms and bathrooms are continually highlighted as issues in the design char-rettes. While the floor areas of each of the housing units would meet the CMHC/ISC guidelines if the single-story addition was not included, and

Figures 4.44: Six Plex South Perspective (Design: W Semple)

Figures 4.45: Six Plex North Perspective (Design: W Semple)

Figures 4.46: Six Plex First Floor Options (Design: W Semple)

would not if they were, these areas reflected the additional areas that participants in the sessions listed as housing needs. I was to raise this point with the community leadership and with CMHC and ISC, as this provided us with a great dilemma. While the government agencies were encouraging increased amounts of community engagement (e.g. CMHC funded the initial housing design charrettes), funding policies and limited funding for the building of new houses made adding any of these into new housing almost impossible. I raised the question more than once; if we were not going to be able to deliver on any of these 'asks' then why were we engaging the community? Experience has taught me that this might be worse than not asking at all, exposing what Sherry Arnstein labels 'tokenism' as "under these conditions they (participants) lack the power to ensure that their views will be heeded by the powerful."[18]

HOUSING FORUM
In late February 2018, the Cree Nation of East-

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main hosted a Housing Forum in order to consult with the community on the development of the Eastmain Net Zero Energy Housing Program and the proposal that would be submitted to the Smart City Challenge.

As was the usual form for these kind of events in the community, we began with a prayer that was delivered by an Elder from the community. This was followed by presentations that provided background information for the Cree Café discussions that would follow. I delivered a presentation on the Smart City Challenge and the Cree Nation of Eastmain's proposed entry to this national competition, and on the work that I had carried out on the design of the Six Plex that built upon the input from the design charrette that I facilitated in January. The presentation covered the following topics:

- An introduction to the Smart City Challenge
- Eastmain's proposed challenge statement and the outline of the Eastmain project
- An overview of 'What is a net zero energy home'
- Solar energy and why it makes sense in Eastmain
- Lessons learned from zero energy buildings that have been constructed across Canada over the past 10 years
- Design drawings of the proposed Six-Plex
- Close-ups of the floor plans for the Home Ownership Unit, the Rent to Own Unit, and the Social Housing Unit, the proposed housing types that would be included in the Six Plex
- An overview of the benefits of a net zero energy home in Eastmain including;
- why a net zero energy project is being proposed for Eastmain
- how a net zero energy home addresses the climatic and cultural needs of the residents of Eastmain and other remote northern Indigenous communities
- the design and technical features that address the issue of energy security and the community's connections to the land.
- An overview of the proposal to deliver net zero energy features and technologies to the retrofit of existing houses in the community through the delivery of a Super Energy Efficient retrofit program
- Examples of culturally appropriate, super energy efficient homes that have been designed and built in other remote northern communities, including the design process used and the cultural features that were incorporated into the design of the houses. Projects included:
- The Arviat, and Inuvik Northern Sustainable Houses
- The Cold Climate Housing Research Center's Northern Sustain-

16   Arnstein, *A Ladder of Citizen Participation,* 4

18   Cree Nation of Eastmain, *The Cree Nation of Eastmain's Net Zero Energy Housing Program*, 63

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Figures 4.47 and4.48: Eastmain Housing Forum (W Semple)

able House projects in Quinhagak and Anaktuvuk Pass

•   Design drawings of Eastmain housing prototypes that have been developed from previous charrettes, meetings and house visits. This included:

-       The Single-Family House prototype
-       The House for Cree Elders
-       The Starter Home

There was a very good level of attendance at the Housing Forum and considerable discussion on what net zero energy meant housing and the rationale behind making this a target for housing in the community (Figures 4.47 and 4.48). People approved of the housing designs while continuing to raise questions with regard to the costs of building and operating a home. When I talked with Eastmain residents on the reasons why net zero energy performance made sense, the idea of significantly enhancing the resilience of houses in the community struck a particular chord; the point that it would take days rather than hours (the current condition), for a net zero energy house to freeze up when power outages occurred, and that it would only take a small wood stove to keep a net zero house warm, piqued the interest of a number of many residents who were in attendance. The idea that a house could provide ongoing and reliable shelter during the sometimes-frequent winter power outages was a compelling rationale for many people.

In support of the CNE's submission to the SCC community members approved a Resolution supporting the CNE's participation in the Smart Cities Challenge. "This included the implementation of an NZE Housing Program and the construction of an NZE Six-Plex. After the Resolution was adopted, community members were divided into four discussion groups where they provided more detailed input on the Smart City Challenge and the CNE NZE Housing Program."[19] Topics discussed by community members included;

▪ The Smart Cities Challenge
▪ The proposed NZE housing program
▪ Energy efficiency targets, technologies and the building systems used to reach these targets
▪ Lessons learned from other successful NZE projects in Canada
▪ The challenges facing remote northern communities in attaining NZE targets and their relationship to the traditional lifestyles
▪ Housing design ideas and principles with respect to the proposed culturally appropriate Six-Plex
▪ Community resiliency and the impact NZE housing can have

- The importance of capacity-building and training to create a sustainable housing program
- The cost/benefit of an NZE program for the Cree Nation of Eastmain
- Smart home technologies
- Housing maintenance
- Views of local builders on NZE building systems[20]

SMART CITY CHALLENGE SUBMISSION

Following the Housing Forum, we continued to develop the Eastmain Net Zero Energy Housing Program, working towards the April 2018 SCC application deadline. With the Six Plex design well underway, our SCC team began to focus on other issues and to reach out to potential industry and government partners. One of the principle technologies being explored was the potential for setting up a local pre-assembly facility for the construction of the wall system that would be used on the prototype houses and the Six Plex. We also began to examine the potential for carrying out net zero energy retrofits on existing houses as part of this initiative. To implement this, we would use the same pre-assembly facility to manufacture the wall panels for the NZE retrofits, installing these to the exterior of existing houses. From my personal experience of working on northern housing projects, the comprehensive program we were developing was perhaps the most ambitious energy efficient housing program to be carried out in an Indigenous community in Canada.

As part of developing our submission to Stage One of the SCC, we identified a number of local issues that would be addressed by the Net Zero Energy Housing Program. This included:

- Home Ownership. Facilitating home ownership by delivering dramatic reductions in high cost of operating a home. The program would subsidize the additional construction cost of going to net zero energy performance as compared to code compliant construction.
- Housing Affordability. Setting the stage for significant improvements in affordability by developing a net zero energy retrofit prototype. This would use of a building system that can be constructed in the pre-assembly facility in the community and used to implement the community wide energy housing retrofit programme.
- Community Resilience and Energy Security. Significantly reducing in the time it takes for a house in the community to freeze during the frequent electricity outages that occur in the community during the extremely cold winter months.
- Technological Innovation. Several approaches will be undertak-

19   Cree Nation of Eastmain, *The Cree Nation of Eastmain's Net Zero Energy Housing Program*, 63

20   Ibid, 63
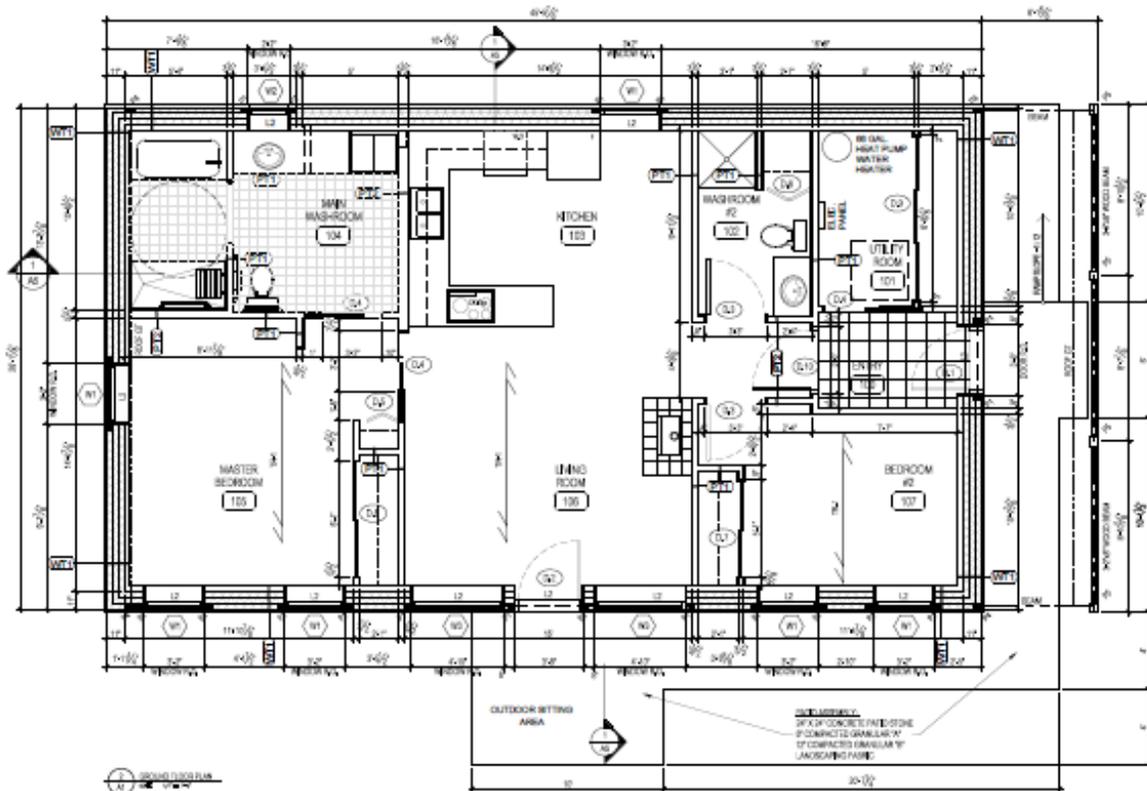
Figures 4.49: Accessible House: Floor Plan (Design: W Semple)

en to develop innovative approaches to northern housing. These include:

- Development of a super energy efficient building system where components of the system can be pre-built in a warehouse located in the community

- The evaluation, adaptation and use of technologies (e.g. solar, heat pumps etc.) that will be needed to attain the net zero energy performance level of proposed prototype net zero energy houses in the climate of Eastmain, and for the net zero energy retrofit that will be carried out in an existing house in the community.

- The evaluation and adaptation of smart home technologies that meet the needs of both the Cree way of life and the severe northern climate. This includes the ability to monitor the home from a remote location, the use of sensors (i.e. CO_2 and humidity) to control the operation of the household ventilation system; and a monitoring system that will track the power supplied by the photovoltaic system and the electricity usage patterns in the house.

• Employment and skills development. With a focus on creating the skills in the community to build this 'next generation' of northern

Indigenous housing, the project will generate employment and build the capacity necessary to construct, maintain and sustain the net zero energy houses in the community.

• Supporting Indigenous Culture. Through a programme of community engagement, the designs of the prototype houses have been developed to meet the cultural/social needs of Cree families, and to ensure pride in and sustainability of the program.

• Addressing Climate change. With the global need to reduce carbon emissions from the atmosphere, the community would lead by example in addressing this global issue.

• Transferability. This Net Zero Energy Housing Programme will be a model that can be duplicated by other Indigenous communities, northern cities around our nation and the rest of the world.[21]

21   Cree Nation of Eastmain, The Cree Nation of Eastmain's Net Zero Energy Housing Program, 41

There were more than 200 applications to Stage One of the Smart City Challenge. In June 2018, Infrastructure Canada announced that that there were 20 finalists in the three different categories, with the Cree Nation of Eastmain selected as one of five finalists in the $5M category. Eastmain would receive a grant of $250,000 to develop the final proposal. With the SCC announcement, I continued to work on the finalizing the designs of the housing prototypes, and initiated plans for developing the process for undertaking an initial net zero energy retrofit on an existing house in the community. I continued this work through the summer of 2018 when the community made the decision, in order to address the housing needs of a young handicapped resident, to design an 'Accessible House' for this young man and identify this house as the initial single-family home to be built under the Eastmain Net Zero Energy Housing Program.

DESIGNING THE ACCESSIBLE HOUSE

Throughout the summer of 2018, the design for the Accessible House was developed while consultations with the local builders on the challenge of building net zero energy housing in the community were also started. While I had facilitated design charrettes for the other housing prototypes that were developed, I did not organize a design charrette for the Accessible House. As Damian Moses, the young man who the house was being designed and built for, was the only non-Elder who was in a wheelchair, I visited Damian's home, spending time with both Damian and his mother who was one of his principle caregivers.

Building on this visit, I utilized the general design of the Elders House as a template for developing the floor plan for the 'Accessible House' (Figure 4.49). This meant reducing the floor plan to meet the funding

South

North

East

West

that was going to be provided by CMHC for the project, while addressing all of Damien's accessibility needs. Throughout the summer of 2018, the design for the Accessible House was completed (Figures 4.50 to 4.53) and work began on evaluating developing the construction details and evaluating equipment required to meet the net zero energy target.

As shown in Figure 4.54, the kitchen and bathrooms for the house will be fully accessible with features that include.

- House Profile. Using a crawlspace and some special detailing to lower the profile of the house, I was able to eliminate the need to install of a wheelchair ramp, an expensive component that also has to be kept clear of snow during the winter months.
- Covered Entrance. The main entrance (from the east, supporting Cree tradition) is protected by a large covered area that will reduce snow buildup around the entrance.
- Bathroom. A wheelchair accessible shower stall and vanity, as well as a front-loading washer and dryer.
- The Kitchen. A wheelchair accessible stove top, counter and a wall mounted oven.
- Interior Doors. All interior doors will be a width of 38 Inches,
- Interior hall. The interior hallway with have a width of 48 inches.

Figures 4.50 to 4.53: Accessible House: Elevations (Design: W Semple)

- Exterior Doorways: Both entrances will have low profile door thresholds and lead onto a paved walkway that is at grade level.
- Wheelchair Turning Radius. All rooms, except for the second bedroom and bathroom that are for a caregiver or family member, have been provided with five foot turning radiuses
- Windows. Lowered to provide for views when sitting in a wheelchair
- Electrical. All outlets are raised and switches lowered for ease of use from a wheelchair

I had spoken with Damien several times about the house, sharing with him that part of the intent in designing this house, was to develop a prototype that could be built for others in the community that might face the same challenges. He seemed very pleased to hear this and was happy to assist us.

ANNUAL ASSEMBLY 2018

In August 2018 I returned to the community to provide an update on the Smart City Challenge and our preparation of the final submission. With our selection as an SCC finalist and my active participation in the Sundance Ceremony, my relationship with the community had evolved. I had demonstrated that the work that I was doing was beginning to benefit the community, and that I also had some practical skills. I had shown my great appreciation for Cree culture and support for Cree rituals and traditions. People were beginning to sense that I was a friend and an ally, and began to treat me as such.

At the Annual Assembly, Mark Tivnan and I gave a presentation where we updated the community on our submission to the Smart City Challenge and on the significance of being selected as a finalist. We once again outlined the key points in the proposed Net Zero Energy Housing Program (NZEHP) and our plans for developing the final proposal. I shared the preliminary designs for the six-plex and the Accessible House, highlighting that this would be the first single family house that would be constructed as part of the NZEHP. I provided some detail on the accessibility features this would include and some of the special considerations that I looked at while working on the design. There was nothing but positive comments on the idea of providing a house for Damien and the overall goal of developing this house as a prototype for people with accessibility challenges.   To me this was yet another positive reflection on the Cree of Eastmain and the priority they place on taking care of those who were most in need. Though Damian had a home, most people were aware of the challenges that the typical small floor
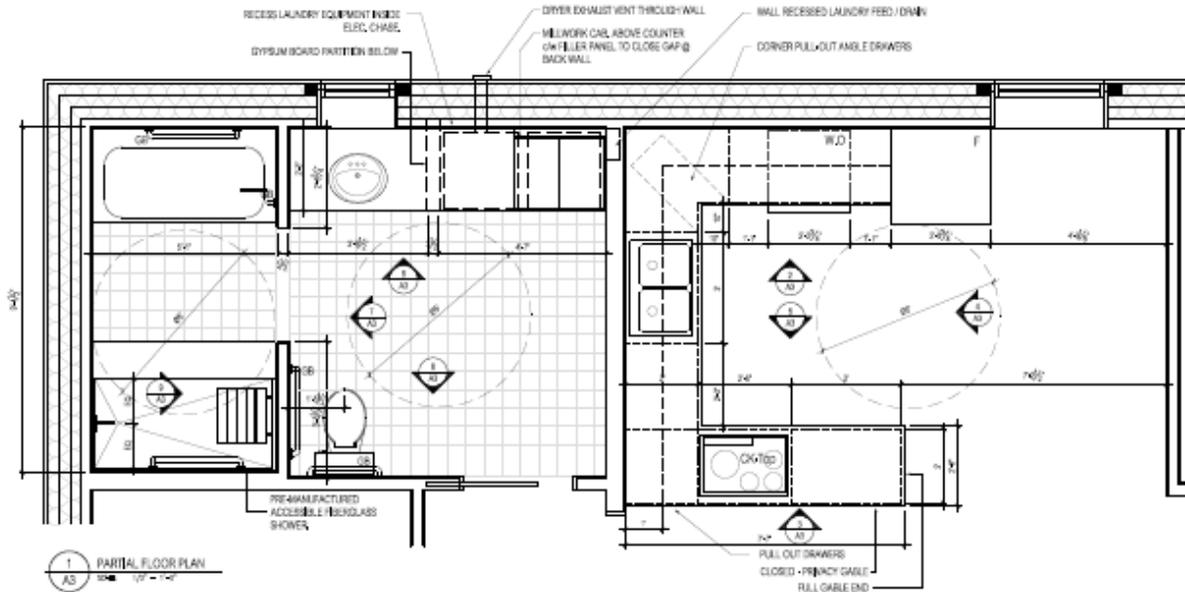
Figures 4.54: Accessible House: Bathroom and Kitchen Plan (Design: W Semple)

plan of existing houses posed to anyone in a wheelchair. A solution for this was welcome.

There were also positive comments on the preliminary design for the Six Plex and the cultural features that were included. People expressed appreciation for the use of the sabtuan for the building form, and the other Cree features on the building. We were also seeking approval from the Chief and Council for building the first Six Plex as early as next year, and approval from the community for the design direction that had been taken was an essential part of that. Again, we used the 'Cree Café' to gather more detailed input on the designs, and our plans for the rolling out Eastmain's Net Zero Energy Housing Program if we won the competition.

I was impressed with the Assembly, the Cree Café and the level of participation it generated. As one person shared with me, unlike a town in 'the south', many people attend the Eastmain assemblies. While food is always served and there are draws for prizes at these events, people come in significant numbers in order to keep up with conversations that are going on in the community and with the decisions that are being made by the Chief and Council. I had grown to understand that the food and gifts are part of a way of life that focuses on the collective and sharing, as well as the importance of celebration and acknowledging the efforts that people make. When everyone broke into 'Cree Café' groups, each to answer 10 questions that Mark, Stanley and I had posed, there was a great deal of conversation and input from each table. We would use this input as we developed the final proposal for the Smart City Challenge.

ENERGY MODELING

With support and input from the community for the Net Zero Energy Housing Program, I began to address some of the technical challenges of the project: identifying the wall system for constructing the houses and evaluating the net zero energy status of the each of the housing prototypes, starting with the Six Plex and the Accessible House. I had been tracking net zero housing projects for some time and had carried out an evaluation of wall systems that had been successfully used on NZE houses in Edmonton, Alberta and other locations across the country. Through this process I had come to know the work of Peter Amerongen, a net-energy zero builder from Edmonton with extensive experience in the field. I engaged Peter and some skillful energy modelling experts to assist in the evaluation and confirmation of the net zero energy status of the Accessible House and the Six-Plex. As part of that process, Peter and I used the energy modelling exercises to the refine the building system, and identify and select the building components and technologies that would be used. We considered the performance and cost of different building components (e.g. windows and heating and ventilation equipment) and the remote location of the community, taking into account the climate of Eastmain and the need for durable, easy -to-execute solutions for delivering good occupant comfort and moisture control. At this early stage, the potential for prefabricating the building system for the houses in a small local warehouse also became a significant consideration. Initial analysis included:

- Examining the wall systems used in other net-zero housing projects
- Drawing from lessons learned on super energy-efficient northern housing prototypes
- Drawing from lessons learned on the modelling of other net-zero energy projects
- Reviewing ongoing research being carried out in this field of work, including
  - Panelized Building Systems for Northern Multi-Unit Residential Buildings, prepared by Cold Climate Building Inc. for NRCan
  - Design and Construction of Multi Unit Residential Buildings (MURBs) in First Nations communities: Challenges and Opportunities, prepared for CMHC
  - Net-Zero Energy Housing: CMHC's Equilibrium Program[22]

When we had selected the building system and the levels of insulation that would be used, I worked with an experienced energy modeller to undertake HOT2000[23] simulations on both the Accessible House and the

22   Cree Nation of Eastmain, *The Cree Nation of Eastmain's Net Zero Energy Housing Program,* 41

23   "HOT2000 is an energy simulation and design tool for low-rise residential buildings. This software is developed by Natural Resources Canada (NRCan) to support the EnerGuide Rating System, ENERGY STAR for New Homes, and R-2000 residential energy efficiency initiatives." The program is used throughout Canada to carry out pre-determine the potential energy consumption patterns on both new and existing building that would be provided, for example, through the use of different kinds and thicknesses of insulation and different air tightness levels of the building envelope. Accessed April 20, 2020, https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-homes/professional-opportunities/tools-industry-professionals/20596
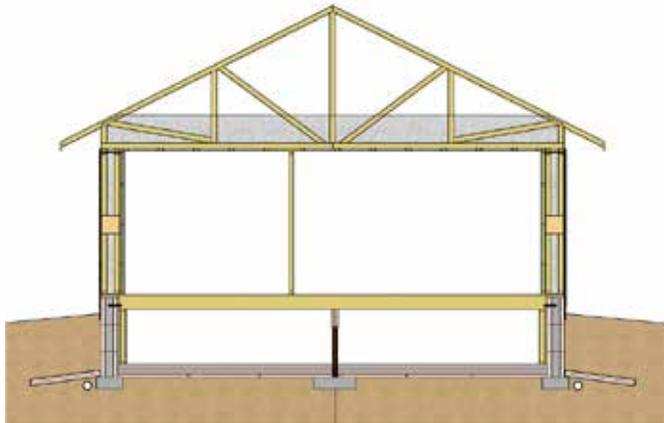
Figures 4.55: Accessible House: Building Section (P Amerongen)

Six-Plex, using the same building envelope details for both and running several iterations on each building as part of this exercise. At times, HOT2000 provided us with results that were puzzling and not consistent with what we would have expected in a northern location like Eastmain. In the case of both buildings, the HOT2000 predictions for peak heating capacity seemed low when compared to the Team's experience with high-performance buildings in Edmonton's milder climate (as compared to Eastmain), while the peak cooling load seemed high. While cooling has become an issue in the height of summer in some northern locations, we were not comfortable with the readings that we were getting. To attend to this uncertainty, I had an additional energy modelling exercise carried out, running the data through 'IES VE', a dynamic energy modelling tool. To explain the departure from expected results, independent longhand calculations were carried out using the hourly weather data for La Grande Riviere, Quebec, a location with similar climatic data to Eastmain. When these calculations favoured the IES VE results, the Team chose values closer to the IES VE results to calculate the net-zero energy performance levels. Based on this modelling exercise, we finalized the design of the building system and construction details, making changes to the roof design to allow for the additional photovoltaics that the calculations showed would be required to meet the net zero energy performance target. A final energy modelling run was then carried out using these selections.

We made the final selection of the other technologies and building equipment that were required to meet the net-zero energy target. This included identifying windows, appliances, lighting and the HVAC system and the photovoltaic system. As stated in our SCC document, "The super insulated envelope, air-tight construction, and energy recovery ventilation system allows for a 90% reduction in annual thermal energy demand intensity relative to typical construction. … This results in an annual greenhouse gas emissions savings of 861 kg CO2 eq for the Accessible House as compared to standard construction techniques. "[24] The remaining 10% would be supplied through energy that would be produced by the photovoltaic system and the air source heat pump.

As previously noted, to meet the energy production requirements, the

roof design of the Accessible House was modified to moderately increase the size of the roof so that a larger solar array could be installed, while maintaining the roof style that was developed for the house. When the energy modelling confirmed that solar energy alone would not enable the house to attain the net-zero energy target, the Team gave significant consideration to the desirability of using an air-source heat pump versus a ground-source heat pump to supply the energy required. Though ground source heat pumps provide a significantly higher level of output, experience had taught me that the complications of installing and maintaining this equipment in a remote location like Eastmain were significant. Even though lower in energy performance, the Team selected the air-source heat pump because of its significantly lower installation costs and maintenance requirements. As a backup system and to provide each household with an additional sense of energy security and resilience, an air tight wood stove would also be installed.

The final energy modelling exercise confirmed that we would meet the net zero energy target with the equipment and components we had chosen and the building system that we had selected and modified. This exercise became the template for what will be repeated for each of the housing prototypes that are being developed under the Eastmain Net Zero Energy Housing Program. When compared to standard Code level construction techniques, this would result in an annual greenhouse gas emission savings of 861 Kg of CO_2 for the Accessible House.[25]

One of the rules of working in the remote communities is to 'keep it simple'. Had we not been reaching for the net zero target we very likely would have continued with the heating practice that is presently used in the community; the use of standard electric baseboards in combination with a Heat Recovery Ventilator (HRV). Though they are not energy efficiently, baseboards are inexpensive, easy to install and foolproof. But to reach the net zero target, some energy production would be needed from our heating system and the energy modelling confirmed that an air source heat pump would supply this. The air source heat pump would also address any of the 'cooling' requirements that, while quite limited, were on the increase in the region due to the impacts of climate change.

THE BUILDING SYSTEM

The remoteness of the community of Eastmain, the resulting high cost of construction and its impact on housing affordability were significant considerations in the selection of the building materials and equipment to be used on Eastmain's NZE Housing Program. Affordability, durability, the capability to be constructed by local tradespeople, and the ability to deliv-

24   Cree Nation of Eastmain, *The Cree Nation of Eastmain's Net Zero Energy Housing Program*, 42

25   Ibid, 42

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Diffusions vents:
5" dia holes @ 12" OC

Siding
Rain screen strips: 1x3 or3/8 ply
Delta Vent S membrane
7/16 OSB sheathing
Double 2x4 framing
12" of Cellulose insulation
1/2" Foil fibreboard sealed
2x3's on edge
R10 Roxul
1/2" drywall

12" x12" OSB Gusset nailed
- min 8 - 2 1/2" per gusset

Delta Vent S water resistant
air barrier sealed as required
with Delta Multiband tape

Foil faced fibre board sealed

R 53 Wall

Figures 4.56: Accessible
House: Wall Details
(P Amerongen)

er the very high level of energy efficiency required for net-zero energy performance were all carefully considered in developing the building system.

The Accessible House and all other houses assembled under the NZE program will be constructed using the following building components (Figure 4.55 and 4.56):

- Walls. A double 2x4 cellulose filled wall including a protected interior air/vapour barrier and an exterior airtight water-resistant barrier (Figure 4.56), with a 2 ½" interior insulated cavity to accommodate services.
- Windows. Fiberglass framed, triple glazed, argon filled sealed window units with 2-Cardinal LoE 272 coatings.
- Attic. R-80 (approximately 24") of cellulose insulation. The ceiling vapour barrier will be installed and sealed to the bottom of the trusses and supported with 2x3 strapping, 24" on centre prior to building the interior partitions, providing a chase for electrical wiring without penetrating the air/vapour barrier (Figure 4.57).

Particular attention was given to the selection of a Heat Recovery Ventilator (HRV). While HRVs have been used in Eastmain homes for many years, a number of performance issues that are typical in northern communities, have arisen. Common amongst these are the improper installation of HRV's, and the decision by occupants to turn their HRV off because of (a) a misperception that these contribute to high energy costs, (b) noise, and (c) the impression that cold air enters the home through the HRV. The poor performance of HRVs in Eastmain, regardless of the reasons, reflects one of the ongoing challenges to maintaining healthy indoor environments in houses across the Canadian north. To address this, training in the proper installation of and operation of HRVs will be carried out during the construction of the Accessible House.

