ABSTRACT: Development in northern Canada has recently come into the mainstream media as an increasingly prevalent issue: expanding shipping routes and increased mineral exploration have led to a dramatic surge in the geopolitical significance of the region, drawing attention both nationally and globally. And yet, this increased attention to the region has brought little in the way of understanding the complex relationship between people and place in these regions, particularly in the rapidly evolving cultural and political contexts of northern Canada. This paper addresses notions of space, time and place with the intent of developing a more holistic understanding of the problems currently affecting Canada's northern territories. The findings of the research present a compelling argument for the inclusion of both qualitative and quantitative factors in developing a meaningful understanding of the north as a basis for design.

KEYWORDS: Indigenous; Culture; Architecture; Ethnography; Systems Thinking

1.0 INTRODUCTION

1.1. The north
As the 21st century unfolds, it is increasingly evident that the world is trending towards a state of vast interconnectedness, systemic to an often incomprehensible degree. Events occurring internationally have the capacity to affect something as small as a single life in seemingly remote locales. The phrase *meta incognita* is an apt title for this project is several ways: most literally, the northern Canadian city where the primary research took place—Iqaluit, Nunavut—lies immediately north of the Meta Incognita Peninsula, a designation bestowed by Queen Elizabeth I in the late 16th century (McDermott 2001, 190). Translated from the Latin as “the unknown limits”, this designation seems entirely appropriate for the kind of strange world it must have been when Sir Martin Frobisher first arrived during his search for the Northwest Passage (Newbery 1995). Certainly we are in a much different era of exploration now—our ventures have rapidly shifted from continental cartography to subterranean mineral exploration. And yet, *meta incognita* is as befitting as ever, for while our society has succeeded in mapping the area geographically since Frobisher’s time, the limits in many other respects are still uncharted, nebulous and indiscrete as ever.

![Figure 1: Meta Incognita Peninsula, with Frobisher Bay immediately Northeast. Source: (Author 2013)](image-url)
The impetus for this research project was spurred by the following questions: in an era now commonly recognized as the anthropocene (The Geology of the Planet 2011), what will the future hold for a land as extreme as Canada’s north? More specifically, how can architecture play a meaningful role in the inevitable development of the north, a landscape that holds a vast wealth of natural resources and previously impassible shipping routes, the development of which entails a breadth of sensitive cultural situations? While these are broad questions, it is our assertion that a fuller understanding of these questions proves vital towards developing an architecture that has the capacity to improve the quality of human life in a manner much more developed than simply providing shelter.

In one of the many ironies of the north, the recently acknowledged impacts of climate change on northern latitudes have actually served to enable further resource exploration and shipping in the north, some of the very activities that contributed to climate change in the first place. As is often the case, ostensibly well-intentioned development projects have left a series of deleterious remnants, ranging from seemingly harmless artifacts such as abandoned shipping containers to the lasting chemical impact of contaminant bioaccumulation in the lipids of Arctic mammals (Wheeler 2012). In much the same way, one can draw an analogy between the poisonous legacy of chemical contaminants and the psychological trauma associated with the imposition of Southern Canadian culture: while Northern expansion can be well-intentioned, the effects of this expansion have transformed the way in which the Inuit people live, for better and for worse. To point out the maladies of a loss of culture is beyond the point—whether present or past ways of life were better is subjective, unquantifiable, and arguably a reductive and simplistic approach to questioning the issues associated with indigenous cultures in the north. Instead, our intention is to engage in a holistic analysis of Canada’s North by embracing the inherent complexities and contradictions that so often derail this type of analysis.

1.2. Structure, methods & aspirations
This paper is broken down into two primary sections characterized by distinct methods of inquiry. The following section provides a contextual overview of several prevalent issues effecting the north. The subsequent section utilizes an ethnographic approach that is the outcome of the author being immersed within the research environment for a total of nine days. During this time, a qualitative study was conducted with the goal of developing a holistic understanding of the ways in which the northern environment affects its inhabitants.

In traditional design processes, one begins with an issue at hand: a lack of housing or an ineffective urban plan. In actuality, these are not issues at all—they are solutions. In order to effectively address a design problem, we must first discover what the problem is. As Hill notes, “we need to find productive ways of articulating questions in order to better understand the nature of the problems we now face, in terms of the architecture of the problem” (Hill 2012, 15). As capital investment increases, mineral exploration escalates and sea ice recedes, the demand for housing, infrastructure and governance forces designers to act hastily; too often, this results in the failure to adequately conceptualize the true problem at hand. To this end, the methods employed for this research intend to be broad and inclusive with the ultimate goal being to develop a conceptual framework that allow designers to comprehend the systemic nature of these problems and develop design solutions that are meaningful, appropriate and effective. In other words, the present research intends to condition the mind of the designer by enhancing their capacity to conceptualize complex situations in their entirety.

2.0. CONTEXT

2.1. Northern issues
Prior to 1942, Iqaluit (then Frobisher Bay) was one of many small camping grounds used by Inuit hunters as they tracked the migratory patterns of caribou and sought desirable fishing grounds (Newbery 1995). Due to their dependency on the land and the sea for sustenance, the Inuit were forced to relocate camps depending on the changing of the seasons. While it is easy to jump to the conclusion that this way of life was primal and unsophisticated, it is a reality of the north, where permafrost negates any possible attempts at agriculture and food production.
As a result, permanent dwellings only became possible once shipping by air and sea allowed goods from the south to be transported north to the extent that they could facilitate permanent residence, particularly by those unskilled at hunting and fishing. Effectually, this shift in mode of dwelling marked the beginning of a series of rapid transformations to the ways of life in the north. As one would expect, with the benefit of hindsight no less, a multitude of issues followed this shift. One of the most publicized maladies are the extremely high suicide rates in the north: as of 2007, Nunavut an average of 71 deaths by suicide per 100 000 people (Statistics Canada 2012). To contextualize this, out of countries ranked by the World Health Organization, Lithuania ranks number one with an average of 36 (World Health Organization 2013), while Greenland averages 88 (Danish Architecture Centre, 2012). Iqaluit’s Director of Planning, Arif Sayani, noted that the developmental path of Nunavut was several decades behind Greenland—a particularly worrisome thought given the present