Typically, houses in Eastmain have been built on full-height poured concrete foundations. Full basements have been an ongoing problem in many houses in the community due to mould issues. In addition, it is also a system that is known to be costly to construct. For this reason, there was considerable interest within Eastmain's Housing Department to

explore alternative foundation systems for the houses to be constructed under the NZE program. Detailed costing and energy modelling were carried out on the use of slab-on-grade versus a frost-protected shallow foundations (crawlspace). As the energy modelling showed there was very little difference in the energy performance of the two foundation types, we decided we would consult with the local builders and work with them to collectively determine the most effective approach to take.

BUILDERS FORUM

In December 2018, we held a Builders' Forum that brought together local builders, tradespeople, housing inspectors and representatives from the construction materials supply chain, with the view of ensuring the comprehensive representation of the building industry and participation of local builders in Eastmain's NZE program. We were looking for the input and recommendations from the builders on the foundation that we would use. We also wanted to make sure that the builders in the community were comfortable with the technical and design decisions on the wall system, and with the building components such as the HVAC system.

Consultation with the local builders raised a number of concerns with slab on grade foundations, particularly with regard to having ongoing access to plumbing and other household systems. The builders believed that a shallow foundation was more feasible as the crawlspace it provided made it easier to install and maintain services. In addition, based on our discussions with the builders, we determined that the site preparation for a shallow foundation is simpler and less susceptible to challenging weather in the region. Based on feedback and these other considerations, we decided that we would use a frost-protected shallow foundation (a crawlspace) for the Accessible House (Figure 4.58).

To minimize the use of concrete, an expensive commodity in Eastmain, the foundation wall was reduced to 6" and the under-slab to 3" as both would meet the structural requirements of this small bungalow. The frost-protected shallow foundation will consist of a 4' high, 6" insulated concrete foundation (ICF) wall on an appropriately sized concrete spread footing. The crawl space will be sealed with a continuous air and vapour barrier and will be included in the heated envelope. The effective insulation of the foundation wall is R-43, the under-slab insulation is R-24 and the footing skirt is R-20. Discussions on technical issues included:

Ventilation. The builders acknowledged that only a few communities have the skills required to repair and maintain the HRV's, and that capacity building and training were badly needed. In Eastmain, this had been

2x3 strapping 24" OC
(electrical wire and
boxes to be installed
below 6 mil poly
Vapour barrier)

R 80 Cellulose (~24" thick)

6 mil poly ceiling vapour
barrier sealed at all joints

1/2" Fibre reinforced ceiling
drywall (CD) or equivalent

18"
Truss heel
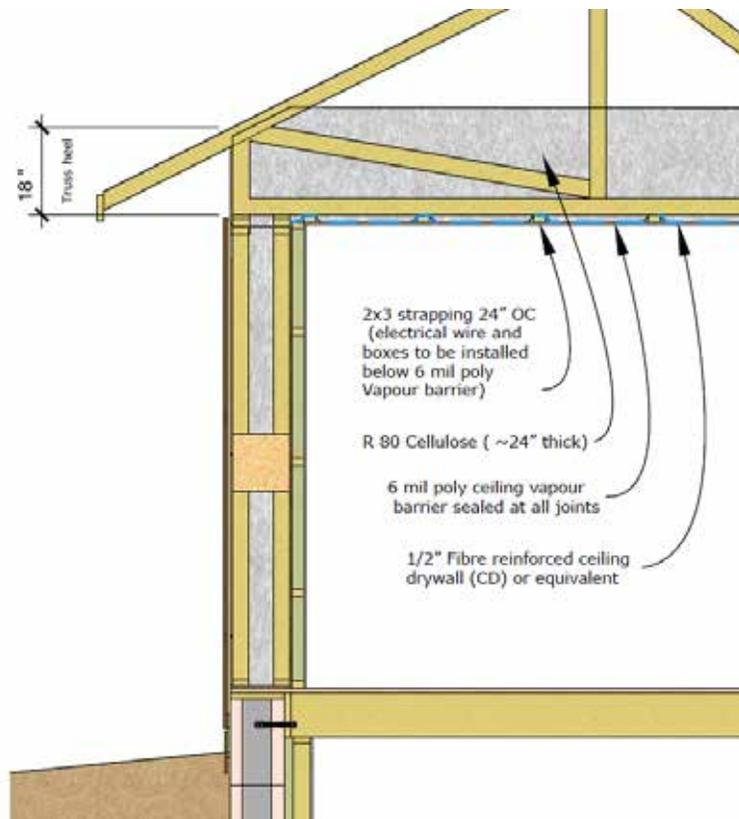
Figures 4.57 Accessible
House: Attic Details
(P Amerongen)

compounded by the fact that outside HVAC firms that have come in to the community to install HRV's have refused to sign off on the hours worked by any local apprentices, doing this to ensure work for themselves over the long term.

Prefabrication Facility. In order to ensure ongoing and long term employment for builders and tradespeople in the community, one of the goals of the NZE program is to develop a long-term market for housing in the community, with a pre-assembly facility being one component of the strategy being proposed to extend the length of the building season and to reduce construction costs. The builders were supportive of this idea as they were entirely susceptible to the fluctuations that occurs in new housing construction numbers from one year to the next that are the outcome of unpredictability in the federal government's funding for housing.

Bulk Order and Storage. An examination of the high cost of construction materials in the community uncovered dramatic contractor and subcontractor markups for the handling and transportation of materials. A major material supplier in attendance at the forum was offering the community the opportunity to make wholesale bulk order purchases of materials. Eastmain was planning of taking advantage of this offer and wanted to develop an approach to this that would work for the community and the builders.

Home Inspections and Inspectors. There is a shortage of home inspectors in all of the Cree communities. We discussed the options for training and developing these skills, recognizing that this is a key component in improving the quality of construction in the community.

As this was a new building system that they did not know, the builders raised concerns with the durability of framing system that we were proposing, Drawing upon his extensive experience with net zero con-

struction techniques, Peter Amerongen noted that net zero building is no longer a new industry and solutions to address these issues have been explored and can be found across the country. Peter pointed out that the details that have been developed and the techniques being used were helping to ensure that building are performing as designed. When properly constructed they were shown to be very durable. While many existing problems are being solved, Peter noted that new challenges continually arise. To address this, one of the goals of the project team was to make sure that a continual sharing of approaches and knowledge transfer occurs and that the local builders are the recipients of it. This was a revealing and positive session for the builders, and they expressed appreciation with being involved.

PROJECT RESEARCH TEAMS

When the SCC finalists were announced, the CNE was approached by the Universities of McGill and Concordia, both with an expressed interest in carrying out research on our Net Zero Energy Housing Program. In January 2019, we brought together researchers from Concordia and McGill, and interested government agencies for a two-day research planning session at Concordia University where both technical and social science research plans and needs were shared and explored. The session was intended to:

- Develop linkages between the social science and the technical researchers and the research projects they would carry out in Eastmain.
- Provide an overview on the Eastmain Smart Cities Challenge proposal and long-term objectives of the community
- Provide an opportunity to contribute to the development of the research objectives of the research partners and input into the development of the final SCC proposal

The session began with a number of presentations from the participants including the Eastmain SCC team, the NRC, CMHC, McGill and Concordia. Presentations covered:

- CMHC northern housing research projects
- NRC northern research projects
- McGill University housing research in Nunavik
- Concordia University Centre for Zero Energy Building Studies research projects and the NSERC research network
- Eastmain's proposed Net Zero Energy Housing Program and the designs of the Six Plex and the Accessible House

6 mil poly sealed around all
penetrations and against ICF blocks

2 1/2" to 3" thick concrete slab

6" of Type 2 EPS: Bottom layer
to be cut to 4' x 4' sheets and
installed with 3/4" gaps for
radon collection

2x10 ledger

6" ICF Wall (2 1/2" EPS 6"
concrete and 2 1/2" EPS)
2x4 frost wall
R22 Roxul batt
6 mil poly Vapour barrier
1/2" drywall

Bottom layer - 4' x4' sheets
with 3/4" gaps for radon collection

4' x 4" XPS skirt frost protection

Figures 4.58: Accessible
House: Crawlspace Details (P
Amerongen)

The session provided an opportunity for Eastmain to share more information on the community's building industry including ongoing technical and capacity issues and the challenge of reducing construction costs, all goals of the Net Zero Energy Housing Program. Engaging with the University research programs was seen as another way of building knowledge in the community.

As well as presenting details on the proposed research that they would carry out as part of the net zero program, both Concordia and McGill brought valuable expertise to the sessions, as well as opportunities that the Cree Nation of Eastmain could benefit from. We had already begun to work with Prof. Mylene Riva from the McGill's Institute for Health and Social Policy, and the Canada Research Chair in Housing, Community, and Health on a proposal for potential research funding from CMHC. With expertise in conducting similar projects in Inuit communities in Nunavik, Nunavut, as well as with the Cree Nation of Nemaskaon, Mylene was very well suited to undertaking the research project in Eastmain. The research would examine Eastmain resident's feelings about housing in the community, with a focus on gathering perspectives on the design of the new net zero houses and how people feel about living in these houses. As there had been too little of this kind of information gathered on housing in Indigenous communities and I was a strong supporter of this work. When we originally met Mylene, we were impressed with her knowledge and sensitivity regarding the challenges of carrying out research projects in Indigenous communities.

Prior to the Concordia session, I worked with Prof. Riva in developing the research proposal which McGill submitted to CMHC to successfully secure the funds needed for the research that McGill would carry out. In our preliminary discussions Mylene was proposing to use 'community based participatory research' (CBPR) as the methodology for the project. Drawing from my own research experience and what I had discerned from Indigenous researchers, I suggested a slight alternative – that we

conduct the research according to the principles of Indigenous Research Methodologies (IRM), while utilizing approaches provided by a community-based participatory research (CBPR) as the 'method' for engaging with Eastmain community members. Mylene immediately understood the emphasis this would give to Indigenous 'ways' while also supporting participatory approaches and agreed with this idea, something very reflective of the conversations we have had and the outcomes that we hoped to see.

MEASURING

The McGill research project will assess the impacts of the NZEHP on the Cree of Eastmain and gather impressions on the experience of living in the new net zero homes as compared to the existing houses in the community. The project will involve all of partners at every step of the project, including: definition of the research question, objectives, and the methodology; data collection and analyses, and dissemination of the results. The research process will include validation steps at every stage, while participatory research will improve the chances of success of the research project. The research be culturally sound and grounded in Cree lived-experience, and will engage with Cree worldviews, knowledge and idioms, with a focus on relationships, one of the fundamental components of Indigenous culture. The research project will document:

- Housing conditions and well-being of individuals, families and of the community at "baseline"; i.e. before the implementation of the NZE housing program
- The change in housing conditions, after the implementation of the NZE housing program (i.e. impact assessment of the NZE housing program)
- The impacts on occupants arising from the change in tenancy and occupancy of a new NZE home or NZE retrofitted unit
- Culturally-appropriate and NZE design vs. housing presently available
- NZE retrofitting houses vs. moving into a newly-built house, vs. moving into an existing house in the community made available when other residents move into private homeownership houses.

Mylene was also proposing to use Talking Circles as a method to ensure that participants are comfortable and are given equal opportunity to share their views. I had not used talking circles in Eastmain, but had in other charrettes and was very interested is seeing how they would work in Eastmain. Talking circles are an Indigenous method of ensuring that all participants that are brought together to share ideas and dialogue have an equal chance to speak. To enable this, an important object such
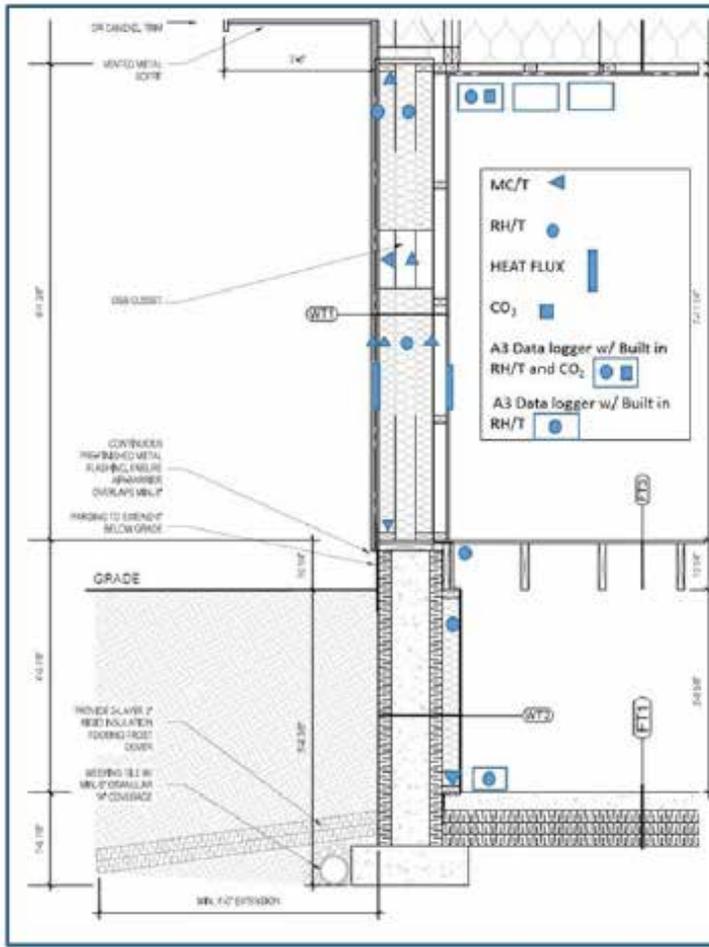
Figures 4.59: Accessible
House: Wall Monitoring Details
(Concordia)

as a feather, a talking stick or other selected object can be used to designate the speaker – whoever holds the object, has the right to speak. "Laara Fitznor explains that the tribal protocol around social encounter within a circle differs from the epistemological underpinnings of a focus group. … While protocols may differ according to tribal group, there is a general set of guidelines around research sharing circles. They normally require the accompaniment of food, and there is a meditative acknowledgment of all those who are in the circle, including the ancestors that sit with us. An elder or cultural person often leads to circle. Like the conversational method, the research sharing circle is a method to engender story. It is meant to provide space, time, and an environment for participants to share their story in a matter that they can direct."[26]

The circle itself is considered sacred and when someone speaks in the circle, it is the task of everyone else to listen respectfully, and without interruption, to the person speaking. It is a process that encourages interaction, openness and relationship building. Examples of the questions that will be asked in the talking circle include:

- What does well-being/health mean to you?
- How are housing conditions important for health/well-being?
- How does housing foster (or not) relationships within the family, within the extended family, within the community, with the land?
- How can housing design and community planning better foster these relationships?

We also addressed the question regarding the ownership of the data and information that would be generated from the project. Again, Mylene and the University of McGill recognized Indigenous protocol, agreeing that all of the data gathered would be owned by the community. While Mylene wanted to right to publish the findings, the community would provide an

overview and retain a right of refusal if they were not comfortable with what was being proposed for publication.

This same issue arose with CMHC. While CMHC, as the funding agency, was willing to cede ownership of the data to the community, they wanted to retain full rights to publish or use the information in any way that they felt was appropriate. The Cree Nation of Eastmain was not comfortable with this and questioned the value of 'ownership' if they had no control over what and how the information could be shared. It was also pointed out that if CMHC wished to engage more with Indigenous communities, something they have expressed interest in, the contract clauses in question would have to change. Through continued dialogue a resolution was found and the contract clauses were changed to give ownership and control over the data to Eastmain. Eastmain would grant CMHC the right to publish, but retained the right of review and refusal. Having been a researcher at CMHC, I knew this was an important and significant move on the part of the agency. But it is also a reflection on the distance that we still must travel in ensuring the rights and needs of Indigenous peoples are not taken for granted.

The Concordia research team was led by Hua Ge, Associate Professor in the Dept. of Building, Civil and Environmental Engineering and part of the Concordia Centre for Zero Energy Building Studies. Concordia would carry out the technical research on the net zero houses, including energy monitoring and evaluation of the performance of the Accessible House and the first Six Plex, and assisting with design and technical revisions that could potentially be carried out in the subsequent housing projects.

In our first meetings with Concordia, there was a great deal of discussion on the 'technologies' that we should use, and on how Concordia felt we 'could only' reach net zero using equipment such as ground source heat pumps. But from the very beginning, I insisted that a particular technology would not drive our final decisions, that the reality of being an isolated northern community would. I shared that, at this point in time, some technologies were too complicated to install and maintain in a remote community such as Eastmain. I remember pulling one of the researchers aside and sharing this with them; that while we were there to listen and learn from them, they needed to do that as well. As the work of the team evolved Concordia became a very positive partner, developing the proposal for the valuable energy monitoring data to be collected on the project. Their work will include monitoring energy use patterns in the house, performance of the ventilation system, hygrothermal analysis of the exterior walls and attic (Figure 4-59), performance of the air source

26   Kovach, *Emerging from the Margins: Indigenous Methodologies,* 124

heat pump and the solar photovoltaic system, and an evaluation of whether the house meets its net zero energy target. Following the monitoring of the first projects to be built, we will use Concordia's input and expertise to refine the building systems, technologies and the designs of the follow up projects. Early on in the process we had, for example, begun to talk about the use of Building Integrated Photovoltaics (BIPV) and other innovations.

Bringing the Universities and the government agencies together brought some unexpected linkages. Eastmain had recently hired a young Cree from Chisasibi who had recently graduated from an Engineering Technician program. The community was interested in keeping him on long term and also saw the potential for eventually having a Cree engineer on staff, something that would be a first for the community. The mention of this idea to both Concordia and the NRC garnered many thoughts on how this could come about, including the potential for enrolling the young Cree engineering technician in engineering studies at Concordia and the potential for work terms at the NRC. Collectively, the discussions laid out a path for capacity building for a skill that both the institutions and the Cree Nation of Eastmain would like to see in the community. It was also an expression of the good will that existed around the table, and the opportunity for the innovation that this project presented.

CHALLENGES WITH MEASURING

In Euro-western society, while scientific knowledge and objectivity have been our strength, it has also been our weakness, as it has often been used to discount and /or discount the validity of emotional reactions and the use of intuition as a legitimate form for evaluating and understanding. Many months ago, I was thinking about how we in the west use energy in buildings, how we measure that use, and how our preoccupation with 'measuring results' often seems to make little difference in our ability to change our overall patterns with the use and consumption of energy in buildings. The growing perception that we need to reduce this consumption is, of course, embedded within the issue of climate change.

Just as we in euro-western society feel no reverence for the earth, we also have no connection to what we take from it. We do not give thanks for the things that the earth provides. In contrast, the 'giving of thanks' remains an integral part of the tradition of Indigenous people today. It is demonstrated through simple acts, such as the act of a hunter who performs a ceremony of thanks for the life of a caribou whose own life is given so that others can survive. Do any of us feel a sense of thanks for the things that we are blessed with? Have any of us, for example,

given thanks for the 'heat' that is in our houses, and what 'the earth' has sacrificed so it could be so? Can we learn to build a relationship with the resources that we use from the land? Can we, for example, build a relationship with energy?' Or are we condemned to see energy as simply an expendable resource, with its use merely a quantifiable exercise to be tracked on spreadsheets?

The very tools and processes we use to measure our energy consumption patterns reveal how far we have to go. I have listened with great interest, for example, to the ongoing debates on the different methods being used by building scientists to measure energy consumption patterns in buildings. While one group of building scientists would state that you cannot get a true understanding of energy use in a house (or building) unless you can control the experiment (i.e. through simulated conditions with no occupants), a second school of thought would take the position that understanding how people live in a building is part the equation and must be included in the analysis. And while this second approach attempts to connect household living patterns with the overall energy use in a building, it misses an essential point; that statistics on energy consumption do little to enhance our understanding of our relationship with the earth. For euro-western societies, energy sources, just like the land, are simply seen as a commodity and are used as such.

REFLECTIONS ON THE FINAL RESULT

Though we had what many people share with us that ours was an excellent and comprehensive proposal, we did not win the Smart City Challenge. This was a great disappointment to the team and the community as a great deal of effort and resources had been put into this effort. From an Indigenous perspective, the SCC did it did have some inherent challenges. These include.

- The Opportunity for long term funding. At present, Indigenous communities rarely know from one year to the next how much finding they will have for housing. In addition to not knowing what housing needs might be addressed, this process makes capacity building and other longer-term initiatives extremely difficult to implement. The $5M. prize money would have provided several years of predictable seed funding that could also have been built on.
- Community isolation and resources. As a small northern Indigenous community with limited capacity (and with a strong an interest in building capacity), entering into this competition required bringing in external consultants to engage with the community and assist with developing the proposal. It also required that the Eastmain team

travel south to engage with potential research and funding partners. Northern travel is expensive, and these costs were significant.

- Competition is not the Indigenous way. The Cree Nation of Eastmain, like other Indigenous communities, uses a consensus-based approach to decision making. An approach that encourages co-operation over competition and engenders the collective decision-making process would be a much more fitting approach to take when working in an Indigenous context.

- Engagement and outreach. I was impressed with the level of 'outreach' that the winning entry in the $5M category, the community of Bridgeport, Nova Scotia, had undertaken. While we had seen engagement as a deep internal drilling down in the community, something that reflects what engagement means in an Indigenous context, the winning entry had done this externally, putting together an impressive list of connections both nationally and internationally that were interested in and supportive of their project. We had not done this as our information and experience would be shared with Indigenous communities; something we could not do until we had something to share, until we could impart what had been 'learned through experience'. The set-up of the Smart City Challenge did not favour the engagement approach that we took.

- The complexities of the challenge. The final proposal's requirement to be an 'implementable ready' project put an incredible strain on resources. For a comprehensive housing project like the NZEHP, this meant carrying out many detailed design, technical and costing exercises, and reaching out to many players outside the community and the region. This was expensive and time consuming.

Yet competing in the challenge was a tremendous experience and, as shared by Mark Tivnan with the Smart City Challenge evaluation team, it improved 'the community's capacity to research, consult, analyze and develop big picture solutions that can be locally implemented'. It also presented opportunities to influence the research process in a positive way.

The development of the Cree Nation of Eastmain's Net Zero Energy Housing Program was the most comprehensive and advanced community engagement process that I have been involved in. The leadership of the community were committed to ensuring that the input from all levels of the community would be sought and that a comprehensive two-way process of information sharing and engagement was put in place. The very nature of the project required buy in from the community, while the decisions made in the support of both community and house design were

largely driven by the ideas and recommendations that were raised by the community.

Had the resources to implement the project been gained through the Smart City Challenge, it is clear that the program as designed, through extensive input from the community, would have been implemented. The efforts made to ensure that the needs of homeowners, those in social housing, of elders and young families reflected the desire to address the housing needs of all members of the community. The efforts at ensuring the building community, the research community and the building materials supply chain demonstrated a sophistication in approach that is rarely seen in what is essentially a small northern Indigenous community. While it is impossible to know what the final outcome would have looked like the process set in place likely would place this project at Level 6 to 7 on Sherry Arnstein's Ladder of Participation– between partnership and delegated power.

5 REFLECTIONS

... on place and culture

Humans are in a time of great ecological and cultural crisis, where the issues of climate change, overpopulation and the ongoing destruction of countless ecosystems are ringing alarm bells that humankind can no longer ignore. Yet in spite the statistics and the growing evidence that humans are on a path that may well lead to our destruction, we cannot seem to find the will or the rationale that would motivate and assist us in changing our course. In contrast to this, when I spend time in Indigenous communities, or reflect on the words of wisdom that are contained in the teachings and stories that shared by Indigenous elders and teachers, I find compelling evidence that the philosophies and values that are needed to solve many global problems do in fact exist. Though euro-western culture has done its best to marginalize and destroy the values of Indigenous people, these values are still very much alive within the living teachings of Indigenous peoples.

While I may use different words and labels, the values and ethics of Indigenous peoples reflect directly on what I personally characterize as the rich connection that exists between culture (the people) and environment (the land). This connection is what Indigenous scholar Dr. Daniel Wildcat, in his important book 'Red Alert: Saving the Planet with Indigenous Knowledge', calls "the nature-culture nexus"[1], the rich symbolic relationship that recognizes the fundamental connectedness and relatedness of human societies to the natural environment and our 'other-than-human relatives' that are part of this. It is what I see and have often referred to as the inherent connection that exists between environmental and cultural sustainability, where the declines of local environments and cultures are intertwined.

Highlighting the importance of Indigenous values and teachings Dr. Wildcat writes, "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."[2] The new 'Guidance Rules' of the International Finance Corporation are but one example of this 'awakening', clearly stating that "Indigenous Peoples' cultures and identities are inextricably linked to the lands on which they live and the natural resources on which they depend. In many cases, their cultures,

identities, traditional knowledge, and oral histories are connected to, and maintained through the use of, and relationships with, these lands and natural resources. These lands and resources may be sacred or have a spiritual significance."[3] As Inuit leader and activist Sheila Watt Cloutier shared in testimony before the Inter-American Commission on Human Rights. " Inuit and other Indigenous peoples continue to be an integral part, and not separate, from the ecosystems in which we live."[4]

As Wildcat notes, this awakening is being threatened by a 'monolithic global consumer culture' that gives no value to place, making natural environments an irrelevant part of its 'homogenizing logic', a logic that gives little if any value to Indigenous 'ways of knowing'. Yet, for those who have been listening, Indigenous people have been speaking on this issue for some time. Appearing in 1977 at the Royal Commission on the Northern Environment, Ojibway Grand Chief John Kelly shared these words.

> *"I do not know if you feel the throbbing of the land in your chest and if you feel the bear is your brother with a spirit purer and stronger than yours, or if the elk is on a higher level of life than is man. You may not share the same spiritual anguish as I see the earth ravaged by a stranger, but you can no longer escape my fate as the soil turns barren and the rivers poison. Much against my will, and probably yours, time and circumstances have put us together in the same circle. And so, I come not to plead with you to save me from the monstrous stranger of capitalist greed and technology. I come to inform you that my danger is your danger. My genocide is your genocide. To commit genocide, it is not necessary to build camps and ovens. All that is required is the remove the basis for a way of life."[5]*

Many Indigenous leaders, researchers and scholars also speak, with great frustration, on the challenge and difficulty of persuading euro-western scientists, researchers and other professionals to expand their world view and give Indigenous ways of knowing equal value; to look closely at what we have to learn from this. As shared by Seneca scholar Sandi Warren,

> *"Until recently there was very little literature that addressed how to get Western scientists and educators to understand native world views and ways of knowing as constituting knowledge systems in their own right. ... It is imperative, therefore, that we come at these issues on a two-way street, rather than view them as a one-way challenge to get native people to buy into the Western system. Native people may need to understand Western society, but not at the expense of what they already know and the way they have come to know it. Non-native people, too, need to recognize the coexistence of multiple worldviews and knowledge systems, and find ways to understand and relate to the world in its multiple dimensions and varied*

1   Wildcat, *Red Alert: Saving the Planet with Indigenous Knowledge,* 30

2   Ibid, 38

3   International Finance Corporation, "Guidance Note 7: Indigenous People", Accessed March 24, 2020, www.ifc.org/ps7

4   Wildcat, *Red Alert: Saving the Planet with Indigenous Knowledge,* 25

5   Clarkson, *Belonging: The Paradox of Citizenship,* 6

In the Canadian north recent decades have shown some advancement in the importance that Indigenous knowledge plays within the scientific community. As shared on the website of the new Canadian High Arctic Research Station (CHARS), "The Canadian High Arctic Research Station (CHARS) campus operated by Polar Knowledge Canada, has been designed and built to optimize innovation in Arctic science and technology, to welcome visitors, and to provide researchers with the accommodation and technical services they need. It's an innovative facility that can support a wide range of research needs – from ecosystem monitoring, to DNA analysis – and where Indigenous Knowledge is recognized as fundamentally important to the co-creation of new knowledge."[7]

Yet, in spite of these advancements, progress with the incorporation of Indigenous knowledge within Euro-western scientific thought has been disappointingly slow. One perspective on this is shared by John Ralston Saul, "the environmental movement seems now to be held back by Western intellectual structures that have sidelined the major questions, like global warming, into a confusion of competing facts and a desperate attempt to analyze these questions from a linear, utilitarian point of view. Any conceptual or holistic approach is ridiculed or punished. But you can only change directions on major issues through a conceptual holistic approach."[8] Coinciding with this is the long list of catastrophic climatic events that mirror the consequences that were predicted by the scientific community's climate change models, only adding to the distress. While we, the descendants of the settlers from the euro-west are not listening to Indigenous peoples, we are also not listening to our own 'experts'.

"We know the laws given to us by the Creator. It is an obligation. It is a duty. It is the future of our (children's) children. We cannot be like the non-Indigenous people who make rules and regulations and change them when they don't like the rule or regulation. We were given the laws by the Creator. We have to live the laws. This is the sovereignty of Indigenous Peoples."

Sharon Venne

One of the challenges for the euro-western perspective is that, when it scrutinizes the land, it does so without any context, that is, without defining any relationship with the land or any natural level of accountability for how it is used or what is taken from it. It is, as John Ralston Saul notes, a crude concept of ownership, with a great deal of control, but with very little responsibility.[9] This has resulted in an accountability that has no recognized or accepted home, but is instead negotiated by players that often have no relationship with the 'place' that is being discussed or the outcomes that are being negotiated. And when a common goal or settlement is reached through bargaining with Indigenous peoples, for example, the settlement or goal is all too often put aside or completely ignored when new 'settler needs' take precedence, the target is seen as unaffordable, or a new settlement target is unilaterally redefined by the outside euro-western player(s). The relationship that Indigenous people

have with the land puts all of this into a completely different context, as accountability is an inseparable part of the process. It is non-negotiable.

In a presentation given in January 2016 at the inauguration of Allan Terramara, the newly appointed president of the Royal Architecture Institute of Canada (who is a strong advocate for Indigenous peoples), author Joseph Boyden shared with the architectural audience how the carving of a totem pole for Indigenous peoples and for the 'white man' would differ, and how this differentiation is a reflection of the perception that each people have of 'the land'. Boyden noted that where a white man's totem would be distinguished by the human image at the top of the pole, symbolizing our dominance over all other things, the Indigenous totem would be distinguished by having the human at the bottom of the pole, symbolizing our dependence on all other things for our survival.[10]

Quoting Indigenous lawyer Sharon Venne, Roxanne Dunbar-Ortiz writes; "We know the laws given to us by the Creator. It is an obligation. It is a duty. It is the future of our (children's) children. We cannot be like the non-Indigenous people who make rules and regulations and change them when they don't like the rule or regulation. We were given the laws by the Creator. We have to live the laws. This is the sovereignty of Indigenous Peoples."[11] The laws that Venne speaks of are the natural laws that bind all living things, laws that are still followed by Indigenous people in Canada.

INTERCONNECTEDNESS

The complexity and challenges of climate change reminds us, if we wish to acknowledge it, of the great interconnectedness of all living things. As I have demonstrated throughout this thesis, considering and emphasizing interconnectedness is a perspective that is held by the Indigenous people throughout the world the world. While the stories and teachings of the significance of relationships strongly express Indigenous peoples' reverence of the land, the importance of mindfulness and the use of ritual and ceremony do the same for Tibetans. Both perspectives highlight that, in order to understand 'reality', it is essential to understand the 'relationships' that support these realities.

The idea that the human species needs a different approach to solving our challenging environmental issues is not new, nor is it a notion that I have created. This was, for example, a significant part of an open discussion at the International Conference on Sustainable Development that was held at Columbia University in New York in September 2015. Moderated by the eminent economist and sustainability scholar Jeffery

6   Warren, *"Tin Can bear fat"*, 31

7   Polar Knowledge Canada (website). "Welcome to the Canadian High Arctic Research Station Campus", Accessed November 13, 2019, https://www.canada.ca/en/polar-knowledge/CHARScampus.html

8   Saul (2014). *The Comeback,* 172

9   Ibid, 62

10   Boyden. *"2016 President Investiture Ceremony - Inaugural Keynote Address"* Accessed November 13, 2019, https://www.youtube.com/watch?v=Rc5F7L4OJf8

11   Dunbar-Ortiz, *An Indigenous Peoples History of the United States,* 203

Top and Left - Figures 5.1 to 5.3: Under a tent at the center of the site, the Sadag Toghig ceremony is performed (W Semple)

Below Right - Figures 5.4 and 5.5: Silk scarves mark the rituals carried out for raising the first column and completing the structure (W Semple)

Sachs, with key note speakers such as Paul Kigame, the president of Rwanda, the venue provided a high-profile discussion on climate change and sustainability, one that was to be followed by significant meetings at the United Nations in New York on this topic. One of the 'calls' of this conference was the need for the human species (read 'the west') to experience a 'paradigm shift'; that we require a new way of looking at the world and our place in it.

Yet, as I listened to these words and the (at times) impassioned pleas that accompanied them, I found myself thinking about the perspectives of many Indigenous peoples; how through their words and the practices and traditions that they follow, they reveal and validate the ways in which they are living representations of the very sustainability values that this conference was trying to foster. In spite of that, the voices and faces of Indigenous people were significant in their absence from this forum. Their words, their values and their perspectives had been left out of the discussion. Nonetheless, it is from Indigenous peoples that I believe we have much to learn on this very issue. The comments of Chief Frank T'Seleie of community of Fort Good Hope that were directed towards Bob Blair, president of Foothills Pipeline, at the Berger Inquiry put this into perspective.

> "I do not envy you, Mr. Blair, I feel sorry for you. Mr. Blair, there is a life and death struggle going on between us, between you and I. Somehow in your carpeted boardrooms, in your paneled office, you are plotting to take away from me the very centre of my existence. You are stealing my soul. … By

scheming to torture my land you are torturing me. By plotting to invade my land you are invading me. If you ever dig a trench through my land, you are cutting through me. You are like the Pentagon, Mr. Blair, planning the slaughter of innocent Vietnamese. Don't tell me you are not responsible for the destruction of my nation. You are directly responsible. You are the twentieth century General Custer. You have come to destroy the Dene Nation. You are coming with your troops to slaughter us and steal land that is rightfully ours. You are coming to destroy a people that have a history of thirty thousand years. Why? For twenty years of gas? Are you really that insane?"[12]

It would appear that we are that insane as it is not difficult to find examples that support Chief T'Seleie's perspective. While the Mackenzie Valley pipeline did not go ahead, countless other projects across the globe have been implemented through a worldwide economic system and its focus on short term economics and meeting six-month targets and deadlines.

In his book, Firecracker Boys, Author Dan O'Neill weaves the story about one of the most troubling and frightening examples in the far north that speak to Chief T'Seleie claims. O'Neill recounts the efforts that Edward Teller and the United States Atomic Energy Commission put towards initiating 'Project Chariot', a scheme that would have used a thermo-nuclear explosion to 'carve' a harbour into a remote area along the coast of Alaska. While the potential level of destruction was vastly beyond anything that had been considered up to this time in the arctic, the justification of the project utilized a similar theme. "The reasons cited by the Chamber of Commerce and other business and labor leaders for embracing Project Chariot have a familiar ring to those who have followed the debates over economic development projects in rural areas: It will bring federal dollars to the area, create jobs for people, and put the area 'one the map.' "[13]

The project, which was exposed from under a cloud of secrecy by Alaskan Inupiak peoples and their environmentalist allies, is cited as one of the precursors of the modern environmental movement, as it brought together numerous professionals and concerned Alaskans and lit a torrent of outrage from the Inupiat people on whose land would be destroyed by 'bomb'.

"We the Inupiat have come together for the first time ever in all the years of our history. We had to come together in meetings in our far villages from Lower Kuskokwim to Point Barrow. We had to come together for this reason. We always thought our Inupiat Paitot was safe to be passed down to our future generations as our fathers passed down to us. Our Inupiat Paitot is our land around the whole Arctic world where we Inupiat live, our right to hunt food any place any time of the year as it has

12   Berger, *Northern Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry: Volume One*, 96

13   O'Neill, *The Firecrackers Boys: H-Bombs, Inupiat Eskimos, and the Roots of the Environmental Movement*, 321
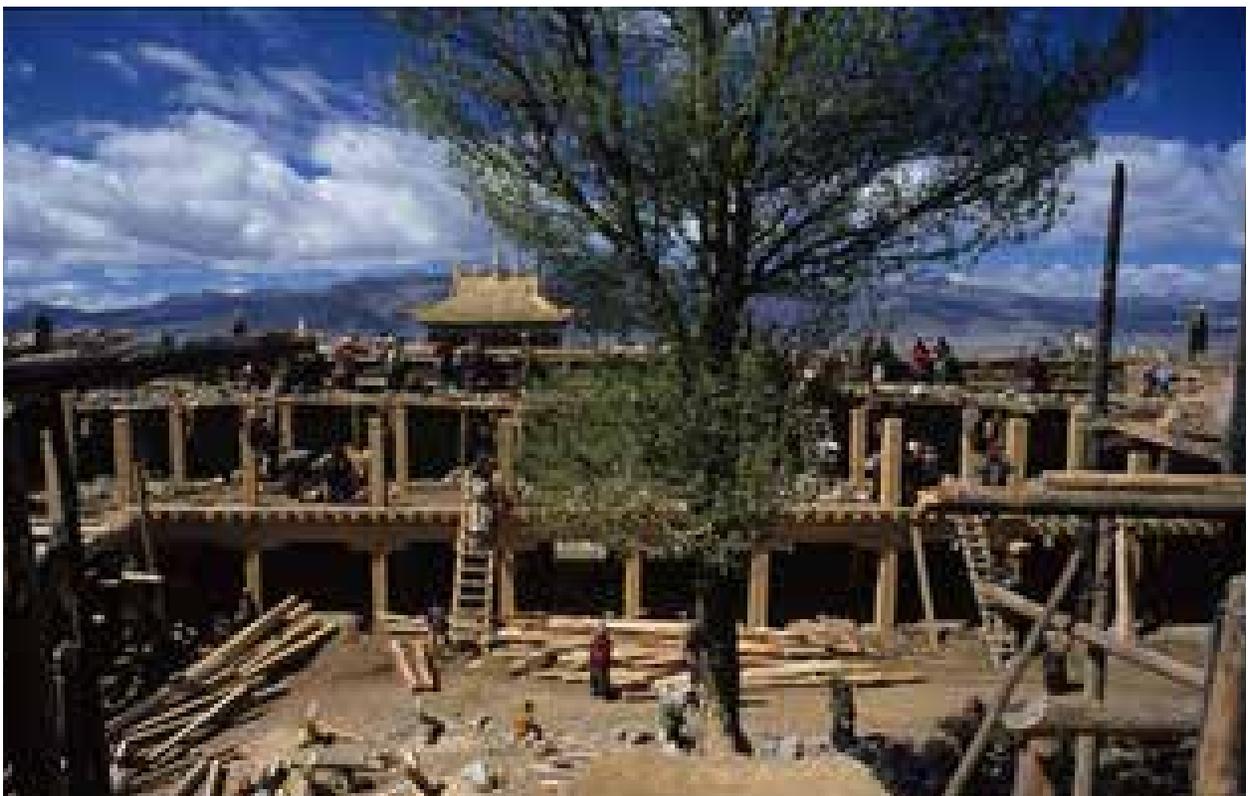
always been, our right to be great hunters and brave independent people, like our grandfathers, our right to the minerals that belong to us in the land we claim. Today our Inupiat Paitot is called by white men aboriginal rights."[14]

In many ways, the tactics and approaches of business and industry have become the new colonialism, where the destruction of the environment, economic inequalities, the displacement of people and other actions are justified by the commerce that is carried out and the profits that are made. From an Indigenous perspective these are the continuing actions of settler colonialism and are connected to the ongoing white privilege that has been one of the outcomes of our occupation of Indigenous lands. Our inability to talk about and acknowledge these actions has been called 'settler fragility' by Indigenous scholars such as Dina Gilio-Whitaker of the Colville Confederated Tribes who writes, "Like white fragility, settler fragility is the inability to talk about unearned privilege—in this case, the privilege of living on lands that were taken in the name of democracy through profound violence and injustice. Like white privilege, white supremacy is also at the root of settler fragility."[15]

BUILDING RITUALS

While rigorously following the protocols for each of the rituals they perform, Tibetan teachers and practitioners that I have spoken with on this topic all place emphasis on the important role that ritual plays in encouraging 'mindfulness' and awareness. For Tibetans this is carried out under the auspices of Mahayana Buddhism, which teaches that enlightenment cannot be gained unless its attainment is done for the 'benefit of all sentient beings', a caveat that, from my own personal perspective aligns Tibetan and Indigenous philosophies. As an architect and a builder, I am drawn to the rituals and ceremonies of building and how these have reminded me of the relationship that exists between culture and the land. Rituals are also an important part of Indigenous practices. As Dawn Hill Adams, of the Choctaw Nation of Oklahoma describes; "A ritual act is a two-way street that includes giving back as well as receiving. A value or ethical system about survivorship in that context includes resilience. It engages in ritual that maintains the greater well-being of the larger community."[16] In the Cree Nation of Eastmain, I experienced this in the rituals associated with the different ceremonies that I was invited to attend. The power of these experiences left me pondering the nature of building rituals and whether ritual could play a role in fostering 'relationships' with the buildings that the Cree are creating?

Top: Figure 5.6: Tawang Monastery (W Semple)
Middle: Figures 5.8 to 5.13: Volunteers construct the new building (W Semple)
Bottom: Figure 5.7: Construction at Tawang Monastery (W Semple)

14 O'Neill, The Firecrackers Boys: H-Bombs, Inupiat Eskimos, and the Roots of the Environmental Movement, 255

15 Gilio-Whitaker, "*Settler Fragility: Why Settler Privilege Is So Hard to Talk About".* Accessed April 2, 2020, https://www.beaconbroadside.com/broadside/2018/11/settler-fragility-why-settler-privilege-is-so-hard-to-talk-about.html

16 Adams, Wilson Head & Gordon, *Ceremony at Boundary Fire,* 47

Figure 5.14: MacCleod Ganj
(W Semple)
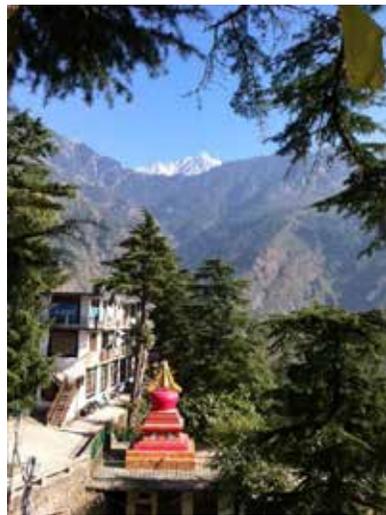
For Tibetans, the practice of mindfulness, and the understanding of the implications of one's actions are key tenants in their daily practice. Tibetans, who also see sacredness in the land upon which they live and who also consider the interconnectedness of all living things, use ritual and ceremony as a way of enhancing these perceptions. This extends into the construction of buildings and the numerous rituals and ceremonies that are part of the Tibetan building process. While ritual and ceremony may seem archaic to the western scientific mind, within the context of mindfulness they are meant to cause everyone involved in the process to stop and reflect upon their actions, including the responsibility that comes with using the land. My own participation in Tibetan building rituals have provided me with a deeper understanding of the use of ritual and ceremony as tools for enhancing awareness and for reflecting upon the implications of one's actions.

Working as an architect on the design and construction of Tibetan buildings I have both observed and been directly involved in the practice of Tibetan building rituals, my involvement reflecting the importance that Tibetans place in having those who create a building being part of the ritual process. The rituals associated with the construction of Tibetan buildings begin with site selection and continue through to the consecration of the finished building. The selection of the site of monasteries or temples would be carried out by Tibetan geomancers who use a combination of intuition and mystical knowledge in the analysis of the site; skills that are handed down

Figure 5.15: Scenes of Mac-Cleod Ganj (W Semple)

Figure 5.16: The Himalayan Foothills (W Semple)

from teacher to student through a process of initiation. Traditionally, this began with incense offerings being made to the earth deities, a ritual that must also occur on an auspicious day, selected by consulting the Lamas, astrologers and the religious texts. A number of tests of the site are then carried out. These include examining the 'directions.' of the site, and testing the ground.

Though these tests revolve around the search for auspicious signs, there is clearly a pragmatic purpose for them. In one test,

for example, if the pit which is dug does not refill all the way up with the excavated earth, this demonstrates that the soil is too light and unsuitable for bearing the heavy masonry walls that typify traditional Tibetan architecture. Even with the best site conditions, a series of rituals to consecrate the site are also performed. These ceremonies also perform the function of gaining permission to 'take possession' of the land from the deities of the earth goddess. These rituals and ceremonies 'sanctify' the site and become a fundamental part of its mythology. Once sanctified, the importance of the site itself takes on mythological significance which remains over the ages.

The construction process itself involves following important rituals and ceremonies with the most important events generally occur at the beginning and the end of the construction process. One example of this is a ritual called 'Sadag Toghig' whose purpose is to 'gain permission to use the land' from the earth deities that reside in the land. This ceremony signifies the gaining of permission to begin digging the land and commence construction. In this ceremony, stakes are placed at the cardinal points, the sub cardinal points and at the center of the site, where rituals are held and offerings are made to the earth spirits (Figures 5.1 to 5.3). When the plan of the building has been laid out on the site and construction is about to begin, traditional offerings of rice, beer, tea, and butter are made to the earth deities, and ceremonial scarves are presented to the head mason and carpenter. A number of other small rituals continue throughout the construction of a building. Rituals occur when the first column is razed (Figure 5.4), when the first doorway is placed, when the structure is erected (Figure 5.5), and when the project is completed. These serve the purpose of both symbolically marking a stage in the construction process and as a way of giving thanks to the skills of the craftsman.

There is also a communal aspect to these rituals, as they have served the important purpose of bringing the community together to create something for the common good, with that good, due to the universal perspective of Mahayana Buddhism, being intended for the benefit of all beings. As a great deal of the construction of the great monasteries was carried out using volunteer labor, where villagers from miles around would descend upon the site to contribute their labour, the ceremonies provided an opportunity to acknowledge the commitment that was made by the community towards the construction of the building. It was also a way to honour the high skills of head mason and head carpenter, skills needed to ensure that the symbols of Buddhist iconography were accurately and skillfully imparted onto the different structural and symbolic

Figure 5.17: Elaborate wooden detailing to the entrance at Twang Monastery (W Semple)

Figure 5.18: Forwork for a concrete Tibetan column and capital (W Semple)

Figure 5.19: Flat roofed archte-icture typical of the Tibetan plateau (W Semple)

elements of the building.

In China, where assemblies of large numbers of people are often ille-gal, gathering to build a monastery has become one of the few ways that large groups of Tibetans can legally gather. In 1999 during a warm spring day in Eastern Tibet, I witnessed this at the reconstruction of a sizable building at Litang monastery (Figure 5.6), where a large group of Tibetans had gathered to work on the rebuilding of this important part of the monastic complex (Figure 5.7). As well as monks from the monas-tery and a few hired craftsmen, the volunteers included husbands and wives, grandmothers and granddaughters, and teenaged friends (Figures 5.8 to 5.13). In the case of Tibet, as well as reflecting spiritual practice and community, the event also spoke of the quiet resistance of Tibetan people and their defense of a way of life that has been under threat since the Chinese occupation of the country in 1951. Each ritual that was per-formed as part of the erection of this building was imbued with meaning far beyond that of Buddhist practice.

REVISITING

Over the past few years, my work in Indigenous communities has brought about personal reflections on the nature of ritual that have led me wonder whether, and in what way, ritual and ceremony could be a part of the cultural identity of Indigenous buildings, while also providing the community with a greater sense of ownership of these buildings; moving past the time when 'buildings arrived like spaceships'. The rituals held for the building of the Sundance Lodge stand as an eloquent example of this practice. Personal reflections on the nature of ritual have caused me to look back on some of my own work, particularly my work with Tibetan communities.

Throughout my time with Tibetans I spent significant stretches studying their architectural tradition; visiting monasteries and temples, talking with high Tibetan Lamas and scholars, and engaging with both architects and builders about the design and construction of Tibetan buildings. The detailed cultural symbolism of Tibetan architecture is a measure of the richness of Tibetan Buddhist philosophy, the quality of craftsmanship that existed within traditional Tibetan society, as well as the lo-cal material culture. In Bhutan and the east-ern Tibetan region of Kham, for example, the great pine forests created an abundant

resource that resulted in the development of more refined and elaborate woodworking techniques and details. While these skills can be found throughout the high dry plateau of Tibet, they are much less refined with craftsmanship increasing in quality as one transitions from the plateau of central Tibet into the heavily forested areas of the eastern part of country. It is a transition that reveals the direct correlation that exists between the availability of local resources (environment) and the skills of local build-ers (culture), and the inter-dependency that exists between environment and culture. Illuminating this, in areas of Eastern Tibet where I have worked and where deforestation has taken hold in recent decades due to over-logging to supply the insatiable Chinese market, these skills are disappearing and, in some cases, no longer exist.

In 2017, I was in India to present a paper titled 'Cultural and Environ-mental Sustainability and the Development of an Indigenous Design Process' at an International conference in Vadodara, Gujarat. The theme of the conference, 'Innovating for Development and Sustainability', was a significant attraction, as was the prospect of re-exploring some past projects. In addition to attending the conference, I was using this trip as an opportunity to return to the Dharamsala and McLeod Ganj after an absence of many years. I was returning to visit the Dolma Ling Nuns Institute, a project that I had worked on in the early 90's, and to reflect, within the Tibetan context, on some of my recent experiences with In-digenous communities. I had always been impressed with Tibetans and their ability to maintain their cultural traditions while being in exile. While their exile from Tibet has been tremendous struggle, they have never wavered from an understanding of who they are or from the importance of their traditions. I wondered if there were lessons that could be used in my own work with Indigenous peoples.

McLeod Ganj (Figure 5.14) is a small town that rests on a mountain saddle at the edge of the Himalayan mountains, several hundred meters above the town of Dharamsala with vistas that look towards the sharp snow-capped peaks of the Dhalidiri range of the Himalayan mountains (Figure 5.15) and back over the green rolling foothills that poke through the early morning mists (Figure 5.16). The town is home to a large Tibetan refugee community, the Tibetan Government in Exile and to the Dalai Lama. As part of my trip back to the community, I was taking time to talk to a number of important Tibetans about identity and culture and how they, as Tibetans, are able to continue to prosper both spiritually and culturally in spite of their long exile from the land they considered their home. Through this process I watched as some of my own thoughts on Tibetan architecture and the nature of tradition evolved.

Figure 5.20: Naturally dyed fabric from Kham, Eastern Tibet (W Semple)

Figure 5.21: Synthetic Fabric and dyes are replacing traditioanl processes (W Semple)

Through Nima Dorje, a Tibetan friend in Canada, I was introduced to Geshe Getun Sandup, who arranged for me to stay in a small complex of Tibetan apartments that were connected to Serkong House, a guesthouse in McLoed Ganj that was associated with the Norbulingka Institute, a centre dedicated to the study of Tibetan Art and Culture. While I was given a small apartment for my stay, I was invited to share breakfast every morning with the Geshe and Tsenshap Serkong Rinpoche, the head of Tabo Monastery and the namesake for the guesthouse. Each morning, after our food was blessed by the Rinpoche, we engaged in discussions on Buddhist philosophy, Tibetan culture and political topics of the day in India. These morning gatherings soon became one of the highlights of my trip back to the community.

Through these conversations the Rinpoche became interested in what had brought me to India, and one morning after we had shared a particularly engaging conversation, he asked me to tell him more about this. I told him about the conference and the paper that I had presented there, sharing with him some of my experience of working with Indigenous communities in Canada. Asking if he could see some of this work, I pulled out my laptop and showed him the presentation that I had given at the conference in Vadodara. While this included design and research work, the Rinpoche was intrigued with the community engagement process I had developed and how this was a reflection of Indigenous teachings and values. Within a very short time we began to discuss the idea of me joining him on a trip to his monastery in Tabo, located near to the western Tibetan border with India. As the Rinpoche wanted me to bring this same process to Tabo, I experienced this as another confirmation of the connections in values and perspectives that exist between Tibetan and Indigenous peoples.

A significant aspect of my journey back to the McCleod Ganj was the opportunity this would give me to re-examine some of my own perspectives on culture and how my work with Indigenous communities might be informed by this. In the past, I had carried out a significant amount of research on Tibetan architecture and had come to admire the richness of this tradition. I had also come to lament over how the Tibetan architectural tradition had changed in contemporary India, where rich details once elaborately fostered in wood, were now being poorly reproduced in concrete (Figures 5.17 and 5.18). During my work on Tibetan projects in the 1990's, I had come to see this reproduction of these architectural details as the creation of 'decorated concrete boxes', with the creation of buildings that no longer supported the Tibetan building tradition, and contained little in what I saw as traditional Tibetan architecture (Figure 5.19).

While I had always avoided this in my own work, this was standard practice in McLeod Ganj. Throughout the 90's and beyond I had come to see this as a process that neither protected the Tibetan architectural tradition, nor did it support the exploration into what contemporary Tibetan architecture might look like. To the trained eye, it was a as glaring a change as the material transition from natural dyes and fabrics (Figures 5.20 and 5.21), to the use of polyester and chemical dyes. While both provide for a specific need, they are generated from vastly different processes and have a fundamentally different relationship to place. From a euro-western architectural perspective, it was the worst form of compromise. But I wanted to understand this perspective from where I now stood, to see if these same ideals and values resonated.

Two examples of architecture projects from the community will help shed light on how this has been addressed in the designing of two contemporary Tibetan buildings in the Tibetan community in India, and some of the upshots of these projects. The first is Namgyal Monastery[17], the personal monastery of the Dalai Lama, a building that was designed and built in the early 70's. While Namgyal Monastery was re-located from Lhasa by the Dalai Lama in order to provide a center where the original teachings and scholarly pursuits of the original monastery could continue unbated in India, the architecture of the new centre is clearly contemporary in its design and stands as, from my perspective, one of the finest examples of contemporary Tibetan architecture in India.

My first visit to this monastery in the early 90's was, in many ways, a complete shock. The simple built form was devoid of all the elaborate detailing that is a fundamental part of traditional Tibetan architecture (Figure 5.22). At the same time, many of the spatial organization rules that govern the traditional layout of monasteries remained, albeit with a contemporary twist. The main prayer hall, rather than being a dark and internally focused space, had three walls made of paneled glass doors that could be opened up to allow the greater 'Sanga', the Buddhist religious community, to view and be part of the ceremony (Figure 5.23). This move was further accentuated by a flat concrete roof that extended over a sitting area that surrounded these three sides (Figure 5.24), with a raised portion of the concrete roof that provided a space to perform 'fire pujas', a ritual that was carried out in numerous Tibetan ceremonies. This architectural gesture moved what were traditionally more sequestered events into the public realm, to be performed in what was essentially a public space (Figures 5.25). They are an example of how architecture can foster ritual and ceremony. It also expanded the notion of who is part of the 'Sanga'. While this had traditionally been limited to

17   "Namgyal Monastery was founded in 16th Century Tibet by the second Dalai Lama, Gendun Gyatso. … The monastery was also established as an esteemed center for learning, contemplation and meditation on the vast and profound Buddhist treaties…. As a result of the Chinese invasion of Tibet in 1959, His Holiness the 14th Dalai Lama and one hundred thousand Tibetans fled to India and Nepal. Among the original refugees were 55 monks from Namgyal Monastery. After His Holiness the Dalai Lama was granted asylum in the northern Indian town of Dharamsala, Namgyal Monastery was re-established very nearby the new residence of His Holiness." Accessed March 21, 2020, https://www.namgyal.org/namgyal-tibet-india/
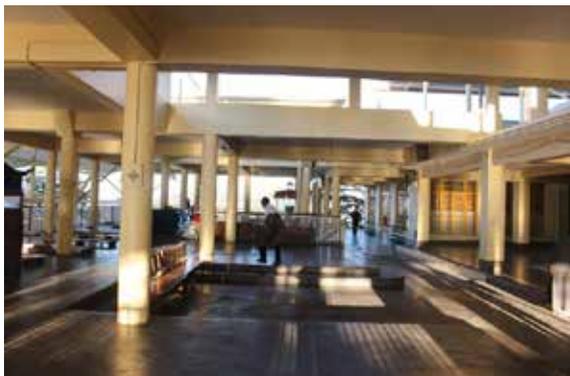
Figures 5.22 to 5.25: Namgyal Monastery - Front Elevation (195.85), Interior Elevation (1985) and two views of the Fire Puja area, 1985 and 2018. (W Semple)

the monks who would have been part of a monastic community, this was evolving the include all those who partake in Buddhist practice.

Within the context of the Tibetan community, these were fairly dramatic architectural moves that soon became clearer as I listened to and considered some of the teachings of the Dalai Lama that I heard while I was in the community. The simplicity of the building form was a reflection of the Dalai Lama's perspective that rather than spending scarce resources on elaborate temple details, these resources should instead be directed towards feeding and housing the Tibetan people. The openness of the temple and the placement of the space for fire pujas (rituals) was also a reflection of his perspective that Buddhism needed to become more worldly in its perspective and that Tibetans, now that they were in exile and had a responsibility to share Buddhist teachings with the world;. It is important to point out that this did not imply there was the need for a mission to convert others to Tibetan Buddhism as there is nothing is Tibetan culture or religion that supports the idea of 'conversion'. It is, instead, an exercise in the illuminating and sharing of the Buddhist messages of compassion and kindness, and a desire for more dialogue on the nature of spirituality in a rapidly changing world.

The second building I will provide thoughts on is the Dolma Ling Nunnery and Institute, a project that I had worked on and is written about in Chapter 2. The "Dolma Ling Nunnery and Institute of Buddhist Dialectics is a non-sectarian nunnery located in the Kangra valley near Dharamsala, northern India. The large campus is home to about 230 nuns."[18] The Institute was designed and built in the 1990's to provide housing for refugee nuns from Tibet, and an opportunity for Tibetan nuns to attain higher Buddhist training and education, a prospect that was not possible in Tibet. This too was an example of the changes that were occurring in Tibetan society

as Tibetans adapted to their place in the contemporary world. I had worked on the preliminary design for the Nuns Institute, using this as an opportunity to explore several aspects of traditional Tibetan architecture, while avoiding the practice of copying, in concrete, the elaborate wood detailing that is found on traditional Tibetan architecture. By the time I began work on the design of this complex in the early 1990's there were no traditional builders left in the community, as well as limited knowledge regarding the Tibetan building tradition. In combination with the lack of wood in the largely deforested foothills of the Himalayan mountains in India, this had eliminated any possibility of constructing a more genuine version of traditional Tibetan architecture in Dharamsala.

In addition, the use of concrete had also given rise to the design and construction of flat roofed architectural style that was typical of Tibetan buildings found across the high dry Tibetan plateau, as compared to the Tibetan architecture found in the heavily forested areas of the eastern part of the Tibet where the climatic conditions that were similar to those found in this region of India. Yet, my studies of traditional Tibetan architecture in various region of the country has consistently demonstrated that local Tibetan architectural traditions were significantly influenced by local climatic conditions (e.g. level of rainfall) and the local materials building materials that were available; merging these with Tibetan Buddhist principles and practices. Dharamsala was the location of some of the heaviest monsoon rains in northern India, and sloped roofs were the norm on the vernacular architecture of the region. While sloped roofs were rare on the Tibetan plateau, they were commonly found on the monasteries of Sikkim, Kham and Bhutan, regions with extensive forests that were the result of the high levels of rainfall that they received.

Revisiting the nunnery after a period of more than 20 years (Figure 5.26) revealed a complex that had 'weathered well', standing up to the rigours of the heavy monsoon rains and climate of the area. Two architectural details were the principle reason for this: the steep sloped roof with large overhangs (Figures 5.27 to 5.29), and the system of water capture and drainage channels the were installed around the building and over the modestly sloping site (Figures 5.30 and 5.31). These related directly back to the traditional architecture of the region with its use of sloped roofs with large overhangs to protect the buildings walls, in combination with the stone plinths that are used to raise the building off of the ground and prevent moisture from seeping into the building from below.   The Dolma Ling Nunnery remained in excellent condition.

This was in stark contrast to Norbulingka Institute, another important

18   "Dolma Ling Nunnery and Institute", Tibetan Nuns Project (website), accessed Nov 15, 2019, https://tnp.org/nuns/dolmaling/

LEFT - Figures 5.26 and 5.27: Dolma Ling Nunnery: Temple and Residences (W Semple)

RIGHT - Figures 5.28 and 5.29: Dolma Ling Nunnery: Architectural Details (W Semple)

BOTTOM - Figures 5.30 and 5.31: Dolma Ling Nunnery: Landscaping (W Semple)

complex that had been built near to the site of the Dolma Ling Nunnery. Constructed in the early 1990's, the "Norbulingka is a unique institute dedicated to the preservation of Tibetan arts and culture. We are a self-sustaining community located in Dharamsala, India, dedicated to ensuring that the integrity of Tibetan artistic traditions is maintained for generations to come. Art is a large part of culture, and by maintaining artistic lineages, we help to conserve the unique identity of Tibetans and the sacred traditions which took root in Tibet."[19] The Institute is the site for the ongoing training for a range of Tibetan artists and craftspeople, many of whom were the artisans who would apply the final architectural detailing on important Tibetan buildings (Figures 5.32 and 5.33).

As a significant center for the preservation of Tibetan culture, the complex was designed to highlight many aspects of Tibetan art and culture, including elaborate painted detailing on the concrete columns and beams, and the detailing around windows and doors. Designed with a flat roof with a heavy concrete parapet, the complex has not aged well as the roof style and the detailing of the parapet, resulted in significant leakage where rain became trapped and allowed to leak into structure through the roof of the building (Figures 5.34 and 5.35). The stark contrast between the two buildings was an affirmation of the important knowledge that is contained within local architectural traditions and as well as a recognition of the significance of drawing upon that knowledge.

CONVERSATIONS

While Tibetans continued to adorn their monasteries and temples with elaborate painted details, they also continued to apply more modest versions of these details on their homes and workplaces. One of the more common practices was the application of a black detailing around both windows and doors, a feature that represents the protector deity, drawn traditionally in the form of the head of a water buffalo (Figure 5.36). Stylized versions of this are used on many traditional Tibetan buildings (Figure 5.37) and 5.38) and can be found in a variety of forms throughout Dharamsala (Figures 5.39 to 5.41). When I carried out my extensive research in Tibetan architecture in the 80's and 90's I had come to the conviction that these gestures were poor examples of the Tibetan tradition of embellishing windows and doors through the use of elaborately carved wooden details (Figure 5.42 to 5.44); that these details weakened the Tibetan architectural tradition creating what I would call 'decorated concrete boxes'. But my experiences over the past 15 years with the built environment in Indigenous communities in Canada and how devoid these were of Indigenous culture had me considering these same details through a different lens; one that placed significant value on the modest

Figures 5.32 and 5.33: An apprentice wood worker and painter at the Norbullingka Institute (W Semple)

Figures 5.34 and 5.35: Roof leakage and water damage to the painted detailing of a column and capital (W Semple)

cultural gestures.

Thinking about the modest architectural gestures through these eyes, I took the opportunity to talk with Tibetans about their sense of identity and how this has assisted them in surviving and prospering as a culture while in exile had drawn me back to Dharamsala. It was also an opportunity for me to revisit the question of architectural symbolism and its significance to both traditional and contemporary architecture, particularly in communities where there are significant challenges with cultural identity. In doing this I was to learn some significant insights into the Tibetan spirit and the ways that different people honour their identity. I will share a few examples of what was imparted to me.

One of the first people I interviewed was Geshe Getun Sandup (Figure 5.45). Geshe Sandup, having designed several buildings in the community, including the Serkong Guest House, was known as the local architect. As he and I often talked about architecture and design, I was wondering how he felt about Tibetan buildings today and whether the gestures of symbolism were important for Tibetan identity. The Geshe shared what I consider to be a very Tibetan answer; one that is without judgement but contains personal reflective insights. "Experience taught me how architects see many things that most people do not…How water is brought in to a building, where different rooms need to be put, how you enter a building and what direction it should face. When we look at the details that people themselves put on buildings, we must not mis-understand the importance of the mindfulness of the moment and how, for Tibetan Buddhists, these different gestures are a reflection of that."[20]

I also interviewed Tsenshap Serkong Rinpoche, who by then had become my friend and mentor (Figure 5.46). Amongst the many things that we discussed, the Rinpoche shared some thoughts on how it is important for each of us to understand our own personal journeys, and how, when you come to understand the nature of journeys, one of the challenges is to not place a judgement on the journey of others. While His Holiness is the ultimate teacher, each of his followers were responsible for their own interpretation of the teachings – each had their own journey to take. The Serkong Rinpoche saw the design of Namgyal Monastery as a representation of the Dalai Lama's own journey, and each person's own use of Tibetan symbolism as acts in support of their own culture and identity. Like the Geshe, he spoke of these from a non-judgmental Buddhist perspective. "For His Holiness the Dalai Lama, it was important to live a humble life and to manifest this in his actions. Each of us has a different way of reflecting the teachings of the Dharma. That others use architectural features without an understanding of the deep architectural meaning behind these features does not take away from the importance of their actions."[21]

While in the community I was introduced to Chuki Tethong (Figure 5.47), a musician and owner of Pema Thang Guesthouse. When Chuki Tethong heard that I was an architect who had studied Tibetan architecture, she invited me for tea so that we could talk about Tibetan architecture and her guesthouse in McLoed Ganj. Chuki Tethong wanted to hire me to help make her guesthouse more 'Tibetan', to add the painted details that would give her building more of a Tibetan look (Figure 5-48). As Chuki Tethong shared "When we built this guesthouse we were concerned about survival and money. I am almost embarrassed that we did not think more about culture. As we now have more resources, it is our responsibility to make our guesthouse more Tibetan. It is our duty to remember who we are."[22]

While I had not supported this approach in the past as a way of architecturally maintaining Tibetan tradition, I found my thoughts on this had changed. In part this was due to the conversations that I had been having with Geshe Getun Sandup and Tsenshap Serkong Rinpoche about Tibetan architecture and what these meant to the Tibetan people. It was also a reflection on what I had learned from working in Indigenous communities in Canada and from being in built environments where culture had never been considered in any way, as well as the destructive influence that this has had on Indigenous people. I agreed to assist Chuki and soon began recommending simple ways that the guesthouse could

20   Geshe Getun Sandup, interview by author, McLoed Ganj, India, November 9, 2015

21   Tsenshap Serkong Rinpoche, interview by author, McLoed Ganj, India, November 10, 2015

22   Chuki Tethong, interview by author, McLoed Ganj, India, November 16, 2015

Figure 5.36. Window Detail from Litang Monastery, Eastern Tibet (W Semple)

Figure 5.37. An elaborate window details from Enchey Monastery, Sikkim, India

Figure 5.38. Window Details from the Potala Palace, Lhasa Tibet

attain more of a Tibetan 'feel'. Could I judge the actions that others take in the name of identity and culture?

I had also come to know a young architect from Ledakh named Karma Yeshe. Karma Yeshe was the architect responsible for the care and maintenance of the Norbulingka Institute. Working in such a distinctive cultural center, I was curious about Karma Yeshe's perspective on both traditional and contemporary Tibetan architecture. Rather than one of the large and more popular schools that are found in the large cities of India, Karma Yeshe (Figure 5.49) had completed his education in an architectural school located in the foothills of the Himalaya. While growing up in Ledakh would have provided him with a strong cultural basis for the work that he was now responsible for, I was interested in knowing if his studies had prepared him for this as well, asked him about this while we toured the Norbulingka Institute together. Karma shared the perspective that Architecture schools in India place little if any value on tradition, and for Karma, this was a significant concern. His answer, that it had not prepared him in any way for working in his own community or in Dharamsala, revealed a great deal regarding the challenges that cultural identity and architecture have in India today.   Through his experience of working in the Norbulingka, he had become to see his role as one that evoked the practice of the master builder or craftsman sharing that; "as architects we are only one part of the process of bringing more culture into buildings. We are the creators of the palette upon which many others carry out their work and place their details. Who are we to change this?"[23]

In our conversation, we discovered that we both shared an interest in organizing a conference on Tibetan Architecture, to creating a forum where we could engage with others on ideas and issues that would explore both traditional and contemporary Tibetan architecture. Karma and I began to talk about organizing this conference and hosting it at the Norbulingka Institute. When we began to talk about conference themes and who we wanted to attend, it is noteworthy that for both of us, this began with the painters, woodworkers and other craftspeople that are normally not accorded a place at the table with architects. For us, these are the skilled people who, by using their high crafts to manifest Tibetan Buddhist iconography, add the layers of meaning to the 'architectural pallet' that is created through the design of a building. These craftspeople are, in an Indigenous sense, the 'knowledge keepers' of this refugee commu-

nity, responsible for maintaining these traditions in exile. Ensuring the participation of these skills would help make sure that the kind of conversations that we wanted would occur, and more aspects of the Tibetan story would be told.

Like Indigenous peoples, Tibetans place a great deal of value on 'ways of being'. Each person that I talked with spoke in support of the different actions that others were taking to reflect Tibetan culture and were doing this from a non-judgmental standpoint. As shared by Tenzin Dhonyoe (Figure 5.50), the manager of the Tibetan office of Radio Free Asia, "The values of kindness and humility are an essential part of who we are as Tibetans. To lose this would be to lose our identity." These words are a confirmation of my own experience with Tibetans and the unassuming kindness and support that they have continually extended to me. Through this process, the common use of architectural details that I once saw as a weakening of the Tibetan architectural tradition, I have come to see as a source of identity and pride. For Tibetans these have been, in many ways, an aspect of the healing process that they have drawn from since their time of exile in 1959. Who am I to judge this?

TABO MONASTERY

In 2018, I returned to India to begin working on the project at Tabo Monastery with Tsenshap Serkong Rinpoche. Tabo monastery is located near to the border of Tibet in the remote region of Spiti, in the Indian State of Himachal Pradesh. Tabo monastery, the oldest Tibetan Buddhist monastery in the world, was constructed using rammed earth walls with an Interior timber frame, a traditional building method in the region. Over a number of years, Serkong Rinpoche had observed that this local building tradition was being supplanted by the use of concrete for the construction of almost all of the new buildings in the community. Drawing upon his influence as the head of the monastery and as a strong proponent of traditional cultural practices, the Rinpoche wanted to re-introduce some of the local building practices back into the community as an alternative to concrete, which he viewed as less environmentally sustainable than the use of imported building materials from outside of the region.

While many local residents felt the use of concrete brought about 'stronger' buildings, it also resulted in much colder and damper buildings as traditional earth walls are much warmer and far less prone to some of the mold issues that were cropping up in the concrete buildings. To begin addressing this, I talked with the Rinpoche about developing a hybrid building system that would combine traditional and contemporary building practices, bringing together the strength of concrete with the warmth

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Figures 5.39 to 5.41. Contemporary Tibetan window details (W Semple)

and feel of earth walls. The Rinpoche was proposing to build a residence for himself that would be adjacent to the monastery and approached me to work on the design of the house as well as the system of construction that would be used. We would use this project as a prototype to test out this new system with the longer term plan for using this system to build local guesthouses and a new nunnery in a nearby community.

As part of this process, I spent time with local builders and guest house owners, talking about the changes that were rapidly impacting the community. One of these was Sonam Tsering, the owner of Sonam Guest House. Sonam had recently built an addition onto his guest house using traditional building practices and I was interested in how the project had gone and any lessons he might have to share from his experience. Though Sonam was a supporter of traditional practices, he was not against change and found the idea of a rammed earth/concrete hybrid to be very interesting. As we talked, Sonam told me about a group of architecture students from Delhi who had travelled to Spiti to see the old monastery and other buildings in the town. When Sonam had asked what they had learned from their visit to Spiti and the traditional buildings there, their answer to Sonam was that they had learned nothing at all, 'that there was nothing to learn'.[24] It was, to me, a sad commentary on the state of architecture in India, where little regard seemed to be placed on their rich architectural heritage and how 'modernism' and contemporary building practices were rapidly removing traditional architecture from the landscape. To Sonam, the people in Spiti were not being well served by this perspective. In India, it was not the first time that I had run into this assessment.

As part of my work in Tabo I facilitated a design charrette with local villagers, village leaders and guest house owners. We talked about the techniques that were used in the past and some of the durability and structural challenges that came with these. And while the use of concrete had addressed these concerns, they had created a new set of challenges. Many of the villagers shared the Rinpoche's view that the new concrete buildings were colder and less healthy. I was proposing to design and construct a house for the Rinpoche using a concrete/rammed earth hybrid; an approach that I proposed could address both the structural and 'comfort and health' challenges. Preliminary work is underway on this project.

REFLECTIVE PRACTICE

In many ways, the perspective of the architecture students is a reflection of what Donald Schön, in his book The Reflective Practitioner, cites as 'the professionals claim to extraordinary knowledge' and what Ivan Illich calls the mystique of technical expertise, "an instrument of social control of the have-nots – the poor, the dispossessed, ethnic and racial minorities, women – by the social elites."[25] As noted by Donald Schön, "The status of professional experts, their claims to social mandate, autonomy, and license, are based on the powerful ideas of Technical Rationality and the technological program. … The mandate, autonomy, and license of the technical expert work toward a distribution of social benefits that is profoundly unjust, and they tend toward the creation of a technocratic society in which most human beings do not want to live. Professional expertise, when it is exposed to careful scrutiny, dissolves into empty claims. The professions are the pre-emption of socially legitimate knowledge in the interest of social control."[26]

In carrying out the work that I do, I have learned that the process is continually evolving and that, if I am paying attention, there are daily lessons to learn. I am reminded of the words of many Indigenous scholars and researchers who, in reflecting on their own work, are constantly reminded of the need for humility in their approach and goodness in their actions. Yet for architects and other practitioners, there is little in our educational context that prepares us for this, as our education as 'professionals' and 'experts' is expected to entitle us to a certain standing in society. In challenging this, Donald Schön writes "I have become convinced that universities are not devoted to the production and distribution of fundamental knowledge in general. They are institutions committed, for the most part, to a particular epistemology, a view of knowledge that fosters selective inattention to practical competence and professional artistry."[27] When working in cultural contexts, where listening, consensus building and relationships are key elements for the success of any project, the 'epistemology' that Schön refers to has, far too often, become a liability that just gets in the way, and are positions that have neither served Tibetan or Indigenous peoples well.

To address this 'selective inattention', Schön believes that professionals need to become more reflective about their work, and to see the process of reflection as an ongoing process. And while Schön admits this will result in the loss of the traditional status that professionals carry, it will bring other rewards.

"As the professional moves towards new competences, he gives up some familiar

24   Sonam Tsering, interview by author, Tabo, Himachal Pradesh, India, May 16, 2018

25   Schon, *The Reflective Practitioner*, 288

26   Ibid, 288

27   Ibid, vii

*sources of satisfaction and opens himself to new ones. He gives up the rewards of
unquestioned authority, the freedom to practice without a challenge to his compe-
tence, the comfort of relative invulnerability, the gratifications of deference. The new
satisfaction spoken to him are largely those of discovery – about the meanings of
his advice to clients, about his knowledge in practice, and about himself. When a
practitioner becomes a researcher in his own practice, he engages in a continu-
ing process of self-education. … Indeed, it can be liberating for a practitioner to
ask himself," what, in my work, really gives me satisfaction?' And then,' how can I
produce more experiences of that kind?"*[28]

On the architectural profession, Social Anthropologist Tim Ingold pro-
vides this perspective. "It has, of course, long been the conceit of the
architectural profession that all of the creative work that goes into the
fashioning of a building is concentrated in the process of design, and the
subsequent phase of construction adds up to little more than its realiza-
tion in the proverbial 'bricks and mortar' of the built environment."[29] My
own experience, in both building and architecture, provides some cre-
dence to Ingold's observations.

In 2000, I was hired as part of the National Research Council's Industrial
Research Assistance Program (IRAP) to be an Industrial Technology
Advisor based at the Canadian Home Builders Association (CHBA). I
was to be Construction Sector's representative for IRAP's National
Initiatives Group. Based at the CHBA, my job was to promote and assist
in the fostering of innovation in the home building industry. I remember
one of the first CHBA meetings I attended where home building industry
representatives (e.g. home builders, suppliers, code officials) from across
the country were discussing significant industry issues. Knowing that
I was from an architecture background, I was told by my director not to
tell them that I was an architect as, he emphasized, builders did not like
architects and that this would potentially alienate the builders and create
a separation with the builders that my director did not want to see. With
my director by my side, I was introduced to an important builder at the
meeting who asked about my background. Ignoring the advice, I was
given I answered that I was an architect. In the moment of complete
silence this created (where everyone seemed to almost step back) I
calmly added 'but I am also a builder and built houses for many years. I
came into architecture from building.' The response was a smile and the
comment 'So you know what is going on." I assured him that I did and
no more needed to be said. Our conversation moved on from there.

The perceptions that we carry and their influence on our actions are
important to consider. Indigenous people hold the viewpoint that If we
cannot build better relationships within our own context, it will be a chal-

lenge to think that we can do this with others. It is part of the reason why the values of humility and generosity are so highly valued within Indigenous cultures as it creates a climate that is more conducive to listening to each other. While I was frustrated with architects when I worked as a builder, I have been equally frustrated with builders when I have worked as an architect. Yet, these perspectives point to the need for constructing better lines of communication, and for fostering understanding both within architecture and between our profession and the trades. It is also a recognition and reflection of the inter-connectedness that we have with each other and all other living things. It is why all voices need to be at the table, including those we may not agree with. It is about the inclusiveness that is needed to foster and support openness and understanding. As Shawn Wilson writes about his own experience of collaborating with other Indigenous scholars,

> *"All of the scholars that were there are very kind, gentle and humble people. They are proud of themselves and their heritage but not boastful or egocentric in any way. The relationships we have formed are co-operative and without competition or secrecy. I know that we will help each other out in any way that we can."*[30]

GENEROSITY AND THE ETHICS OF SHARING

That we have much to learn from Indigenous peoples has been highlighted by the United Nations Inter-Commission Task Force on Indigenous Peoples. "indigenous and peoples may provide models for the worlds more populous societies. If humanity is to survive and prosper, it will benefit from indigenous People's principles of conservation, environmental ethics and regard for future generations."[31] Willie Ermine of the Sturgeon Lake First Nation of northern Saskatchewan presents a compelling argument that the Indigenous world view is needed to provide insight and understanding towards the development of a common humanity and connectedness. Ermine's is a call to action on the need for re-discovery and healing, and the importance of the Indigenous perspective in a world that seems, at times, bent on destruction. As Ermine states, "Aboriginal people have the responsibility and the birthright to take and develop an aboriginal epistemology congruent with holism and the beneficial transformation of total human knowledge."[32] I share the view that a call to action is not only required, it is necessitated by the times that we are living in.

From Indigenous peoples, we also have much to learn to learn about the relationships that are needed to support this reality, those of egalitarianism, generosity and the tradition of sharing, all of which are seen as an

28   Schon, *The Reflective Practitioner*, 299

29   Ingold, *Making: Anthropology, Archaeology, Art and Architecture,* 47

30   Wilson, Shawn (2008), *Research Is Ceremony: Indigenous Research Methods,* 83

31   IUCN Inter-Commission Task Force on Indigenous Peoples (1997), *Indigenous Peoples and Sustainability: Cases and Actions*, 35

32   Ermine, "Aboriginal Epistemology"*,* 103

Figures 5.42 and 5.43. Elaborate traditional Tibetan carved wooden details from Sikkim and Bhutan (W Semple)

Figure 5.44: Column details from a barn in Sikkim (W Semple)

indispensable part of Indigenous culture. Speaking at the Berger Inquiry at Fort Liard, Joachim Bonnetrouge stated that " 'we do not conquer, we are not like that. We are sharers, we are welcomers.' … Many native people expressed the view that, although they have extended to white strangers the same generosity with which they have traditionally treated each other, the white man has not reciprocated."[33]

Indigenous generosity is exhibited in many forms. In his book *Kinship and the Expression of Values in an Athabascan Bush Community, a study of the people of Colville Lake*, Joel Savishinsky, writes;

 "in addition to generosity in terms of food, the People's concept of inter-dependence and reciprocity extends into matters of hospitality, cooperation, and mutual aid. People adopt and care for one another's children, help each other in moving to and from Bush camps, get one another firewood in cases of immediate need, to sewing for each other, camp with one another for varying periods in the bush, and also offer each other assistance for mending and operating boats, motors, chain saws and other equipment. Generosity, therefore, covers both goods and services, and these two aspects are often interchangeable in terms of reciprocity involved in the people's behavior."[34]

In January 2017, while in the Cree Nation of Whapmagoostui to facilitate a housing design charrette, I was witness to Indigenous generosity in action. Whapmagoostui[35] is the most northern of Cree communities of Eeyou Istchee, the Cree territory of northern Quebec. That January, one of the Caribou herds of northern Quebec had migrated down the frozen Great Whale River, gathering in a forested area across the river from the community. In speaking with some of the elders of Whapmagoostui I learned that the caribou had not been in the area for a number of years and the caribou knew that the forests where they gathered were rich in lichen, one of their principle winter foods, as it had not been grazed for several years. Light snowfall in the region that year made the migration down the river possible.

With the arrival of the herd, the fathers and sons of each family were soon hunting to fill their family freezers. Once filled, the hunt continued

so that the hunters could fill the freezers of all of the Elders in the community. Once these were filled the hunt persisted until the community freezer, a facility established for those who could not hunt and/or were in need of support, was also filled. Once all these needs were satisfied, the hunt ended. It was an impressive experience that spoke highly of the ethic of sharing that exists in this and other Indigenous communities. It was also a reflection of the importance of giving thanks and taking from the land only what you need.

I was in the community the day the caribou herd left the forested hills and began its migration up the Great Whale River and back into the Quebec interior. I was being driven around the community by Brian Wynne, the Housing Director for Whapmagoostui. After inspecting the heating and ventilation systems in a couple of houses. Brian took me to a bluff that overlooked the Great Whale River. We were soon joined by a number of people who, like us, had driven to this location to view this remarkable sight (Figure 5.51). As we stood and watched, groups of several hundred caribou slowly make their way up the river. No one was pursuing the Caribou as the hunt was over and everyone's needs had been taken care of. People were saying goodbye to their caribou relatives. In the standing and observing the herd, there was also an important lesson for the young; that you do not hunt caribou when they are on the move as this could spook them, disturb the hunt and bring unintended consequences to the herd.

SEVEN GENERATIONS THINKING

So how do we move forward with what we can learn from the knowledge and experience of Indigenous people. To begin, I think it important that we consider the perspective of seven generations thinking in all of our decision making. This may be one of the most significant changes that we could make to most things that we do. It would compel us to listen to the past, to 'understand' the present and to carefully consider the future. To do this effectively also implies the need to ensure that all voices are at the table as we need to not only to repair the land and our 'relationship' with the land, but also to repair our relationships with each other. For non-Indigenous people this means learning to listen. It means being respectful of the views of others. It means working to develop consensus. A mentor and friend of Indigenous scholar Manulani Aluli Meyer shares this perspective:

> *"I think the wisest thing is being humble and listening. We live in a very arrogant society. Listening has to do not only with listening to myself, but listening to nature and listening to very simple people. There are things that Native Americans have said to*

33   Berger, *Northern Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry: Volume One,* 97

34   Ibid, 96

35   "Whapmagoostui (Cree: Wâpamekuštui, "place of the beluga") is the northernmost Cree village in Quebec, located at the mouth of the Great Whale River (French: Grande Rivière de la Baleine) on the coast of Hudson Bay in Nunavik, Quebec, Canada. About 906 Cree with about 650 Inuit,[3] living in the neighbouring village of Kuujjuarapik. The community is only accessible by air (Kuujjuarapik Airport) and, in late summer, by boat. Whapmagoostui is about 250 kilometres north of the nearest Cree village, Chisasibi". Accessed November 15, 2019, http://www.whapmagoostuifn.com/culture/#history

Figure 5.45: W Semple and Geshe Getun Sandup and (W Semple)

Figure 5.46: Tsenshap Serkong Rinpoche (W Semple)

Figure 5.47: Musician and Guesthouse Owner Chuki Tethong.(W Semple)

me in just a few words that just summarize so much. I was talking with one Native American and he got a little tired of my questions and he said, ' you know you white people, you have so much trouble understanding the way we Indians look at the world, it is very simple to understand Native Americans view of things, you have only to remember two things, one is, everything is alive, the other is, we are all relatives.' … and that is wisdom."[36]

A prerequisite to repairing our relationship with the land rests in our ability to better consider the land upon which we live as our home, with our survival depending upon our caring for that home. This requires that we learn to see the land and all that comes from it as much more than just a commodity. Like Indigenous people we need to build a relationship with the land.

"Regarding relational accountability, in Cree the words that form the basis of that concept are 'otcinawin' (breaking of natural law), which means that if a person deliberately mistreats other creatures, that action will invoke natural justice. So, they will receive similar treatments themselves or their descendants … even to seven generations. And the other word is 'pastahowin' which means the breaking of a sacred law. This action also will invoke natural justice and will surely befall the perpetrator. This all means therefore that humans, who are capable of knowing the difference, are accountable for all of their actions to all their relations."[37]

The question, of course, are we willing to learn? As shared by Indigenous scholar Daniel Wildcat,

"The most difficult changes required are not those of a physical, material, or technological character, but changes in worldviews and generally taken-for granted values and beliefs that are embedded in modern, Western-influenced societies. In this respect, what humankind actually requires is a climate change – a cultural climate change, a change in our thinking and actions."[38]

In many ways, this presents tremendous challenges for both academic and design professionals. For researchers and scholars, this will mean developing a process that has greater fluidity, where the research questions and the process of carrying out the work is defined and created by the practitioner in participation with those who are being researched. As Cora Weber-Pillwax states "an academic focus on Indigenous research methodology would move scholars toward a stronger sense of professional and ethical accountability. ... Indigenous methodology thereby becomes an effective means of increasing the possibility that research with Indigenous people will be a source of enrichment to their lives and not a source of depletion or denigration."[39] It would do this by changing the control and definition of knowledge and returning this to the commu-

nities themselves. I would hope that this process would also begin to challenge the dominance of western thought and a predominance with the use of western methodologies, providing both indigenous and non-indigenous researchers with better tools for viewing the world in a far more holistic way.

For architects and designers, it may be a more challenging process. In many ways, architecture is a process of intervention where the architect's 'vision' or concept for a project often drives the design that is developed. This, in many ways, is an outcome of how architecture is taught in architecture schools, where process is seldom discussed and non-western architecture is rarely studied. Architects are not taught to value tradition, but rather to embrace modernism and the new trends that are being developed within the profession. That work in our design courses culminates in 'critiques' where we are expected to heavily defend our ideas, does little to advance a more participatory approach to design, let alone a process that emphasizes significant community involvement in the design process or its outcomes.

For architects, this would mean seeing our role as less about developing the architect's vision of a project, and more as part of a reflective practice where the architect, while having the responsibility of bringing the many voices together and for ultimately defining the building form, is only one of these voices. In this context, the responsibility that I speak of is the architect's responsibility for carrying out the design, with the design reflecting the input of the participants and representing the ideals of the community. Within an Indigenous context, it would be the responsibility of the architects to ensure that participation in the process broadens to include all of those who might be affected in any way, have a personal interest in the design being created, or have an important role to play. This too would be a fluid process.

STORYTELLING AND THE SHARING OF KNOWLEDGE

In addition to challenging our ethical model, architects and other design professionals will need to expand our conception of knowledge, with the telling of stories being one of the 'methods' that deserves support. As written in the Truth and Reconciliation Commission, "Traditional Knowledge Keepers and Elders have long dealt with conflicts and harms using spiritual ceremonies and peacemaking practices, and by retelling oral history stories that reveal how their ancestors restored harmony to families and communities. These traditions and practices are the foundation of Indigenous law; they contain wisdom and practical guidance for moving towards reconciliation across this land."[40] While some architects

36   Meyer, "Holographic Epistemology: Native Common Sense", 9

37   Wilson, Shawn (2008), *Research Is Ceremony: Indigenous Research Methods,* 107

38   Wildcat, *Red Alert: Saving the Planet with Indigenous Knowledge,* 5

39   Webber-Pillwax, "Indigenous Research Methodology: Exploratory Discussion of an Elusive Subject",* 32

40   Truth and Reconciliation Commission of Canada, *What We Have Learned: Principles of Truth and Reconciliation,* 120
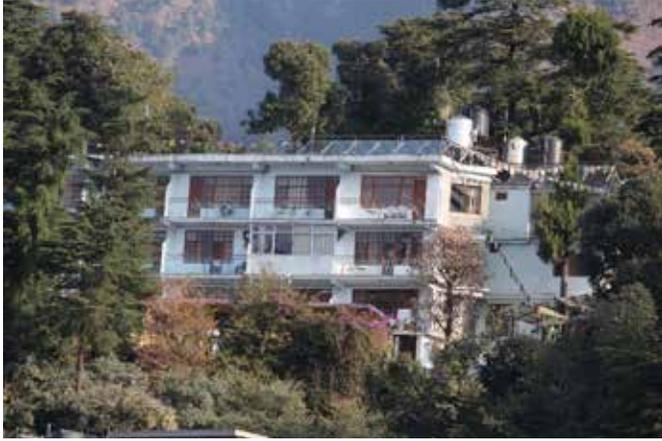
Figure 5.48. Pema Thang Guesthouse (W Semple)

Figure 5.49: Architect Karma Yeshe: (W Semple)

Figure 5.50: Tenzin Dhonyoe, Manager of Radio Free Asia. (W Semple)
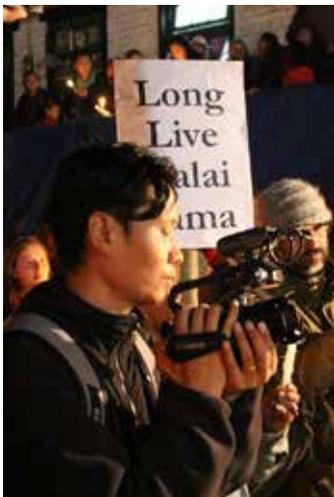
and researchers may have challenges with the idea of using 'stories' for the transfer knowledge (as the word 'story' invokes the idea that it may be make-believe or have the potential for 'untruth') this should not be a negating factor within an Indigenous context. In this context the telling of stories is a more nuanced and layered process. It is why Indigenous storytellers begin with 'location', declaring from the outset their 'relationship' with the story, what is 'personal knowledge', and if learned from others, who and where they heard the story from themselves, and the reliability of this 'knowledge'.

It is important to understand that there are also different levels of storytelling, each with a set of guidelines that inform how the story is told. As Cree Elder Jerry Saddleback shares, there are three levels of storytelling.

> *"At a higher level are sacred stories, which are specific in form, content, context, and structure. These stories themselves must be told at different levels according to the initiation level of the listener. Only those trained and tested and given the permission to do so are allowed to tell these stories, which must never vary in how they are told. They are sacred and contain the history of our people. I maybe shouldn't event talk about them here, but it is already on the page, so I'll leave it.*
>
> *The second level of stories are like the Indigenous legends that you may have heard or read in books. There are certain morals, lessons or events that take place, but different storytellers shape them according to their own experience and that of the listener. The intent or underlying message of these stories remains the same.*
>
> *The third style of story is relating personal experiences or the experiences of other people. … Elders often use experiences from their own or others' lives to help counsel or teach."*[41]

Within the Indigenous context, storytelling is also a confirmation of the validity of what John Ralston Saul calls 'oral memory'. Oral memory or the oral tradition is a deeply venerated way to 'store' and 'impart' traditional knowledge. The carrier of this knowledge is governed by societal rules and obligations that they, as knowledge keepers, have with the knowledge. Oral memory is considered to be form of knowledge that is both accurate and layered with the relationships that give it context and meaning. Oral memory has been validated as a legitimate form of evidence in land claim cases that have been brought before the Supreme

Court of Canada. For example, in a case brought before the Court in 1997, the Gitxsan and Wet'suwet'en Nations "put forward an argument of oral memory in order to prove the land was theirs. They argued that oral memory is perfectly accurate as it is passed on from one generation to the next via individuals charged with remembering, and with doing so accurately through a formalized process."[42] And while the two First Nations did not win ownership in this case, the admission of their oral histories 'for their truth' legitimized oral memory in the eyes of the law and opened the door for further negotiations. As court noted in its decision "Let us face it. We are all here to stay."[43]

REMEMBERING

This brings to light the importance of remembering and what it means for Indigenous peoples. In her final book, Dark Age Ahead, Jane Jacobs examines the nature of memory and the impacts that a loss of cultural memory has on a people. Jacob writes, In North America, "we live in a graveyard of lost aboriginal cultures, many of which were decisively finished off by mass amnesia in which even the memory of what was lost was also lost."[44] While there is truth in this statement, the majority of Indigenous communities did not disappear and are actively working to rebuild their cultural heritage. Many Indigenous researchers and scholars point to the resilience of Indigenous peoples and how, in spite of the concerted effort that was made to destroy their way of life, they have survived. But because tremendous challenges remain, it is incumbent upon practitioners to understand the importance of remembering and to explore how this can be brought into both the research and design processes.

A great deal of the remembering that is going on in Indigenous communities is through the use of stories and the support of storytelling as a method for the sharing and transfer of knowledge. Story tellers are the carriers of knowledge and this knowledge, as I shared in earlier chapters, is the property of the community, not the individual storyteller. "You can't be a carrier of certain types of knowledge without earning it first. But even then, you don't own that knowledge. You're just a person carrying it for a while. It's like you have custodianship of it, maybe, a better way of thinking of it. Yet you are carrying it, you earned that, so there's still the individual thing that way. Certain gifts are given to an individual for whatever reason and they carry it on behalf of the community."[45]

In the process of remembering there is much for us to learn about the vulnerability that our own culture has with what Jacobs refers to as 'the grips of forgetfulness'. Jacobs makes the case that cultures can be

41   Wilson, *Research Is Ceremony: Indigenous Research Methods, 98*

42   Saul, *The Comeback*, 37

43   Ibid, 38

44   Jacobs, *Dark Age Ahead,* 3

Figures 5.51: Caribou begin their migration back to the Quebec interior (W Semple)

assaulted from both the outside and the inside, and while Indigenous cultures were assaulted from the outside, the threat to the other cultures has often come from the inside; caused " by internal rot in the form of fatal cultural turnings, not recognized as wrong turning while they occur or soon enough afterward to be correctable. Time during which corrections can be made runs out because of mass forgetfulness."[46] It seems a fitting warning for the times we are presently in as this form of 'forgetfulness is, in many ways, much more serious.

This is a reminder that the process of remembering needs to be a two-way street, where our own remembering becomes part of the process. Indigenous people, who place great value on their tradition, have much to teach us about this, to help us remember the ways that we once valued. This brings to mind a recent conversation I had with Gavin Renwick. Gavin and I were sharing stories of our own experiences of working in communities; me with the Cree in northern Quebec, and Gavin with the Tlicho in the NWT. While sitting together next to a barrel wood stove with a roaring fire, Gavin described a conversation with a Tlicho friend who shared with him that he 'felt sorry for white people' as they had lost 'touch with the animals'. In terms of memory, it would be fair to acknowledge that this is one of the areas where we do not even remember what it is that we have lost. For architects and other design professionals, it is necessary that we begin to see our work as part of the process of assisting communities, both Indigenous and non-Indigenous, with remembering.

HEALING

Healing is another part of the process. Indigenous scholars often speak of the damage that Indigenous people have suffered as a consequence of the loss of cultural identity, and how the rebuilding of cultural identity is a necessary part of the healing process. Inuit consultant Shirley Tagalik,

for example, provides a valuable perspective on the root causes of cultural loss and its significance to the social problems being experienced by the Inuit:

> "From all across Nunavut, we were brought in from our traditional lands and concentrated in permanent settlements. Here we became, in effect, "wards of the state", living in an unfamiliar, and, in many ways, an artificial environment. … But socially and culturally, the settlement policy was soon destined to weaken our sense of independence and self-worth. …Many of these [well-intended social programs] were at odds with our traditional forms of social organization, family life, and economy, programs not of our making and over which we had little say. [We view this] as the root causes of the cultural loss we are experiencing today …expressed in the social malaise now evident in so many of our communities, including drug and alcohol addiction, suicide, and loss of identity and purpose."[47]

The Government of Canada (GOC) has admitted that the process of assimilation that was carried out on Indigenous people in Canada amounted to cultural genocide, and while it has apologized for those actions, far too little effort and resources have been put into the healing process. On healing, a study carried out by the Canadian Association for Suicide Prevention in two Inuit communities indicated that, "… family was most commonly related to suicide prevention and intervention. Unhappiness was tied to not being with family and not visiting, and family bonding was listed as one of several essential elements of Inuit well-being."[48] The findings of the report make obvious how relationships of the family and of the extended family/clan factor into the health and well-being of the Inuit.

While much of the trauma and the health issues are the legacy of residential schools, Shirley Tagalik rightfully places some of the blame on the GOC's settlement policy and social programs 'which were at odds' with the Inuit traditional way of life. As Shirley noted, the Inuit had little say in this process, and that these were not 'programs of our making'. As shared in earlier chapters, these actions resulted in the formation of a built environment that was and is the re-creation of the 'white man's world', and did nothing to reflect Inuit values. Going forward, we can use processes that either heal or hurt, but to heal, it is important that these be guided by Indigenous ways that open the path for the community's truths to be remembered and shared. As noted by Narcisse Blood: "I am a survivor of residential school and I bear the scars. If we're going to learn from Place, we have to deal with those historical traumas. So, what we try and come from is what has sustained us all these years – that you're a person first. We are meant to love one another. Then you can add all the other titles."[49]

45   Adams, Wilson, Head, and Gordon, *Ceremony at Boundary Fire: A Story of Indigenist Knowledge,* 54

46   Jacobs, *Dark Age Ahead,* 14

47   Tagalik, *Inuit Qaujimajatuqangit: The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut,* 3

48   Dawson, *An Examination of the Use of Space by Inuit Families Living in Arviat, Nunavut,* 78

Fostering an emphasis on the use of the traditional knowledge that is specific to each community can also be a contributor to the healing process.

> *"We expect knowledge to be contextual, local to a specific Place. We emphasize the relational aspect of knowledge. That relational aspect is embedded in the very notion that knowledge is contextual to Place. Knowledge is seen as arising out of that relationship, and its purpose is to reinforce and maintain the health of that relationship. … We see knowledge as having its own agency. … The fact that we see knowledge as coming from the Land -- which holds knowledge and is the source of knowledge -- means that a human receives knowledge instead of discovering it. Then, of course, the person processes the information that's been received, communicates it to others, and applies it in some way. But that human cannot be said to have discovered or invented the knowledge, so they cannot possibly own it."*[50]

The principle that Indigenous knowledge is relationship based adds credence to the position that I have shared in previous chapters; that you cannot work in a community successfully without building relationships, including the relationship to land, to place. Without these relationships one's own understanding of the land and relationship with it will not grow. You will have fewer opportunities to hear and honour the stories of people's relationship with the land; nor will you hear and see how this relationship manifests itself in the daily lives and in the ceremonies and celebrations that bring people together. Giving all of these relationships and events agency that, from and Indigenous perspective they naturally have, is itself an honouring that can be a contribution to the healing process. Bringing what is learned to the design process and giving it agency will also do this, but for many design practitioners this will mean giving up some control over the process.

While I have never tried to quantify this in any way, I have come to see the use of an Indigenous design process as a positive contributor to the healing process while it will also, by its very nature, bring additional cultural characteristics into the design of buildings and communities. This is because the process of engagement, of sharing cultural perspectives is intended to improve cultural identity and enhance the process in part by creating the circumstance where all words are heard. As Shawn Wilson shares; "Words themselves, like music, laughter, crying, playing, dancing and other forms of expression, have the power to heal or to harm. They can transfer information and enlighten others, but they can also be used as tools of social control and disempowerment."[51]

TRUTH AND RECONCILIATION
The Truth and Reconciliation Commission (TRC) has much to guide us in

the work that needs to be done in Indigenous communities and what this work entails. That healing is a required part of the process is stressed throughout the TRC report. Health and Healing, supporting Indigenous culture and building trust, respect and 'mutually respectful relationships' are qualities that are repeated throughout the 10 Principles of Reconciliation that were laid out by the TRC. The 10 principles are:

1. The United Nations Declaration on the Rights of Indigenous Peoples is the framework for reconciliation at all levels and across all sectors of Canadian society.

2. First Nations, Inuit, and Métis peoples, as the original peoples of this country and as self-determining peoples, have Treaty, constitutional, and human rights that must be recognized and respected.

3. Reconciliation is a process of healing of relationships that requires public truth sharing, apology, and commemoration that acknowledge and redress past harms.

4. Reconciliation requires constructive action on addressing the ongoing legacies of colonialism that have had destructive impacts on Aboriginal peoples' education, cultures and languages, health, child welfare, the administration of justice, and economic opportunities and prosperity.

5. Reconciliation must create a more equitable and inclusive society by closing the gaps in social, health, and economic outcomes that exist between Aboriginal and non-Aboriginal Canadians.

6. All Canadians, as Treaty peoples, share responsibility for establishing and maintaining mutually respectful relationships.

7. The perspectives and understandings of Aboriginal Elders and Traditional Knowledge Keepers of the ethics, concepts, and practices of reconciliation are vital to long-term reconciliation.

8. Supporting Aboriginal peoples' cultural revitalization and integrating Indigenous knowledge systems, oral histories, laws, protocols, and connections to the land into the reconciliation process are essential.

9. Reconciliation requires political will, joint leadership, trust building, accountability, and transparency, as well as a substantial investment of resources.

10. Reconciliation requires sustained public education and dialogue, including youth engagement, about the history and legacy of residential schools, Treaties, and Aboriginal rights, as well as the historical and contemporary contributions of Aboriginal peoples to Canadian society.[52]

At a Traditional Knowledge Keepers Forum sponsored by the TRC, An-

49   Adams, Wilson, Head, and Gordon, *Ceremony at Boundary Fire: A Story of Indigenist Knowledge,* 11

50   Ibid*,* 17

51   Wilson, *Research Is Ceremony: Indigenous Research Methods,* 126

52   Truth and Reconciliation Commission of Canada, "What We Have Learned: Principles of Truth and Reconciliation"*,* 3

ishinaabe Elder Mary Deleary spoke about the responsibility for reconciliation that both Aboriginal and non-Aboriginal people carry. She emphasized that the work of reconciliation must continue in ways that honour the ancestors, respect the land, and rebalance relationships. As shared by Mary Deleary:

> *"I'm so filled with belief and hope because when I hear your voices at the table, I hear and know that the responsibilities that our ancestors carried ... are still being carried ... even through all of the struggles, even through all of what has been disrupted ... we can still hear the voice of the land. We can hear the care and love for the children. We can hear about our law. We can hear about our stories, our governance, our feasts, [and] our medicines.... We have work to do. That work we are [already] doing as [Aboriginal] peoples. Our relatives who have come from across the water [non-Aboriginal people], you still have work to do on your road.... The land is made up of the dust of our ancestors' bones. And so, to reconcile with this land and everything that has happened, there is much work to be done ... in order to create balance."*[53]

In reading the conclusions of the TRC I noted four reoccurring themes that I feel are relevant to and highlight the principles of process that I have been writing about. These are Relationships, Trust, Language and Visioning.

RELATIONSHIPS

As has been highlighted by Indigenous scholars and researchers throughout the chapters, the significance of relationships, including the relationship with the land, was raised throughout the testimonials as an essential requirement of reconciliation. Many shared the perspective that the traditions, beliefs and practices of Indigenous peoples have a great deal to teach euro-westerners about how to institute and maintain relationships with the land and the natural world.

> *"Reconciliation between Aboriginal and non-Aboriginal Canadians, from an Aboriginal perspective, also requires reconciliation with the natural world. If human beings resolve problems between themselves but continue to destroy the natural world, then reconciliation remains incomplete. This is a perspective that we as Commissioners have repeatedly heard: that reconciliation will never occur unless we are also reconciled with the earth. Mi'kmaq and other Indigenous laws stress that humans must journey through life in conversation and negotiation with all creation. Reciprocity and mutual respect help sustain our survival. It is this kind of healing and survival that is needed in moving forward from the residential school experience."* [54]

TRUST

From an Aboriginal perspective, the treaties that were signed between

the Crown and the Aboriginal peoples of Canada were based on mutual respect, including the principles of mutual support and assistance. These treaties were signed in good faith by Aboriginal leaders, with their legitimacy contained within and passed down within the community through the oral histories of the different Nations. This trust was badly broken by the actions of 'the Crown' which came to condemn Indigenous ways, severely damaging the trust that is required to maintain and build relationships. The legacy of residential schools was one of those 'actions'.

> *"The destructive impacts of residential schools, the Indian Act, and the Crown's failure to keep its Treaty promises have damaged the relationship between Aboriginal and non-Aboriginal peoples. The most significant damage is to the trust that has been broken between the Crown and Aboriginal peoples. A broken trust must be repaired. A vision that led to that breach in trust must be replaced with a new vision for Canada; one that fully embraces Aboriginal peoples' right to self-determination within, and in partnership with, a viable Canadian sovereignty."[55]*

LANGUAGE

As has been highlighted throughout this thesis, the findings of the TRC also emphasize the role that language plays as an essential part of identity. The TRC's 'Call to Action' includes specific reference to the federal governments responsibilities with regard to fostering and rebuilding the use and survival of Indigenous languages across the country. As highlighted in the commission's report:

> "We call upon the federal government to enact an Aboriginal Languages Act that incorporates the following principles:
> i. Aboriginal languages are a fundamental and valued element of Canadian culture and society, and there is an urgency to preserve them.
> ii. Aboriginal language rights are reinforced by the Treaties.
> iii. The federal government has a responsibility to provide sufficient funds for Aboriginal-language revitalization and preservation.
> iv. The preservation, revitalization, and strengthening of Aboriginal languages and cultures are best managed by Aboriginal people and communities.
> v. Funding for Aboriginal language initiatives must reflect the diversity of Aboriginal languages."[56]

VISIONING

Visioning is required in order to begin what Poka Laeni calls the 'building of dreams on further dreams'. These "eventually become the flooring for the creation of a new social order. It is during this phase that colonized people are able to explore their own cultures, experience their own

53 Truth and Reconciliation Commission of Canada, "What We Have Learned: Principles of Truth and Reconciliation",, 115

54 Ibid, 123

55 Truth and Reconciliation Commission of Canada (website). "Truth and Reconciliation Commission of Canada: Calls to Action". Accessed March 24, 2020, http://nctr.ca/assets/reports/Calls_to_Action_English2.pdf, 184

56 Truth and Reconciliation Commission of Canada (website). "Truth and Reconciliation Commission of Canada: Calls to Action". Accessed March 24, 2020, http://nctr.ca/assets/reports/Calls_to_Action_English2.pdf, 157

aspirations of the future, and consider their own structures of government and social order to encompass and express their hopes."[57] It is why 'healing' is a part of the process of visioning, and why it is important that visioning precede action. But it is clear that we are some distance from the most critical phase for the process of reconciliation and decolonization, that of visioning the future. As noted in the report of the TRC:

> "Reconciliation must support Aboriginal peoples as they heal from the destructive legacies of colonization that have wreaked such havoc in their lives. But it must do even more. Reconciliation must inspire Aboriginal and non-Aboriginal peoples to transform Canadian society so that our children and grandchildren can live together in dignity, peace, and prosperity on these lands we now share."[58]

Reading the findings of the TRC and reflecting upon my own experiences, it is difficult to see how reconciliation between euro-western and Indigenous peoples can occur until we are both at the table as equals, listening and learning from each other and honouring each other's ways. The honouring of Indigenous ways by euro-western society has not yet occurred, though there are glimmers that it may have begun. Yet, like any beginning, it is fragile and could easily be lost before it has the opportunity to grow.

GUIDELINES FOR REALISATION

It is important to recognize that there is no one formula or 'way' of working in different Indigenous communities. Each workshop or design charrette will bring its own challenges and provide its own insights and rewards. It is important to be open, non-judgmental, receptive and flexible, to always be observant for the subtle confirmations that you are on the right track as this can take unexpected forms and may not always immediately obvious.

So, what is needed so that we, as design professionals, can be of better service to Indigenous communities; so that, when we carry out our design work, we can also be part of the process of healing and remembering? While different 'methods' can be used in different communities, there are important principles that, if incorporated, would enrich each project. The list I have provided below is a culmination of what I have learned about process from Indigenous scholars and researchers as well as from my own experience. It includes.

Spirituality. To researchers like Shawn Wilson, research should be a sacred process. It is important that we begin to see the design process in the same light. While this would include more commonly recognized acts such as beginning and ending each session with a prayer

and acknowledging the sacredness of the land where everyone has gathered, it also needs to include the perspective that the generation of knowledge is also a sacred process.

Relationships. Every step in the process will need to focus on the building of relationships with people in the community. Any thought that you can avoid doing this or make it a lower priority is faulty thinking. Relationships are the basis upon which Indigenous community's function and interact with the world around them. They are the foundation for doing work in the community. For architects, building relationships will often entail stepping into new roles. As shared by Patrick Scott, "Too often it is the professional researcher/fieldworker who chooses to be a visitor rather than become a full member. The ability to step outside one's professional role enables the growth of trusting, friendship-based relationships. These relationships become more real than fabricated."[59]

Traditional languages. Language is the one of the basic elements of culture and language rights are protected by the United Nations Declaration on the Rights of Indigenous Peoples. The use of the local Indigenous languages needs to be supported at all meetings, charrettes, workshops etc. As this will mean that all meetings and consultation sessions will take longer, it is necessary to ensure that the time required for this is always factored into the process. As stated in the report of the TRC: "Language is necessary to define and maintain a world view. For this reason, some First Nation elders to this day will say that knowing or learning the native language is basic to any deep understanding of a First Nation way of life, to being a First Nation person. For them, a First Nation world is quite simply not possible without its own language. For them, the impact of residential school silencing their language is equivalent to a residential school silencing their world."[60]

Process and Product. It is important to see the process and the product as one, where the outcome and method of getting there are no longer viewed as separate parts of the process. From his time with the Dene Guy Goulet shares another perspective on this sharing the viewpoint that "Investigators (designers) who cling to research (design) methods that clearly separate observer and observed stand to lose, because in the eyes of the Dene, they distance themselves too much from what the Dene consider authoritative source of knowledge."[61]

Knowledge. From an Indigenous perspective it is important to remember that knowledge comes from place and is acquired through personal experience. It is necessary that the architectural design process give priority to Indigenous knowledge by drawing upon the 'learned expe-

57   Laenui, "Processes of Decolonization", 155

58   Truth and Reconciliation Commission of Canada, "What We Have Learned: Principles of Truth and Reconciliation", 114

59   Scott, *Talking Tools: Faces of Aboriginal Oral Tradition in Contemporary Society,* 22

60   Truth and Reconciliation Commission of Canada, "What We Have Learned: Principles of Truth and Reconciliation", 107

61   Goulet, *Ways of Knowing: Experience. Knowledge and Power Amongst the Dene Tha*, xxxvii

riences' of the community, and assist in the generation of new knowledge by giving priority to processes that emphasize the generation of new knowledge through experience. This includes challenges such as capacity building and understanding what it means to approach this through an Indigenous lens.

Listening. It is essential to Learn to listen well as listening may be one of the most important methodologies to use when working in an Indigenous community.

Story Telling. Storytelling as a method for the sharing of traditional knowledge should be fostered, and wherever possible, incorporated into the architectural design process.

Ceremony. If you are in the community when a ceremony or important cultural event is happening, and through the relationships you have developed you are extended an invitation to participate, it is Important that you stay and attend. Participating in ceremonies is an important aspect of knowledge generation and for further building and expanding your relationships with the community. It is a great privilege to attend these ceremonies and each ceremony should be approached from a place of respect, to be honoured, as I have in my own reflections, by protecting the knowledge that is acquired and the experiences that are gained.   While protecting this knowledge, the experience of ceremonies will provide significant insights into the ways that ritual can be incorporated into the design process and into the design of buildings for the community.

Sharing. Be prepared to share information, designs and address questions openly, doing this in a way that is always supportive and without judgement. As final decisions on a project should rest with the community, sharing what has been done is an irreplaceable part of the process.

Community Support. It is important that the community be supported through its' decision-making process, while acknowledging bringing improvements to the community will often be a long-term process. The evaluation and ascertaining of success must be through the eyes of the community itself. In all cases the final decisions on a project have to rest with the community.

Way of Being. Be humble, kind and have a good heart.

Agency. It is important to always remember who you are doing this for; that it is for the community. Indigenous researchers like Linda Tuhiwai Smith challenge researchers and designers to use their agency for the benefit of the community. It would be fair to say that, from an Indigenous perspective, this is what is expected; that each of us, as architects, will use our agency for the benefit of the community.

Giving Thanks. At the end of each session and project, give thanks to all

"Architecture arises from the concept of experience of home, and even a multitude of other functions of buildings – work, gathering, worship – derive from the mental essence of dwelling. Due to its primordial significance, the house continues to be, poetically, the most potent design task in architecture along with the buildings of belief and worship;"

Juhani Pallasmaa, Architect

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who came and shared. Give thanks to the land.

As I have worked on the design of new housing prototypes and acknowledge the desperate need for this kind of work, I have also come across Indigenous communities that are not ready to 'imagine', as their own process of healing has not brought them to a standpoint for doing this. This is yet another outcome of colonization and its lasting impact on Indigenous people. in his article 'Processes of Decolonization' Poka Laeni (Hayden F. Burgess) suggests that there are Five distinct phases for the process of decolonization. They are: rediscovery and recovery, mourning, dreaming, commitment, and action. To Laeni, the rediscovery and recovery phase is "the foundation for the eventual decolonization of a society. People who have undergone colonization are inevitably suffering from concepts of inferiority in relation to their historical/cultural background."[62] In many ways we have yet to progress beyond the first phase, though many Indigenous peoples are involved in the second phase, that of mourning, This is "a time when people are able to lament the victimization."[63] Taking time to understand where a community is along its own process of decolonization will help in determining how the process can be shaped and how far it might reach.

REFLECTING ON HOME

While houses are the buildings where people, particularly in northern communities, spend most of their time, the designing of houses is by and large rarely carried out by architects. Yet it is from 'the home' that we have a great deal to learn about how people interact with each other and the world around them. In this, the house represents a meaningful design challenge. As architect Juhani Pallasmaa shares,

> *"Architecture arises from the concept of experience of home, and even a multitude of other functions of buildings – work, gathering, worship – derive from the mental essence of dwelling. Due to its primordial significance, the house continues to be, poetically, the most potent design task in architecture along with the buildings of belief and worship;"* [64]

Yet, in Indigenous communities, little attention has been paid to social needs and cultural identity in the design of housing, neither spatially nor through the use of cultural iconography or symbols. In contrast, Indigenous housing suffers from an almost complete lack of context, from any 'poetic' notion that could speak of who Indigenous people are. It is, instead, based on replicating simple models that reduce 'housing needs' to the number and sizes of rooms and success in terms of the numbers of houses that are delivered to a community, while rarely addressing questions regarding quality of life, and almost never in terms the contri-

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62   Laenui, *Processes of Decolonization, In Reclaiming Indigenous Voices and Vision,* 152

63   Ibid, 154

64   Pallasamaa, The Embodied Image: Imagination and Imagery in Architecture, 120

bution that housing could make in terms to rebuilding cultural identity or 'way of being'.

In their attempts at solving the housing crisis in the north, northern housing agencies generally approach the delivery of housing as a 'numbers game', an ongoing struggle that is focused on 'reducing the housing backlog', in order to deliver as many housing units as possible with the limited funds that they receive from the government. While it is an understandable strategy, it is one that abandons any pretext at addressing family needs or the cultural identity of the community. Instead of advancing the variety of housing designs that would be required to address the range of needs that exist in the communities, this approach has fostered a one-size fits all mentality that ensures that little or no sense of ownership or relationship with the houses is developed. As a result, it should come as no surprise that so many houses in Indigenous communities suffer from a complete lack of care from those who dwell in them, as this process has done little to nothing to gender any sense of 'ownership'.

Similar comments can be made regarding the design of indigenous communities, which has been based entirely on the southern euro-western model of community, and organization principles that reflect southern needs for transportation and services rather Indigenous family relationships or relationship to place. As shared by Dr, Gavin Renwick, these actions have put Indigenous communities at a disadvantage at the very time when traditional Indigenous models are needed to support the rebuilding of Indigenous identities. "For First Nation communities within the Canadian North, government design, planning, and social policies have created a cultural contradiction, they insulate First Nation people from the land – their homeland."[65] As Harold Strub, in his book *Bare Poles: Building Design for High Latitudes* bluntly puts it; "In Canada, the high latitude community that properly serves the needs and aspirations of its population has not been built."[66] Neither the design of housing or communities has provided for the needs of the clan-based relationships that are an integral part of Indigenous communities, nor has it fostered the relationship with the land.

While I have given a great deal of focus in my writing on using a process that supports Indigenous identity and ways, there is a tremendous need for new designs for Indigenous housing, buildings and communities and for the exploration of new ideas and models. These are required to help re-establish the relationships in the family, the clan and the community, and relationship with the land. The increasing use of multi-unit residential housing across the north, could be a positive trend if it was accompa-

"There can be no doubt that the founders of Canada somehow lost their moral compass in their relations with the people who occupied and possessed the land…. While we cannot change history, we can learn from it and we can use it to shape our common future."

Gerry St. Germain

nied by the exploration and design of alternative models of housing that may be more conducive to the clan-based needs of Indigenous families. Transitional housing, multi-generational housing, co-housing, and flexible housing are some of the possibilities. But each of these possibilities needs to be explored within an Indigenous context in order to uncover the unique qualities that these models would take on within this context.

CEREMONY AT BOUNDARY FIRE

The Cree ceremonies that I have attended have been very moving experiences, ones that have revealed to me a great deal about the richness of Cree culture. As I have born witness to these ceremonies, I have also personally experienced sadness, as this has shed more light on 'what has been lost' and the impact that the decades long prohibition of these very rituals and ceremonies have had on the lives of Indigenous peoples. As Gerry St. Germain (Métis), then a Canadian senator, said to the TRC,

> *"There can be no doubt that the founders of Canada somehow lost their moral compass in their relations with the people who occupied and possessed the land…. While we cannot change history, we can learn from it and we can use it to shape our common future…. This effort is crucial in realizing the vision of creating a compassionate and humanitarian society, the society that our ancestors, the Aboriginal, the French and the English peoples, envisioned so many years ago—our home, Canada."[67]*

While this process needs to be led by Indigenous peoples, non-Indigenous people and in particular professionals such as Architects, can play a crucial role as allies and advocates, while also bringing our skills to assist with the 'dreaming' that is required, and weaving that dreaming into the design work that we do. Perhaps this is also part of the healing that we also require, an atonement for the past actions of our settler fathers and grandfathers. It is clear to me that we must facilitate the rituals that re-affirm identity and foster sharing, openness and trust. We are at a time when there is an opportunity to change the 'story' on the relationship between the settler community and that of Indigenous peoples. What could this be? What would this look like?

Perhaps the most compelling view of what this might entail came in an article called 'Ceremony at Boundary Fire: A Story of Indigenist Knowledge', a compelling story that explores the nature of Indigenous ritual. In the story, a group of Indigenous and non-Indigenous scholars meet to explore the nature of Indigenous knowledge, relationships and ritual. The story of the event itself reveals much about Indigenous process, and how fluidity and relationship-based knowledge was utilized to explain

65   CMHC, *The Land We Live on Is Our Home: The `Gameti Ko` Project Second Community-Led Workshop,* 1

66   Strub, *Bare Poles: Building Design for High,* 92

67   Truth and Reconciliation Commission of Canada, "What We Have Learned: Principles of Truth and Reconciliation"*,* 184

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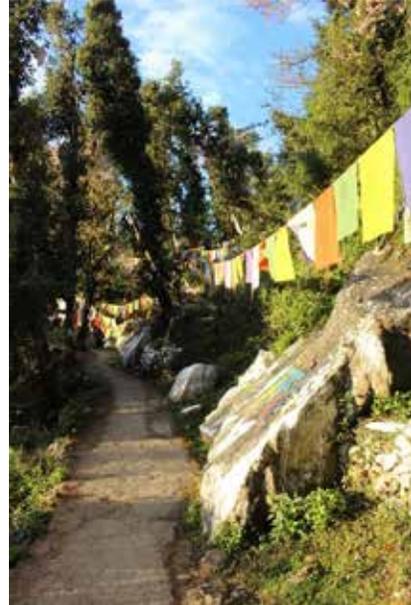
Figures 5.54 to 5.57. Prayer Flags adorn the sacred walk around the house of the Dalai Lama (W Semple)

and.share the nature of Indigenous ways. A 'recap' from the of the central aspects of 'Indigenist knowledge' reveals much about the focus of the conversations:

"• *Indigenist knowledge comes from the Land and has agency, choosing who it*

reveals itself to and under what circumstances;
• Indigenist knowledge is relationship-based, often intersectional;
 • A value system based in beauty, utility, and service to the community, rather than knowledge for knowledge's sake, undergirds Indigenist knowledge;
• Participation, experience, ritual, story, art, and spirituality, as well as cognitive processes such as logic and reason, are important Indigenist ways of knowing."[68]

68   Adams, Wilson, Head, and Gordon, Ceremony at Boundary Fire: A Story of Indigenist Knowledge, 30

69   Ibid, 21

70   Saul, The Comeback, 213

The roots of 'Ceremony at Boundary Fire', a Cree story from the time of pre-contact offers an intriguing description of an Indigenous way of meeting and what the exchange dialogue might entail. When traveling to the edges of their territory, coming to "a place where they knew other people lived, they stopped and built a campfire at the boundary. The people who lived in the neighboring land would see this fire on the boundary between the peoples, and they would know to come and visit, to communicate with people from another culture."[69] When asking about the spaces that would facilitate this process Shawn Wilson asks, "How do we create intersectional spaces at the edges of our understanding to meet in a new area? … How do we create the campfires that invite others to visit with us?"

This is our challenge as architects working with Indigenous peoples, to design and build, both materially and symbolically, the places where Indigenous and non-Indigenous people can come together to share who we are and begin to see and experience ourselves as true partners and friends. As put eloquently by Manitoba Grand Chief Courchene:

"Only thus can hope be bright that there might come in tomorrow when you, the descendants of the settlers of our lands, and say to the world, look, we came and we were welcomed and then we brought much despair, but we're also men of honor and integrity and we set to work in cooperation, we listened and learned, we gave support, and today we live in harmony with the first people of this land who now call us brothers."[70]

The time that we now live in, however, shows that this will not be an easy or direct path, as revealed in the recent musings by US President Donald Trump on the 'purchase of Greenland', and shared in the New York Times:

"Mr. Trump's diplomatic dust-up with an ally over the potential purchase of a land that would never be for sale is indeed absurd. But it reflects a dark reality. Greenland, a strategically significant and resource-rich island, was colonized 300 years ago by racist imperial entrepreneurs who cast indigenous peoples as guileless actors incapable of governing themselves. That Greenland is again being discussed in this way, however unseriously, is a measure of how present these forces are in

our world today — and of how little headway we've made in fighting them."[71]

Too often it does feel to be a long road ahead as the forces that Birkhold speaks of have often appeared to have taken command of much of to-day's agenda. Yet, we have the choice as to whether to draw upon these voices or to draw upon the 'angels of our better selves', to create and use processes that seek to heal and build a better world. For Indigenous people this would have to be seen as part of a larger process that would encourage the ritualization of the process. " If you conduct research to gain enlightenment or to build a better community, to improve and maintain relationships, then that is a ritualized process. You must access liminal space, or create that space by setting a time or place for ritual, in order to be open. This creates a process whereby the sacred miraculous can become physical."[72] I have spent many years of travel and work exploring the nature of ritual and ceremony and their importance to the development of awareness and consciousness, and through this have come to agree with this perspective.

Figures 5.58. William Semple amd s Holiness the Dalai Lama (W Semple)

CONCLUDING

One afternoon, during my time in Dharamsala, the Serkong Rinpoche informed me that he had arranged for me to have a personal audience with the Dalai Lama the following morning, as he wanted me to share our project idea with him. As I wrote earlier in the thesis, our project was to bring the design process I had shared with him and use this process to engage with people in Tabo. Our plan was to use this process to re-introduce some traditional building practices back into the region through the design and construction of new buildings for the monastery. The traditional building practices had become largely supplanted by the use

of concrete, a material that was neither ecologically sound, nor suitable to the cold climate of the Spiti Valley, where Tabo is located.

As I walked to my audience with His Holiness, as I had done many mornings in McLeod Ganj I took the circumambulatory path that surrounds Namgyal monastery, the Dalai Lama's monastery; a beautiful pathway that winds through pine forests garlanded with vibrant, colourful prayer flags that glowed from the warmth of the soft morning light (Figures 5.54 to 5.57). It was a picturesque autumn morning as I joined the many Tibetans who take this sacred walk as part of their morning rituals, with the quiet of the morning broken only by the sounds of Tibetans quietly reciting mantras under the towering snow-capped peaks of the Himalaya. For many Tibetans this was an important ritual as this was a place where they could garner the blessings that come with being near to their spiritual leader and accumulate merit from carrying out what the Tibetan consider to be a sacred practice. For me, it was a reminder of the importance of being in the moment and of celebrating the richness of Tibetan culture.

The end of the walk took me to the entrance of Namgyal Monastery where I joined a line of Tibetans and foreigners who had come to see His Holiness and receive his blessings. For many of the Tibetans, this would mean having only a moment of the Dalai Lama's time, as it was enough just to be near to him and to be in his presence. As I stood waiting, I admit to feeling guilty, as I was to get several minutes to speak with the Dalai Lama and share a conversation, and waited for my turn to be signaled that it was time for my audience. I had met the Dalai Lama many years before while I was working on the design for the Dolma Ling Nunnery, but this did not take away from the significance of this moment.

Before coming for my audience with the Dalai Lama, the Serkong Rinpoche had encouraged me to not talk about my experience with working on Tibetan architectural projects or my knowledge of Tibetan architecture. Instead, the Rinpoche asked me to share with him my experiences of working with Indigenous communities in Northern Canada, as the Dalai Lama was concerned with the plight of Indigenous peoples. When we met and he asked me what had brought me to come and meet with him, I began to share my concerns with the revival of Indigenous cultures and my work on housing projects in Indigenous communities. After listening, he turned to me and, sharing his thoughts on the common values and ideals of Tibetan and Indigenous peoples, said "We are the same people". I agreed with him and this is how our conversation began (Figure 5.58).

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71   Birkhold, "A Brief History of the Indignities Heaped Upon Greenland", Accessed from https://www.nytimes.com/2019/08/22/opinion/trump-greenland- denmark.html?action=click&module=RelatedLinks&pgtype=Article

72   Adams, Wilson, Head, and Gordon, Ceremony at Boundary Fire: A Story of Indigenist Knowledge, 19

EPILOGUE

... looking back, moving ahead

This thesis is a compilation of a journey that began early in my adult life and continues today. It is personal reflection on my own work as an architect and consultant as well as a practice-based study on the process of working as a non-Indigenous architect on architecture and planning projects in Indigenous communities in Canada, as well as projects working with Tibetans in Northern India and Tibet. Much of the focus of this thesis is on the work that I carried out over the past 16 years on housing projects for Indigenous communities across the Canadian north, including projects in Nunavut, NWT, the Yukon, northern Labrador and northern Quebec. In order to understand and reflect upon the needs of communities and to draw upon the input from local communities, self-reflection through location and community engagement became significant parts of the design process.

As I began to research into the ideas that I could draw upon for developing a design process for working with indigenous communities, I was soon faced with a lack of material from which to draw upon. In fact, there is very little documented material that relates to architectural practices in the Canadian North, and there certainly are no materials on the values and ideals that an architect or other designer might use when working with Indigenous communities. This thesis is a culmination of personal experiences and the lessons learned, an approach that reflects many aspects of the Indigenous process of knowledge accumulation that has been described by numerous Indigenous scholars and researchers, such as Shawn Wilson and Linda Tuhiwai Smith. As shared by Daniel Wildcat, "What we desperately need are the knowledges of peoples who developed lifeways over many generations in places they call home."[1]

There are many ethical considerations, practical issues and potential pitfalls that come with being a non-indigenous person working within indigenous communities. On the most part, these can be mitigated through awareness of the realities of Indigenous peoples, through deep self-reflection and understanding of oneself, by developing deep and meaningful relationships with the people within the communities, and working *with* the communities in collaboration. According to Margaret Kovach, "The greatest allies of Indigenous Research will be those non-Indigenous 'methodologies from the margins' that do not hide from but embrace the political nature of research."[2] I believe that the best way to move forward

with the creation and design of culturally appropriate architecture is for indigenous peoples and non-indigenous peoples come together and embrace a common goal. I believe that architectural design and the creating of various buildings that fulfill a myriad of needs for indigenous peoples, buildings that create a sense of home as defined by indigenous peoples, is the ideal common goal to collaborate on.

This epilogue concludes the five main chapters of this thesis by bringing together five 'necessary understandings for working in the north' that I considered in the prologue (Colonization, Northern Housing Policies and Practices, A Brief Account Of Euro-Western Architectural Design Practices, Ethical Indigenous Practice, and Story), with four additional viewpoints that connect to and summarize this work.

'Colonization', identified in the prologue as the first and primary context for designing architecture in the Canadian North is not just an idea, it is a reality. Colonization has been ongoing for centuries and continues to impact the experience of Indigenous peoples across Canada today. I explored colonization, examining the implications of this for indigenous peoples in Northern Canada. In the second 'understanding' I examined how 'Northern Housing Policies and Practices' guide, limit and drive the ways that architectural projects can be done in the Canadian North. I built upon this by providing 'A Brief Account of Euro-Western Architectural Practices' to establish what the norms are in architectural design with the aim of being able to create a comparison with and to show the unique challenges of designing architecture in the north. In the fourth major 'understanding' I introduced the concept of 'Ethical Indigenous Practice'.

The fifth 'understanding' presented in the prologue was the idea of story. This thesis takes the idea of story very seriously by recounting many of the stories that have informed the architectural design projects I've been engaged in. The final section in this epilogue identifies the first steps that could be taken in creating a new story for architectural design by summarizing the seven core values for practicing decolonized architecture.

In this epilogue I also bring together policy and ethical practice by exploring the two in combination.

REALITIES FOR INDIGENOUS PEOPLES IN CANADA
For Indigenous peoples in Canada there have been, of course, many practical implications of the process of cultural genocide. As Euro-western colonizers placed no value on Indigenous ways, imposing western values, designs and processes was never given a second thought. As

1   Wildcat, *Red Alert: Saving the Planet with Indigenous Knowledge,* 47

2   Kovach, M. (2005). *Emerging from the Margins: Indigenous Methodologies*, 33

Justice Thomas Berger wrote, "We should recognize the links between attitudes to environment and attitudes to native peoples. The assault upon the environment was also an assault on their way of life. To be sure, it was often an assault carried out under the banners of benevolence and enlightened progress, but it was nonetheless an assault. The native peoples and their land were, and to some extent continue to be, under siege."[3] For Indigenous peoples across Canada, and the north has not been an exception, this has included a complete assault on their ways of being and ways of knowing. It is an assault that has continued for many generations, the impact of which has deeply affected many generations of Indigenous people.
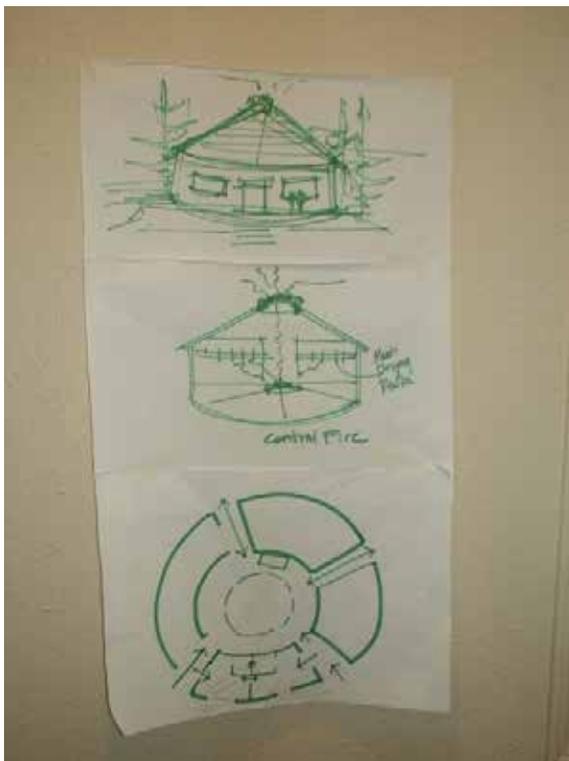
Figure 6.1: Traditional Ross River FN Housing. (W Semple)

For many non-Indigenous people, it seems to be a significant challenge to understand the extent of the damage that was done to Indigenous people in Canada, to acknowledge the role that our society played in this, and to take responsibility for these actions. This often takes the argument that 'we did not do this, we were not here and, as a result, we are not responsible'. While there are a number of problems with this argument, perhaps the most significant falls under the cloak of what is known as 'settler colonialism'.   "Settler colonialism is an ongoing system of power that perpetuates the genocide and repression of indigenous peoples and cultures. Essentially hegemonic in scope, settler colonialism normalizes the continuous settler occupation, exploiting lands and resources to which indigenous peoples have genealogical relationships. Settler colonialism includes interlocking forms of oppression, including racism, white supremacy, heteropatriarchy, and capitalism. This is because settler colonizers are Eurocentric and assume that European values with respect to ethnic, and therefore moral, superiority are inevitable and natural."[4] Seen through the lens of Settler Colonialism, we are all beneficiaries of the exploitation that has occurred and importantly, we are all part of the system that, from an Indigenous perspective, continues to perpetuate these actions. Part of the healing process rests in our ability to begin to acknowledge this.

From my own perspective, one of the challenges of this is the inability of non-Indigenous people (mostly white) to grasp the extent of the damage that was done to Indigenous people. When talking about Indigenous people in Canada, all too often I have heard people make the comment

that, if this had happened to their community or their society, they would have held together as a society better, that they would not have succumbed to the levels of despair that have taken over many Indigenous communities. I believe this perspective neither understands historically how long this has been going on or the extent to which our society tried to destroy Indigenous culture. As I began to listen to people in Indigenous communities, I began to enhance my understanding of this.

On a working trip to the Yukon, I was invited to be part of a one-day housing workshop for the Ross River First Nation (RRFN) that was being funded by the Yukon Housing Corporation. The workshop was being held in Whitehorse with representatives of the RRFN. From the very beginning of the workshop, the RRFN people were continually making the case that the housing being built for them did not meet their needs. One woman in particular noted that they used to live in a way that was much more communal in nature and that modern housing had broken many of the bonds that they had as people. At one point in the conversation, when a reference was made to how their 'houses' used to work, I asked one woman if she could draw this and show us what this looked like.

The drawing she made (Figure 6.1) shows a round 'multi-family' dwelling, where each space around the center represents the living space of different families that are all part of the extended family; it was common, for example, that the eldest son and his wife and children would be living with his parents. But perhaps the most significant aspect of this drawing was how she described the spatial use of the building. While the outside areas of the house contained sleeping areas, the center of the dwelling was communal and the location of the fire, an area where collective family activities occurred and where the children would play. In her description she placed children at the center of the house as they were what each family cherished the most, they were the future. She emphasized that, in this central space, they would be safe and they would be cared for by all. As I sat listening, I found myself cringing in horror as this connected directly with the story of residential schools and how, in taking children from their families we had effectively brought destruction of each family and in turn, each community where this was carried out. We had removed the 'center' of family and community life.

"Scholars, including Gregory Cajete 2000, Donald Fixico 2003, and Voss, D'ouville, Little Soldier, and Twiss, 1999, tell us that it is the nature of the North American Indian mind to be concerned not with a cause-effect linearity but to look at the world recognizing its circularity, understanding the network of relationships between people, places, spirits past and

3   Berger, *Northern Frontier Northern Homeland: The Report of the MacKenzie Valley Pipeline Inquiry: Volume One*, 29

4   *Cox, Settler Colonialism, Accessed from https://www.oxfordbibliographies.com/view/document/obo-9780190221911/obo-9780190221911-0029.xml#obo-9780190221911-0029-bibItem-00033bo-9780190221911-0029-bibItem-0003*

5   Mehl-Madrona and Mainguy, *North American Indians and Human Ecology*, 207

present, the rocks, the trees and the ancestors."[5] In removing children from their families and communities we broke this deep network of relationships. Sadly, and shockingly, this was our intent.

This Ross River story stayed with me as I began to spend more time in Indigenous communities and began to learn more about the impact of residential schools. As I began to comprehend the collective and individual pain that this caused, I wondered if any of us, if faced with losing our children and our family and community structure, would have survived this ordeal? Too few people seem to understand that this happened in every Indigenous community in the country, and that this also went on for several generations. Once in these schools each child was forbidden from speaking their own language or carrying out any aspect of Indigenous culture. The food they ate, the cloths they wore, and every aspect of life was intended to 'destroy the Indian' in them. And each summer, they would return to their families to live like strangers in their own culture. I wondered how any of us would survive a trauma like this and have often challenged people who claim they would not have been impacted to the same extent to reflect upon this.

For architects, the drawing made in the telling of the Ross River story and the account of relationships lost contains many of the nuggets of what is needed in a house. In a more modest sense, this simple diagram conveys what the distinguished Finnish architect Juhani Pallasmaa refers to as artistic expressions that "are capable of communicating the complex experience of being human instantaneously through a singular image."[6] It is an example of the surprising moments that can come in charrettes and workshops, and the importance of capturing them.   It is also an example of the value that needs to be extended to stories which, in an Indigenous context, are imbued with meaning. "Stories are the language of meaning-making. Since all things around us have spirits, they therefore have ontological status and the ability to speak for themselves. "I," can best be understood as instantiated in the interconnectedness of all the stories told about me, by all the people telling them, including spirits and ancestors, ourselves and, importantly, our environment."[7]

Along with the cultural genocide of Indigenous peoples in Canada, the idea of consulting with or engaging Indigenous peoples to create policies or design buildings was never considered. As a result, as Harold Strub writes in his book 'Bare Poles', "Buildings designed out of context frustrate everyone—users, owners and designers. Because they don't fit the need, they are poorly cared for and do not last long. For lack of a home-grown design and construction industry, polar regions have

imported copies of many such buildings from the midlatitudes over the past fifty years."[8]   In reality, it would be more accurate to say that the designs and building systems were imposed upon the north, and that this underscores the complete lack of engagement of Indigenous peoples in the design and construction of their building and communities. And while the practical implications are often clearly laid out, a fundamental understanding of what is needed to change this paradigm is not. Missing from this paradigm is any explicit mention of culture or societal needs, or of the engagement process required to understand and ensure those needs were recognized and addressed. My autoethnography and the case studies that I have presented in this thesis document illustrate how architects and collaborators working with Indigenous peoples can begin to do better. The first step is to recognize and give priority to engagement processes, and bring this to the design of northern Indigenous housing.

ETHICAL PRACTICE COMBINED WITH POLICY

Northern housing policies do not help architects and builders to engage in ethical practice. On the contrary, these documents hem architects and builders in by giving them a false sense of security about what the goals of their work are. As such, I call to bringing ethical practices into northern housing policies by acknowledging the importance of self-reflection for practitioners, relationship building, and deeply engaging with communities. This thesis began with a full chapter that located myself as a designer and author. In a number of ways this was a response to Abolson and Willet's statement: "Very few books about aboriginal people reveal anything substantial about the identity and location of the author"[9]By doing this I am both acknowledging the significance of their observation as well as providing my own example of how this is done.

In the case of working with Indigenous communities, ethical practice also implies that we cannot take a cookie cutter approach to designing for or with communities. From an Indigenous perspective the idea that one size fits all, or could fit all, is a direct example of not listening to Indigenous communities and what they have to say. When I facilitate design charrettes and workshops, I often share examples of what people in other communities said and the designs that I developed from this input. I can say quite accurately that no community has ever said to me 'yes, we will use that one – it will meet our needs'. While community members commented on what they liked or would like to see in the house designs for their community, often in informal conversations after the event, they were also clear that they are would like to see house designs developed

6   Pallasamaa, *The Embodied Image: Imagination and Imagery in Architecture,* 120

7   Mehl-Madrona and Mainguy, "North American Indians and Human Ecology", in *Radical Human Ecology: Intercultural and Indigenous Approaches*, 205

8   Strub, *Bare Poles*, Foreword

9   Abolson and Willett, "Putting Ourselves Forward: Location in Aboriginal Research", in *Research as Resistance: Critical, Indigenous and Anti-Oppressive Approaches,* 118

that would meet the specific needs of their own community.

The idea that one size could fit all also dominated the work that I carried out when I was the Northern Housing Researcher at CMHC. There I was given the approval and resources to carry out a project in each of the northern Canadian territories, with the intent that these would be prototype houses that could then be replicated throughout each of the territories. CMHC did not formally recognize that each community had a unique identity and that each were searching for housing and building solutions that would fit their own community. In many ways this gave the decision-making power to the territorial housing agencies rather than the communities themselves. By following this course, identity was once again institutionalized and homogenized It also ensured that 'process' was not acknowledged as a significant component in the course of working with Indigenous communities.

A process that ensures there is a connection between 'process and product', a component that I have highlighted as an integral part of Indigenous philosophy, is an essential aspect of the holism and interconnectedness that is needed to change the pattern on how architectural projects are carried out in Indigenous communities. Holism and Interconnectedness are at the heart of Indigenous beliefs and values. "The idea of connectedness in a North American Indigenous paradigm not only includes the idea of a cosmology that puts people in community with everything else around us, but holds that it is even improper to think of a mind or self as something separate and individual."[10] This idea extends the notion of connectedness into the question of 'what is knowledge?'. As Lewis Mehl-Madrona and Barbara Mainguy state, this is "where a holistic or intuitive voice is challenging the dominant positivist voice on what might be considered evidence that can lead to a knowledge claim. … to unfix the idea of what might constitute knowing."[11]

An example of the significance of interconnectedness and the necessity of bringing this viewpoint into research, design and other fields of work is being explored within the field of 'Radical Human Ecology'. As shared by Lewis Williams, "This is not so much a subversion of Western methods from which the discipline has grown, as a radical reintegration. We are all people who deeply value 'science', but who wish to see it re-grounded into wider, culturally based epistemologies. In this instance we are concerned with traditions that privilege worldviews based on metaphysical interconnectedness: in plain language, paradigms that are open to there being a spiritual grounding to reality."[12] To Lewis, this is a 'radical reintegration' of the study of Human Ecology.

The importance of viewing the world through the eyes of interconnectedness are furthered by Alistair McIntosh who writes, "The rational mind, if bereft of the soul's touchstone of beauty that poetry offers, may come to know the world with great precision, but at the cost of fragmentation."[13] In this statement, McIntosh acknowledges both the inherent strengths and weaknesses of the rational mind and the nature of rationality.

Interconnectedness is also a fundamental principle within Buddhist thought and philosophy. "The Buddha's doctrine of pratitya-samutpada teaches that nothing at all, most of all that which we call the self, exists independently, in and of itself. Rather, everything arises in dependence upon everything else; "because there is this, there is that; because this is not, that is not." We live in a web of mutual causality in which everything ultimately touches and conditions everything else, with nothing at all existing autonomously and nothing at all standing aloof from change."[14] The nature of interconnectedness is what Buddhist philosophy calls *pratityasamutpada* or 'dependent co-arising' (or more specifically Interdependent co-arising). As defined by the great Zen teacher Thich Nhat Hanh dependent co-arising "is that everything arises in dependence upon multiple causes and conditions; nothing exists as a singular, independent entity."[15]

ARCHITECTURE IN THE NORTH

In this thesis I have brought together work accomplished with Tibetan communities and in the Northern Canadian context in order to explore the similarities and differences that exist between Indigenous and Tibetan peoples in terms of their way of knowing and the values that shape the way they see the world and the way in which they live on this planet. Both share similar 'ways of knowing' and a deep spiritual connection with the land, seeing the earth and all its life forms as sacred. Both are peoples who have been overrun by powerful 'outside' forces who justified these interventions through a sense of social, cultural and spiritual superiority. Neither community has been 'listened to' by their conqueror. As history is 'written by the conqueror', too few of these stories are commonly understood. Both have been victims of attempts at 'cultural genocide'.

Early in my work with Tibetan communities in northern India, I drew upon my education as an environmental planner and my experience as a builder to begin exploring what I have grown to see as the direct connection that exists between cultural and environmental sustainability. This began in the Himalayan region, where the great forests of the regions provide the materials for the elaborate wood detailing that are manifested

10 Mehl-Madrona and Mainguy, "North American Indians and Human Ecology", 205. We live in a web of mutual causality in which everything ultimately touches and conditions everything else, with nothing at all existing autonomously and nothing at all standing aloof from change.

11 Ibid, 207

12 Williams et al, "Human Ecology: A Pedagogy of Hope?", in *Radical Human Ecology: Intercultural and Indigenous Approaches,* 2

13 McIntosh, *Soil and Soul*, 208

14 Daniels, "Climate change, economics and Buddhism — Part I: An integrated environmental analysis framework", in <u>Ecological Economics</u>, 63

15 "Understanding Dependent Co-Arising is critical to Buddhist practice: The Great Causes Discourse Maha-nidana Sutta", accessed June 4, 2020, https://buddhaweekly.com/understanding-dependent-co-arising-critical-buddhist-practice-great-causes-discourse-maha-nidana-sutta/

by skilled Tibetan craftsmen in both traditional domestic and religious Tibetan architecture. In this region, it is only where these great forests still exist, that the skills for building this way can still be found.

While this perspective and understanding offered me with a valuable way of 'seeing' the traditional architecture of Tibetans, neither my building experience nor my architectural design training prepared me for working in Tibetan communities. This was the beginning of my explorations into different aspects of 'process' and the development of a design process that is oriented towards ways of knowing and doing that are distinctly non-western. Much of this was developed through trial and error. I had to learn different ways of listening and different ways of seeing in order to understand Tibetan processes and priorities. The process of developing architecture that I was taught and used in 'the west' did not fit within a cultural context that placed great emphasis on the collective nature of knowledge, on the significance of ceremony and ritual, and of the challenge of maintaining rich cultural and religious traditions that were under assault or in exile from the land from which they had grown.

Taking what I had learned from working Tibetans to the Canadian north, my work with Indigenous communities soon revealed additional challenges. While Tibetans have faced significant trials in maintaining their cultural traditions in exile, the level of 'cultural genocide' that was enacted upon the Indigenous people in Canada have been more severe and more comprehensive in their impact. While the built environment and cultural traditions of the Tibetan community in India still provided 'cultural stories' that could be drawn upon, the built environment of Indigenous communities in the Canadian north all too often feels like a cultural wasteland, with buildings that do not relate to the environment, the climate, or the cultures of the Indigenous peoples who live there. Some of this is a reflection of the differences that exist between a more agrarian versus a hunter/gatherer way of life, and the vulnerability that hunter/gatherers peoples have against far more powerful outside forces.

As I have shared in this thesis, this did not occur by accident, but was a government policy that was foisted upon Indigenous communities in Canada. As highlighted by Patrick Scott, "For reasons rooted in imperfections of the human condition, those at the highest levels of authority in Canada came to believe that our indigenous cultures, languages and our ways of worship were not worth keeping and should be eradicated."[16] The history of Residential Schools and the impact that these had (and still have) on Indigenous communities in Canada cannot be over emphasized. For Indigenous people in Canada there is a need to reach back and see

architecture as yet another tool to help rebuild the foundation, while with Tibetans it feels that there is more of a foundation to build upon as their society, even in exile, is more fundamentally intact.

As written by Alistair McIntosh, "Maybe the name of the game is to identify remnant islands of both human culture and natural ecology, and to nurture them: to help them find the angelic manna that will rebuild their strength, even for those on the verge of death."[17] It is essential to understand that this will be different in each community and in each context that you work in. Hence the need for a more culturally endowed process, and for taking the time to realize this process.

When I reflect on my work on housing projects in First Nations and Inuit communities across the Canadian north and on architectural projects in different Tibetan communities in northern India and Tibet, I have come realize that it is not only important but necessary that architects begin to develop a more culturally appropriate northern Canadian architecture.

A NEW STORY FOR ARCHITECTURAL DESIGN

As I shared in earlier chapters, in further developing my own understanding of process within the context of Indigenous communities and to begin to create a new story for architectural design, I have drawn upon the extensive writing that Indigenous scholars and researchers and the principles and values they see as the necessary foundation upon which to undertake 'research' in Indigenous communities. These all fall under what is being called an Indigenous Research Methodology (IRM), a process that is geared towards guiding Indigenous researchers to engage in practices within their own communities. Where Indigenous scholars and researchers have been examining and developing the principles behind an IRM, I have summarized these into seven core values and translated these into an architectural design process that incorporates self-reflection, autoethnography and case studies that are the stories from my architectural projects. I ask readers of this thesis, particularly young architects and designers, to take a 'standpoint' that supports a new way of seeing the world.

To summarize the work completed in this thesis and what it means to the practice of architecture I wish to revisit the seven core values that were learned through doing my work with communities and that I highlighted through a series of 'vignettes'. As I have written about the significance of interconnectedness it is important that I highlight that these seven core values need to be viewed through the lens of interconnectedness, to see how they draw upon and reflect back on each other. These are:

16 Scott, *Talking Tools: Faces of Aboriginal Oral Tradition in Contemporary Society,* 17

17 McIntosh, *Soil and Soul*, 122

1. Location: Establishing the architect's location, the process of understanding, documenting and sharing one's personal position is initiated at the beginning of the consultation process and is revisited throughout the collaborative process. Location is used to assist others in understanding personal standpoints and dispositions, which helps people to understand the voices and identities of the architects collaborating with communities. Location relates directly to the idea that there is no such thing as objectivity, that each person is made up of a lifetime of experiences that informs the way the world is perceived. The use of location in not meant as a means for placing judgement on one's opinions or beliefs, but rather to place these opinions or beliefs in context – in building relationships, people will want to know 'where you are coming from'. For architects, understanding the importance of location, what it means and ensuring that it is employed as part of the consultation process is essential.

2. Relationships: Developing and implementing a successful process will involve fostering relationships with people in the community. The notion that an architect is or can be, an independent third party who can impartially carry out a design project in a community simply does not fit with the value that Indigenous people place on relationships. Relationships are a part of every aspect of life in Indigenous communities. In building relationships with community members, architects will develop friends and allies on the way to understanding and working more effectively in the community. In doing this, architects will also come to learn and appreciate the intricate web of relationships that are an integral to the lives of Indigenous people. These relationships with community include families, clans and community, as well as, relationships to the land that are fundamental of all other relationships. Relationships to land are 'foundational' to Indigenous people and are the structure on which all other relationships are built.

While the relationship to the land may present the greatest challenge to understanding relationality in an Indigenous context, in my own experience, delving into this has exposed some of the most unsettling aspects regarding the design and building of northern housing as it exposes how poorly previous housing designs have been created through a neglect for the foundational need of relating to the land that is a fundamental value for Northern Canadian communities.

3. Knowledge: It is absolutely essential to begin to understand that there are different ways of viewing the world, different 'ways of

knowing'. As I shared in the thesis, Indigenous peoples place great value on subjective thought, on what is 'learned through experience, through doing'. There is a great deal of distrust with the idea that a person can be objective and unbiased or have the ability to make decisions that are not influenced by the experiences of life that each of us brings to that moment. There is also distrust for objectivity as 'objective and rational' euro-western people have continually used this argument as a method of professing intellectual, cultural and spiritual superiority. It is part of the history of distrust. Understanding this aspect of knowledge will help in understanding the importance of listening as subjective knowledge is mostly transferred verbally. With the importance of subjective knowledge comes the importance of listening.

When an architect is doing a project where new ideas, technologies or building systems are being introduced, it is almost certain that a process of knowledge and skills transfer, of training, will be necessary in order to ensure the success of the project. Understanding this aspect of knowledge is essential for developing a responsive and effective process.

4. Stories: With the emphasis that is placed on subjective knowledge, the sharing of knowledge has traditionally been through the oral tradition, with the use of stories being a fundamental component. Storytelling and the oral tradition have been used to transfer pragmatic knowledge, to provide guidelines on how life should be lived and to connect both the teller and the listener to the community and the wider natural world. When architects are working in an Indigenous community, most of the valuable information that will come forward will be shared orally. As relationships with communities become deeper, more of this knowledge will be in the form of stories. Architects need to listen to these stories.

5. Making: Here I connect the idea that process and product are inseparable. Where euro-western approaches often place emphasis on the final product, Indigenous communities place greater emphasis on the process where 'the final product is always secondary to the community benefitting from the process'. It is important to consider what this means to the idea and process of architectural design, which is fundamentally focused on the final result, not on the process of getting there. This viewpoint presents the most significant challenge to the way architecture is practiced in Indigenous communities and the necessity of emphasizing community needs

that are difficult to measure, particularly through the lenses of objectivity and southern economics.

Ultimately it is hoped that this will also evolve into developing approaches to building that support Indigenous values and processes and draw from more traditional Indigenous building processes.

6. *Spirituality*: It is essential to see that to Indigenous peoples, spirituality is an integral part of all things. As with the nature of relationships, the special and underlying connection with the land is a fundamental aspect of Indigenous spirituality. Indigenous people consider the land to be a gift from the creator; it is part of their relationship and the covenant that they have with the creator. It is not considered to be a commodity or something that needs to be developed.

When knowledge generating sessions are held in a community (e.g. assemblies, charrettes etc.) these are opened with a prayer that is often delivered by an Elder from the community. This reflects the idea that knowledge and the process of collecting knowledge is also seen as having a spiritual quality. The act of seeking knowledge is also seen as a personal and spiritual journey, as the foundation for Indigenous knowledge is spiritual. For architects and others working in communities, it is hoped that understanding this will provoke change through the ideas that are shared, the values that are highlighted through sharing, and how this information is then used. Acknowledging spirituality will help to bring more humility to the process of doing architecture.

As Indigenous scholar Rebecca Sockbeson writes of her own research, "This work is much like a prayer; I hold my people with me as I write, and I treat my words with the utmost care and thought. I refer to this work as part of processes of social and political change."[18]

7. *Agency*: Indigenous scholars have written extensively about how all work carried out in Indigenous communities should be for the benefit of the community. An important caveat here is that what is defined as 'beneficial' needs to come directly from the community. Agency is why embracing process-oriented approaches is so important. For each person involved in working with communities, it begins with the question of how we as individuals will use our own agency. In many ways, an architect's agency and how they use it will be influenced by a process that includes each of the previous six

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core values outlined. When an architect takes the time to use location, to develop meaningful relationships in the community, to come to understandings of the collective and spiritual nature of knowledge, to listen to the stories of the communities, to gain greater understanding of the inherent connection between process and product, and to learn and experience more about the nature of Indigenous spirituality, it seems to me that other architects will naturally come to a place where I have come—where using one's personal agency for the benefit of communities is the only course of action that makes sense.

In truth, however, this is something that each person must closely examine as part of their own personal journey.

FINAL WORDS

For those who read this thesis and the stories herein, it is important to come to this with an openness to new ways of designing and a willingness to challenge the normative ways in what research and design are carried out.   Cree scholar Shawn Wilson approaches this from the perspective that Indigenous research is a ceremony and must be given the respect that ceremonies are due. Wilson effectively brings together all of the aspects of process that are required to enrich the ceremonial aspect to research, sharing that "ceremony, according to Minnecnju Elder Lionel Kinunwa, is not just the period at the end of the sentence. It is the required process and preparation that happens long before the event. It is, in Atkinson's (2000b) translation, dadirri, the many ways and forms and levels of listening. It is, in Martin's (2003) terminology, ways of knowing, ways of being and ways of doing. It is the knowing and respectful reinforcement that all things are related and connected. It is the voice from our ancestors that tell us when it is right and when it is not. Indigenous research is a life changing ceremony."[19]

Through the pages of this thesis I offer and share with architects, planners and other designers what I have experienced and learned from collaborating with Northern Canadian communities. I also encourage architects, planners and designers to delve into the writings of Indigenous scholars and researchers as it is through these wise words that deeper understanding and respect for Indigenous ways and the wisdom of Indigenous peoples will be gained.   My wish is that this thesis contribution of a culturally appropriate design process, with its accompanying manifestation of the values, perspectives and needs of Indigenous communities, will aid others in the designing and building of exceptional housing and communities in the Canadian North.

18   Sockbeson, "Indigenous Research Methodology: Gluskabe's Encounters with Epistemicide", In Postcolonial Directions inEducation, Volume 6 Issue 1,7

19 Wilson, *Research is Ceremony: Indigenous Research Methods*, 60-61

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Appendix 1: NRI Research Registry

Nunavummi Qaujisaqtulirijikkut / Nunavut Research Institute

Box 1720, Iqaluit, NU X0A 0H0   phone:(867) 979-7279   fax: (867) 979-7109   e-mail: mosha.cote@arcticcollege.ca

RESEARCH REGISTRY

Registry#   03 010 20Registry

ISSUED TO: William Semple
Department of Human Ecology
University of Alberta
206 Sunnyside Avenue
Ottawa, Ontario
K1S 0R5   Canada

TEAM MEMBERS:

AFFILIATION: University of Alberta

TITLE: Decolonizing Architecture: Stories from the Canadian North

OBJECTIVES OF RESEARCH:
This is the story of nearly thirty years of my work as an architect where I aimed to support the creation of culturally appropriate architecture and the promotion of sustainable building practices. Much of this work was directed towards the development of energy efficient housing in the Canadian north, carried out in collaboration and direct consultation with Indigenous communities including community members and Elders who live in these communities. My story is entangled with the stories of five northern communities in Canada, one northern community in the USA, and a Tibetan refugee community in India. This story is written as a self-reflection that is deeply personal and I intend it to lead towards better understandings of the processes of creating housing with communities through something I call the 'decolonizing of architecture'. My story is a kind of auto-ethnography, written from the perspectives of white privilege, human ecology, and architectural design. This work takes a practice-based approach where I reflect upon my own practices as a son within an immigrant family, an advocate, a builder, an architect, and a person who lives within Canadian society.

DATA COLLECTION IN NU:
DATES: ---
LOCATION: Nunavut

Registered for notification purposes only.
Issued at Iqaluit, NU on September 01, 2020.

Mary Ellen Thomas
Science Advisor

Appendix 2: Project Absract - Inuktitut Translation

ᑭᓯᒥᑉ ᐅᖅᐅᑦᖂᓕᖄᖏᓂᖅᵇ: ᐊᑭᑉᖨᑉᐃᑎᐊᓂᖍᐅ ᐃᓐᓗᑦᖄᐊᑉ ᖃᓄ ᖐᐊᓕᓂᖕᒐᓂᖕᵇ: ᐅᓂᑉᖳᑉ ᑲᑌᑐᑉᐋ ᐅᑉᐅᑉᑕᑉᑐᐊᓂᖅ
ᐅᖃᑲᐃᑉᑐᒥᐅᑕᓂᖕᶜ

ᐅᑯᐊ ᐅᓂᑉᑲᓐᖆ 30 ᖑᐊᖄᐊ ᐃᖅᑲᐃᖩᑕᐅᖐᓂᖄᓂᖕᵇ ᐊᑉᖐᖔᒥᐊᖐᖐᐊᓂᖅᶜᔾᶜ ᐊᖞᑉᖃᔾᐊᑎᖕᶜᔾᶜ ᐃᓐᖅᑖᐊᓂᓕᓐᶜ
ᐊᑊᑉᐋᐃᑐᖕᵇ ᐃᓄᓐᐅᑉᖄᓐᐅᑉᐋ ᖀᐃᖔᓂᶜ ᐊᔾᑲ ᑊᑎᐊᖃᕪᐃᓇᖕᶜᔾᶜ ᑊᑎᖕᶜᖄᐊᖞᖕᓗᖅᖐᑐᖕᵇ ᐃᓐᓗᐅᑉᖄᓂᔾᶜ
ᐱᓐᑎᖍᖐᖃᓂᖓ. ᐱᓐᑎᐊᖔᑲᐊᶜ ᐃᐃᑉᐃᖃᔾᐊᓕᐅᑉᖃᔾᶜ ᐊᖅᑉᖐᖄᐊᖅᖐᓇᖏᓂᖓ ᐃᓐᐅᑉᔾ ᐃᑉᑉᐋᐃᖂᑐᖕᵇ,
ᐅᖵᖃᑐᓂᖕᓗ ᐊᑐᓗᐊᖕᖏᓂᖄᑉᖏᓂᖕᶜᔾᶜ ᐃᓐᖐᐅᑉᖄᓂᖓᵇ ᖃ ᑲᑐᑉᐋ ᐅᑉᐅᑉᑕᑉᑐᐊᓂᖅ, ᐊᔾ ᑕᓐᖃ
ᑊᓕᑮᐃᑐᖅᖅᖄ ᐱᓐᑎᖃᑊᖃᑲᐃᑮᶜ ᐊᔾ ᑎᓴᐅᖅᑕᐅᖑᐅᑉᖃᐃᖓᖕᵇ ᓄᐊᖥᑊᖐᖐᒄᶜ ᓄᐊᶜᖓᖏᓂᖕᵇ. ᐅᖃᑲᓂᖄᖅᖂᶜᔾᶜ
ᐅᖃᑲᓂᖄᖐᐅᑉᖐᖆᖕᵇ ᑕᑉᓖᓇᖕ ᐅᑉᐅᑉᖄᖐᑊᖅᒥ ᓄᐊᓂᖔᓂᖅᶜ ᑲᑌᒥ, ᐊᶜᐅᖥᶜᖓ ᓄᐊᖕᵇ ᐊᖥᐊᑲᵇ ᓄᐊᖄᖐᶜ, ᐊᔾ
ᑕᑊᐃᑊᑈᖅᒥ, Tibetan ᖀᖞᖥᖄᖐᓂᖓᶜ ᓄᐊᖐᖔᖓᶜ ᐃᖅᒄᑊᑈᒥ, India. ᐅᑯᐊ ᐅᖃᑲᓐᶜ ᑎᑎᖐᖥᖄᖅᶜ ᐃᖅᑲᐅᑉᔾᖕᖅᐅᑉ
ᐊᑉᖥᐊᓗᖐ ᐃᐃᖄᓂᶜ ᐃᑊᐊᖄᐃᑐᖕᶜ ᐊᔾ ᐊᑐᶜᐃᖐᐋᖐᖅᖃᶜ ᐅᑉᖥᖐᖄᓂᖍᖐᓂᖕᶜᔾᶜ ᐱᓐᑎᖅᶜᖃᖔᖕᖐᖕᵇ
ᐃᓐᖐᐅᑉᖄᖅᒄᖃᑲᐃᒄᶜ ᓄᐊᖐᖔᖓᶜ ᐊᑐᖅᖓᖄᒄᶜ ᑕᑉᖄᖐᓂᖕᵇ ᖐᐊᑉᖥᐊᑐᖔᖅ ᓄᐊᖐᑐᑉᖅᖐᖥᐊᑉᖐᖄᖐᖕᵇ ᐃᓐᓗᑦᖄᐊᑉ
ᖐᐊᓕᓂᖕᖐᖕᖐᖓᖕᵇ. ᐅᖃᑲᑊᐊᑲᐅᑉᐋ ᖐᶜᖓ ᖃᐅᖥᖔᖐᖄᖐᖅᖓᖕᵇ ᐊᑐᖄᖥᖐᖄ, ᑎᑎᖐᖥᖄᖐᐅᑉ ᐊᖥᖐᖩᖥᐊᑐᶜ ᖃᶜᖓᔾᶜ, ᖃᐅᖥᖐᖥᐃᖐᖄᖅᖓᖕᓗ
ᖀᑊᑐᑉᐃᐊᖓᖕᵇ ᖃᓂ ᐃᖅᑐᖍᖞ ᐃᖐᐊᑊᖃᖕᖐᖄᖐᓂᖕᵇ, ᐊᖐᖃᑎᖃᓂᖅᖃᖕᵇ, ᐊᔾ ᐅᖅᐅᑉᖄᖅᖓᖕᵇᶜ ᐃᓐᓗᑦᖄᐊᑉᖔᐃᶜ ᖃᓂᖄ
ᖐᐊᓕᓂᖥᖅᖐᖄᖕᵇ. ᐅᑯᐊ ᐱᓐᑎᐊᖃᑎᖥᖄᖅᵇ ᐊᑐᖅᖐᖄᖞᶜᖅᶜᖄᖕᵇ ᐊᑐᖅᖓᖄᖓᶜ, ᐃᖐᖐᖥᐅᓕ ᖖᖓᖃᖓᖕᶜ ᐃᖐᖏᖕᶜ
ᓄᐊᖐᖥᖐᖅᖓᖕᶜ, ᐅᖃᑲᐅᖄᖥᖐᖅᖄᖅᖓᖕᓗᖅ, ᐃᖐᖐᐅᑉᖐᖔᖐᖃᖔᖕᓗᖅ, ᐃᖐᐃᐃᶜ ᖐᐊᓕᓂᖥᖅᖐᖄᖓᖕᵇ ᖐᐊᖐᐅᑉᖔᖕᓗᖅ, ᐊᔾ ᓄᐊᖅᖐᖐᖄᖕᖅ
ᑲᑌᒥ, ᑕᑊᑐᑈᖥᖞᶜ ᐱᓐᑎᖥᖄᖐᖥᖅᖓᖔ ᐃᖅᑲᐅᑉᐃᖕᶜᔾᶜ ᓄᖥᖓᖕᵇ ᐱᓐᑎᖩᐃᑊᖄᶜ.

ᑐᖐᖥᖐᖃᖅᖞᐃᖕᶜ ᐅᖅᐅᑉᖥᖐᖔᖕᵇ ᐃᖅᑲᐅᑉᖃᖔᖕᓗᖅ ᖃᶜᖓᐃᑎᖅᶜ ᐱᖅᖐᖥᐅᑉᖆᖅᑎᔾᶜ ᐱᓐᑎᖩᖥᐃᐊᖓᖕᵇ ᐃᓐᓗᐃᶜ
ᖐᐊᓕᓂᖥᖐᖄᖓᖕᵇ ᑊᓗᖐᖓᖅᶜ ᐊᔾ ᐅᖐᖐᖥᐃᖅᐅᖥᖥᶜ ᑐᶜᖞᐃᖅᖄᶜ ᐊᑐᖅᖐᖥᖔᖍᶜ ᐊᔾ ᑊᑎᐊᖃᕪᐃᖄᖅᖐᖓᖕᵇ ᓄᐊᖃᕪᖥᖐᖄᖐᖓᶜ
ᖃᐅᖥᖐᖥᖅᖞᶜ ᐊᔾ ᐱᓐᑎᖃᕪᐃᖅᖃᑲᐃᒄᶜ ᓄᐊᖐᖔᖓᶜ ᐅᖅᐅᑉᖄᖅᖓᖕᵇ ᐊᖥᖐᖐᐅᑉᖄᖐᖓᖕᵇ ᖃᓂᖄ ᐃᖐᖐᖐᐃᖐ ᖐᐊᓕᓂᖥᖐᶜ
ᐊᑊᑲᖓᖄᖅᖞᖥᖐᖅᖞᖕᖕᶜ ᐊᖄᖅᖥᖐᐅᑉᖄᖞᶜᑐᖕᵇ ᐅᑊᖐᖥᒥ ᐱᓐᑎᖩᖞᖞᖞᐃᖞᶜ. ᓄᖞᶜᖓᖕᵇ ᐃᖅᖐᖥᖐᖃᖔᖕᵇᶜ ᐊᑐᖅᖞᖐᖅᖓ ᑊᐃᖥᖐᖔᖕᖞ
ᑐᖐᖥᖃᖥᖐᖥᖏᖅᖞᐃᖓᶜ ᖞᖥᐊᕪᖐᖄᖐᖓᐃᖐᖕᵇ ᖞᖐᖅᖞᐊᖥᖐᖞᶜᔾᶜ ᖐᐃᖐᖞᖐ ᖐᖞᑎᖞᶜᐃᖐᖞᖞᐊᖐᖞᖐᶜᔾᖓ ᑊᖞᖐᖞᶜ ᑲᑌᒥ, ᖀᖥᐊᖓ
ᑕᑊᖞᖃ ᑐᖅᑊᖅᖞᖅᖄ ᐊᑐᑉᖞᖃᐃᖃᖕᖄ ᖃᖞᖐᖄᖕ ᐱᓐᑎᖩᖥᑐᑉᖞᖞᖞᖕᵇ ᖐᐊᓕᓂᖥᖐᖄᖞᖞᶜ ᐃᖐᖐᖥᖄᑊᖄᖐᖄᶜ
ᐊᑐᖄᑲᐅᖃᖞᖃᶜᔾᶜ. ᖃᖞᖐᖄᶜ ᐊᖥᖐᖥᖐᖞᖂᖞᖍᖐᑊᖐᔾᶜ ᐊᖥᖐᖥᖐᐅᑉᖄᖐᖄᖞᖞᖄ ᑐᖐᖞᖥᐃᶜ ᐃᓖᑊ ᐊᑐᑉᖞᖃᐃᖞᖕ
ᐊᑊᑐᖞᖅᑐᑉᖞᖃᖞᖞᖄᐃᖄ ᐃᐃᐃᑊᖞᑉᖥᖐᖕᵇ ᐊᔾ ᐃᖐᖐᖥᐃᶜ ᖐᖞᑊᐅᑉᖥᖐᖔᖐᓂᖓᶜ
ᐱᓐᑎᖍᖐᖄᖐᖕᖕᖕᵇ/ᐱᓐᑎᖃᕪᐃᖞᐅᑊᖄᖐᖞᖕᵇ ᐃᓐᖐᐅᑉᖄᓂᔾᶜ ᐅᑉᐅᑉᖄᖐᑐᖥᖓ ᑲᑌᑐᑉᐋᶜ. ᑐᖐᖞᐊᖃᖅᑐᖕᵇ
ᐊᖅᐅᖥᐃᐊᓂᔾᶜ ᐃᑊᐊᖄᒄᖓᖕᶜ ᐊᑊᑉᐋᐃᖂᑐᖕᵇ ᐃᓐᖐᐅᑉᖄᖞᖕᵇ ᐊᔾ ᐊᔾ ᐱᓐᑎᖃᖃᖔᖕᖐᖕᵇᶜ ᓄᐊᖐᖔᖥᖐᖞᖞᖄᖞᵇ
ᓄᐊᖐᖂᑐᖕᵇ ᓄᖐᖐᖃᒥᖕᵇ, ᐊᑭᑉᖥᖐᑐᐃᖂᖃᕪᐃᖄᖅᖐᖔᐃᶜ ᐊᖥᖐᖩᖥᖐᖓᖕᵇ/ᐅᑊᐊᓐᖥᖕᵇ ᐱᓐᑎᖃᕪᐃᑐᶜ ᓄᐊᖐᖂᑐᖕᵇ ᖐᐃᖃᖥᖓ
ᑕᑊᑊᑯᐊ ᓄᐊᖐᶜᶜ.

ᐊᑭᑉᖥᖐᑐᐃᖃᕪᐃᖞᖓᖐ ᖃᖞᖐᖄᖔᖅᑐᖕᶜ ᐃᖐᖐᖥᖃᐃᖕᐅᑉᐃᖥᖐᖞᖕᵇ ᐊᑭᑉᖥᖐᑐᐃᖃᕪᐃᖞᖓᖐᵇ ᐅᖅᐅᑉᖥᖐᖃᕪᖐᖐᖅᖞᐃᐅᑊᖐᖄᐅᓂᖥᖕᵇ
7,ᖓᵇ ᐱᖦᖐᖃᖕᖐᖥᖕᵇ ᐃᖄᑈᖥᖐᖞᖕᵇ ᐃᖅᑲᐃᖩᖏᖞᖅᖞᖃᶜ ᓄᖞᖓᖄᖍᖔ ᐊᔾ ᐅᑯᐊ ᐃᖅᖞᑮᖔᐅᑉᖞᶜᔾᖞᶜ: ᐊᑭᑉᖥᖐᐃᖂᑐᔾᶜ
ᐃᓐᖐᐅᑉᖄᐃᖃᑊᖐᐋᵇ ᓄᖐᶜᖞᐃᖅᖞᖃᖥᖐᑊᖃᕪᖞᖄᐃᖞ, ᐱᓐᑎᖃᖃᖍᖞᖍᖐᐊᑊᖅᑎᶜᐃᖂᑐᑉᖞᖓᖕᶜ (ᐱᖐᖥᖐᐅᑉᖞᐅᖄᖕᓗ ᓄᐊᐃᶜ ᐊᖅᑐᐊᖄᖐᶜ),
ᐅᑊᐃᖥᖐᖄᖞᖞᶜ ᑮᖥᖐᐊᑊᐅᑉᑕᐅᖥᖅᑐᖕᵇ ᖃᐅᖥᐃᖄᶜᔾᶜ, ᓄᖞᖓᖃᖅᖓᖞᓗ ᐅᖞᖃᑎᖅᑐᖕᵇ, ᐊᑊᑉᖐᖄᖃᖞᖕᵇ, ᑕᑊᖃᖐᖞᓗ
ᓄᐊᖐᖥᖐᖃᕪᖐᖄᶜ ᐊᖅᑐᐊᖞᖕᖐᖕᵇ ᖐᓄᐃᖄᐅᑊᶜ ᖐᖞᖅᖥᐊᒥ, ᐊᔾ ᐊᑐᖞᐊᑉᖃ ᑐᖅᖞᖔᐃᑊᖞᖓᖕᖐ ᐊᑊᖐᖥᖐᖃᑉᑐᖃᖞᖕᖕᖞᶜ
ᓄᐊᖐᖥᖐᖃᕪᖐᖄᶜ ᓄᐊᓂᖞᖄᖞᶜ. ᑎᑎᖐᖥᖄᖐᐅᑉᖞᖅᶜ ᑐᖞᖍᖞᐃᶜ ᐅᖅᐅᑉᖥᖐᖅᖄᖐᖓᖕᵇ 7,ᖓᵇ ᐱᖦᖐᖔᐅᑉᖞᖕᵇ ᖐᖞᐃᖞᑊᐅᑊᖐᐅᖞᖕᓗᖅᶜ
ᐊᑊᑉᑎᖃᖔᖞ ᑐᖀᖃᕪᐅᑉᖅᓗᖔᵇ ᑊᑎᐊᖃᕪᐃᖞᐃᖞᐃᖞᵇ ᐃᓐᖐᐅᑉᖞᖐᖞᖞᖞᖄᶜ ᐊᑭᖓᖄᖐᖕᵇ ᐅᐱᖐᖥᖐᓇᖅᖞᶜ ᐊᔾ ᐊᑭᑉᖥᖐᒥᐊᖐᓂᔾᶜ
ᖐᖃᖐᐃᖞᑕᐅᑊᖅᖞᖄᖐᖓᖕᵇ ᐱᓐᑎᖃᕪᐃᐊᓂᔾᶜ ᑕᑊᖞᖐᖞᖞᖞ ᐱᖞᖞᑊᑈᖞᖞᓗ ᐃᖐᖐᖥᖃᖕᖕᖐᖕᖐᖞᐋᖞᖕᵇ ᐊᔾ
ᐅᑊᐃᖥᖐᖞᖕᖄᐅᑉᖞᐃᖞᖓᖕᵇ ᓄᐊᖐᖞᐃᖞᐊᖞᖕᵇ ᓄᐊᖥᖐ, ᐊᑐᖓᐊᖞᓗ ᓄᐊᖐᖥᖐᖓᖞᖕᵇ, ᖐᖞᑊᑎᖐᖥᖐᖞᖅᶜ

ᐃᙳ�à-ᐊᓂᕐᓚᖕᒥᓂᐅᑉ. ᓂᏢᐅᒪᓂᖅᖢᑉᒪᓕ ᐅᓂᖅᑯᓂᕐᒥᒃ ᐃᑲᔪᕐᑕᐅᑦᕼᐅᓪᔪᓯᖅ ᕈᑉᓂᕼᒥ ᐃᙳᐅᕼᐃᒃ
ᓴᒪᓕᓂᑌᔅᑦᖕᑌᓯᒃ ᐊᖅᑭᕐᕉᐃᐲᒃ ᐱᓂᑕᑳᑎᑳᖅᑦᖢᓪᒃ ᑲᓕᏢᑐ ᐅᑭᑐᕐᑦᑐᑭᓂᕐ, ᐊᒻᓚ ᐱᓂᑕᑳᑎᑳᖅᑦᖢᑉᒍᓪᒃ
ᓄᕌᖅᑭᕐᖢᕉᖏᒃ ᐃᓂᖅᑭᓕᕐᑌᓐᑐᒃ ᒩᓯᕐᑭᖠᑦᑎᒐᓂᕐ, ᐅᐱᔪᓯᖅᖢᑉ5 ᐱᓂᑕᐅᓯᕐᓚᒃᑐᕐ ᐊᒻᓚ ᐱᐁᒄᓯᖅᑕᕐᕼᒃᕈᑕᖅ
ᕼᕌᐱᐅᐟᑐᕐᖢᓇᖅᑯᒃ ᓂᐱᖅᓄᒫᓐᑐᒃ ᐊᒻᓚ ᐊᑐᖅᓂᖅᑯᒃ ᓄᕌᖅᑭᕐᖢᕉᖏᒃ ᐃᙳᐅᑉ ᓴᒪᓕᓂᑌᔅᑦᖕᑌᖠᖅ
ᐊᖅᑭᕐᕉᐃᓂᕐᑯᒃ.

Appendix 3: REB Ethics Review

Health Research Ethics Board

April 7, 2020

William Semple
Department of Human Ecology
Faculty of Agricultural and Environmental Sciences
Supervisors: Dr. Gavin Renwick & Dr. Megan Strickfaden

Re: Decolonizing Architecture: Stories from the Canadian North

Dear William;

Thank you for the opportunity to review the above-mentioned project. This project, which is an auto-ethnographic reflection of architectural work that was completed over the past thirty years, does not meet the criteria for the definition of research as set out in section 2.5 of the Tri-Council Policy Statement(2) and is therefore outside of the purview of the Research Ethics Board (REB). Ethics review and approval is not required for this reflection.

The REB had reviewed this project in January 2020, and had communicated this decision via email at that time. This letter serves as a formal announcement of that decision.

Sincerely,

Charmaine N. Kabatoff
REB Consultant
Research Ethics Office (REO)
Vice-President Research Innovation

UNIVERSITY OF ALBERTA   Alberta Health Services   Covenant Health

Appendix 4: W Semple: Projects and Presentations

Decolonizing Architecture: Stories from the Canadian North

Communities and Projects
The following communities are written referred to and/or written in my thesis:

1 - Ross River First Nation, Ross River, Yukon, 2004
In 2004, as part of my work as the Senior Researcher in charge of Northern Housing Research from CMHC, I participated in a housing design charrette that was facilitated by the Yukon Housing Corporation. I did not carry out any design work for the community. I am using a drawing the was prepared by one of the participants in the charrette to describe traditional housing of the community

2 - Gameti First Nation, Gameti, NT., 2005
In 2004, as part of my work as the Senior Researcher from CMHC, I participated in a housing design charrette that was being facilitated by Dr. Gavin Renwick. I did not carry out any deign work for the community. Material from and the results of this charrette were published in the following documents.

CMHC (2005). *The Land We Live On Is Our Home: The `Gameti Ko` Project Second Community-Led Workshop*, Ottawa, Ontario: Canada Mortgage and Housing Corporation.
Renwick, Gavin. "Southern Value, First Nation Life." Presentation at the Northern Housing Forum 2010, Inuvik, NT., March 23, 2010.

Photographs used: Photographs used are taken from the CMHC document and the Renwick presentation

3 - Northern Sustainable House Project, Arviat, Nunavut, 2007
In 2007, as part of my work as the Senior Researcher from CMHC responsible for northern housing research, I co-facilitated a housing design charrette in the Inuit community of Arviat. Using the results of the charrette, I led the design team from CMHC and the Nunavut Housing Corporation that carried out the design of a new prototype house (culturally appropriate and super energy efficient) for the community. The house was built and is in the community. An extensive description of this project, the comments shared by Inuit participants, and photographs of the event have been taken from the following document:

CMHC (2007). *The Northern Sustainable House: An Innovative Design Process*, Ottawa, Ontario: Canada Mortgage and Housing Corporation

Description of the project and the design drawings were published in:
Semple, Bill (2008). *A Sustainable House for the Arctic*, Home Energy Magazine, Jan/Feb, pp 24 – 29.

Research for the charrette and the design of the house drew upon the following document.
Dawson, Peter (2003)*. An Examination of the Use of Space by Inuit Families Living in Arviat, Nunavut*, Ottawa, Ontario: Canada Mortgage and Housing Corporation

Photographs used: Shots for my thesis are taken from the CMHC and the Dawson documents.

4 – Nunatsiavut Six Plex and the Healthy Homes in Nunatsiavut Initiative, Nain, Nunatsiavut (2014)
In 2014 I partnered with FDMDa Architects in Montreal to facilitate a design charrette in Nain, NL and co-lead the design team that developed the design for the Nunatsiavut Six Plex. The designs developed and the photography used were presented to the community in follow up presentations to the community. The designs and project results were included in the following document.

FGMDa (2014). *Nunatsiavut Housing*, Montreal Quebec: FGMDa Architects

The design work and the photographs were the focus of the following presentations.

• Speaker, 'Northern Design: Cultural and technical issues and the design of housing for remote northern communities', RAIC Festival 2015, Calgary, June 2015
• Speaker, The Design and Building of Culturally Appropriate Northern Housing, Arctic Change 2014, Ottawa, December 2014
• Facilitator and Speaker, Nunatsiavut Multi-Unit Housing Design Charrette, Nain, March 2014

The project was developed as the design prepared for the *Healthy Homes in Nunatsiavut*, the winning entry into the Arctic Inspiration prize 2014. The designs prepared and the background information of the project has been shared across the country and internationally in the numerous presentations that I have given on the project.

5 – Cree Nation of Eastmain entry into the Smart City Challenge and the design of Eastmain Housing Prototypes (2017 to 2019)

I worked as an architect/consultant for the Cree Nation of Eastmain (CNE) including the development of the design of several housing prototypes including a Six Plex, a House for Cree Elders, an Accessible House, a Starter House and a Home Ownership prototype. These were developed as part of the CNE's entry into the Government of Canada's Smart City Challenge. I was a key person on the team that developed the entry and the document that submitted by the Cree Nation of Eastmain into this competition. The project was fully documented in a 90 page document that was submitted as a finalist to the Smart City Challenge, and was posted online on the CNE website, with a link to the Smart City Challenge website, for a period of one year. Information shared in the thesis draws heavily from this document. This has been a long-term relationship where I have given a number of presentations to the community about the design work and technical challenges that I am addressing. These presentations have used many images from other projects that I have carried out with other Indigenous communities across the north.

Presentations given on these projects include:
• Facilitator and Speaker: The Smart Cities Challenge and the Eastmain Net Zero Six Plex, Eastmain Housing Symposium, February, 2018, Eastmain, PQ
• Facilitator and Speaker: Elders and Starter Housing for The Cree Community of Eastmain, 2017, Eastmain, PQ
• Speaker. The Eastmain Annual Assembly, August 2018

- Facilitator and Speaker. The Eastmain Builders Forum, December, 2018

PRESENTATIONS Given on Northern Indigenous Housing and on Tibetan Architecture include:

All of the work that I have carried out with Indigenous communities across the Canadian north over the past 16 years has been shared at numerous northern, national and international architecture and building science research conferences, design charrettes and workshops. In each northern charrette/workshop I speak quite extensively about the projects that have been carried out in other indigenous communities. It is part of the reason I am hired to do this work – I bring an approach that is supported by the communities, and bring skills and experiences that people wish to learn about. It is important to note that all of the information that I have shared in the thesis has been shared numerous times and is in the public realm., in the presentations listed below:

- Key Note Speaker: "Environmental and Cultural Sustainability and the Architectural Design Process", Cold Climate HVAC, Kiruna, Sweden, March 12 – 15, 2018
- Facilitator and Speaker: The Smart Cities Challenge and the Eastmain Net Zero Six Plex, Eastmain Housing Symposium, February, 2018, Eastmain, PQ
- Facilitator and Speaker: Elders and Starter Housing for The Cree Community of Eastmain, 2017, Eastmain, PQ
- Facilitator and Speaker: 'Innovative Housing For Northern Indigenous Communities', Mushau Innu First Nations Design Charrette, Natuashish, Labrador, Newfoundland, November 2016
- Key Note Speaker and Panelist, 'Indigeneity and the Design Process", AIA Alaska Annual Conference, Fairbanks, Alaska, November 2016
- Speaker, 'Innovative Housing for Inuit Communities', Inuit Housing Forum, Ottawa, October 2016
- Speaker, 'Cultural and Environmental Sustainability and the Development of an Indigenous Design Process', Inuit Housing Symposium: Inuit Studies Conference, St. John's Nfld., Oct. 2016
- Facilitator and Presenter: Building Managers Workshop: 'The Integrated Design Process and the Design of Sustainable Housing and Communities', Eastmain, Quebec, June 2016
- Speaker, Facilitator and Panelist: 'Indigenous Housing and the Integrated Design Process', Indigenous Housing and the Integrated Design Process Workshop, Ottawa, Ontario, March 2016
- Facilitator and Speaker: 'Indigenous Culture, Interconnectedness and the Design of Buildings', Enoch Cree Nation Elders Housing Charrette, Edmonton, Alberta, March 2016
- Speaker: 'Cultural and Environmental Sustainability and the Development of an Indigenous Design Process', National Conference on 'Innovation for Development and Sustainability, Navrachana University, Vadodara, India, October 2015.
- Speaker: 'Cultural and Environmental Sustainability and the Development of an Indigenous Design Process', Third Annual International Conference on Sustainable Development (ICSD), Columbia University, September 2015.
- Speaker, 'Northern Design: Cultural and technical issues and the design of housing for remote northern communities', RAIC Festival 2015, Calgary, June 2015
- Speaker, The Design and Building of Culturally Appropriate Northern Housing, Arctic Change 2014, Ottawa, December 2014
- Facilitator and Speaker, Nunatsiavut Multi-Unit Housing Design Charrette, Nain, March 2014

- Speaker and Panelist, 'Financing for Residential Green Building Projects in Remote Communities', Building Healthy and Sustainable Homes in Remote Communities: A Focus on Indigenous Communities in North America, Commission for Environmental Cooperation of North America, Oaxaca, Mexico, May 2014
- Guest Lecturer, 'The Design and Construction of Buildings in the North', Lund University, Lund, Sweden, January, 2014
- Speaker, 'The Design and Construction of Sustainable Northern Housing', AGM of the Alberta Association of Architects, Edmonton, Alberta., April 2013
- Speaker and Panelist, 'The Design and Construction of Sustainable Northern Housing', First Nations Conference on Sustainable Buildings and Communities, Edmonton, Alberta., Feb. 2013
- Speaker, 'The Development of Super Energy Efficient Housing in Canada', IIDEX 2012, Toronto, Ontario., October, 2012
- Speaker, 'The Development of Super Energy Efficient Housing in Canada', RAIC Festival 2012, St. John's, Nfld., June 2012
- Speaker, 'The Northern Sustainable House: Sustainable Housing For Arctic Communities', and Panelist on 'Building Sustainable Community Infrastructure in the Arctic', International Polar Year 2012, Montreal, April 2012.
- Speaker, The Design and Construction of Sustainable Northern Housing and Communities', Northern Housing Forum/Borealis Conference, Alta, Norway, March 2012
- Speaker, 'Northern Housing Innovations: The Design and Construction of Sustainable Northern Housing', Northern Construction Roundtable, Yellowknife, Feb. 2012
- Speaker, 'The Design and Construction of Sustainable Northern Housing', National Housing Research Committee, Ottawa, November 2011
- Speaker and Panelist, 'The Design and Construction of Sustainable Northern Housing', Affordable Housing Summit - Greenbuild 2011, Toronto, October 2011
- Speaker, 'The Northern Sustainable House', Residential Summit – Greenbuild 2011, Toronto, October 2011
- Speaker, 'On Igloos and Earth Houses', College of Fellows, Royal Architectural Institute of Canada, Ottawa, November, 2010
- Presentation on 'CMHC Northern Research and the Challenges of Building in the North', Faculty of Engineering, Concordia University, Dec 2010
- Panel Chair and Speaker: 'The Importance of Visioning: Collaborative Models for Community Sustainability', Community and Corporate Social Responsibility Conference, Ottawa, November, 2010
- Speaker, 'The Northern Sustainable House', The Assembly of Manitoba Chiefs, Winnipeg, Manitoba, March 2010
- Key Note Speaker, 'The Northern Sustainable House', Northern Housing Forum 2010, Inuvik, NT, March 2010
- Speaker, 'The Northern Sustainable House: Energy Issues and Solutions', Northern Energy Solutions Conference, Whitehorse, Yukon, February, 2010
- Speaker and Panelist, 'The Design of Sustainable Northern Housing', Greenbuild 2009, Pheonix, Arizona, November 2009
- Speaker, 'Traditional Values and the Design Process', ARTEK Conference on Sustainable Tourism Cottages for the North, Sisimiut, Greenland, August, 2009

• Key Note Speaker, 'Green Building in the North: The Design and Construction of Sustainable Buildings', Landsmotet 2009, Alesund, Norway, June 2009

• Key Note Speaker, 'Challenges for Remote Areas: The Design and Construction of Sustainable Housing and Communities in the Canadian Far North', Cold Climate 2009 International Conference, Sisimiut, Greenland, March 2009

• Guest Lecturer, 'Green Building in the North', Technical University of Denmark, Copenhagen, Denmark, March 2009

• Panelist and Speaker, 'The Northern Sustainable House', First Nations Housing Conference, Thunder Bay, Ontario, February 2009

• Speaker, 'Tradition and Technology: The Designing of Housing for the Arctic', International Conference: Exploring Domestic Spaces in the Circumpolar North, Tromso, Norway, Oct. 2008

• Speaker, 'Culture, Housing and Community Development in the Canadian Far North', International Conference on Indigenous Art and Economic Development in Canada and India, Khajuraho, India, Sept. 2008

• Guest Speaker, School of Architecture, North-South University, Dhaka, Bangladesh, Sept 2008, 'Climate Change and Its Impact on the Design of Northern Communities'

• Speaker, 'Update From Nunavut: The Nunavut 5-Plex and Northern Sustainable House' and 'The CMHC/Tr'ondek Hwech'in Northern Sustainable House', Northern Sustainability Symposium, Dawson City, Yukon, June 2008

• Speaker, 'The CMHC Northern Sustainable House: Community Consultation, Design and Energy Monitoring in the Canadian Far North', CMHC Lenders Committee, Yellowknife, NWT May 2008

• Speaker and Panel Chair, 'The Design of Sustainable Northern Buildings and Communities', CCHRC Conference – Sustainable Northern Housing in world of Diminishing Resources, Fairbanks, Alaska, October 2007

• Speaker and Panelist, 'A Model for the Design and Evaluation of Energy Efficient Northern Housing', Conference of the National Building Envelope Council (NBEC), Banff, March 2007

• Speaker and Panelist, 'Traditional Architecture and the Design of Inuit and First Nations Housing in Canada', Borealis Conference – Building Capacity for Sustainable Places in the Circumpolar North, Alta, Norway, March 2007

• Speaker and Workshop Facilitator, 'NHC/CMHC Energy Efficient House: Community Consultation and Proposed Design of the Arviat E2 House, Adaptation Action in Arctic Communities Workshop, Iqaluit, Nunavut, Dec. 2006

• Speaker, 'Integrated Design Charrettes For Northern Communities', Green Build, Denver, Colorado, Nov. 2006

• Speaker, 'Traditional Design and Culture in First Nations and Inuit Housing', First Nations and Inuit Housing Forum, Edmonton, September 2006

• Speaker and Panelist, 'The Future of Tradition'; Royal Architectural Institute of Canada, Vancouver, June 2006

• Guest Lecturer, 'Culture, Communities and Design in the Canadian Far North'; Speakers Series, Dalhousie School of Architecture, Halifax, June 2006

• Speaker, 'Culture, Communities and Design in the Canadian Far North'; Natural City Conference, Toronto, May 2006

• Speaker, 'Traditional Architecture: The Design of Buildings and Communities', Yukon and First Nations Northern Housing Conference, Whitehorse, April 2006

• Speaker, 'Cultural and Environmental Sustainability: Design and Research for the Far North'; Aboriginal Policy and Research Conference, Ottawa, March 2006

- Speaker and Panelist, Inukjuak Climate change and Energy Workshop, 'Energy Efficiency, Culture, and the Design of Communities.' Inukjuak, Nunavik, Feb. 13-15, 2006.
- Speaker and Panelist, Banff Mountain Summit 2005, 'Cultures at Risk: Challenges for Traditional Architecture', Banff, Alberta, Canada. August 2005
- Speaker, 'Northern Housing Research', National Aboriginal Housing Association Conference, Montreal, April, 2005
- Key note Speaker, 'Clusters Atriums and Multi's … Opportunities for Northern Housing', Conference of the Winter Cities Association, Prince George, B.C., February 2005.
- Speaker, 'Greening Your Home – The Big Picture', Okanogan Science Centre, Vernon, B.C., Nov. 2004
- Seminar Presentation, 'Housing in a Global Context', Greenbuild 2004 – Conference of the U.S. Green Building Council, Portland, Oregon, November, 2004
- Conference Presentation, 'Cultural and Environmental Sustainability and Traditional Architecture', The Natural City – Conference of the World Society of Ekistics, Toronto, June 2004
- Speaker, 'eKOCOMFORT and other Innovations', Northern Housing Conference, Thunder Bay, February, 2004
- Conference Presentation. "Healthy Highrise: Ventilation Issues and Innovations.", Open Building: Dense Urban Structures Conference, Hong Kong, October 2003
- Conference Presentation. "Cultural and Environmental Sustainability and Housing". International Association of Housing Science Conference, Montreal, June 2003
- Seminar Presentation: "Architecture in Exile, Issues of Identify and Authenticity", Festival of the Royal Architectural Institute of Canada, Halifax, June, 2001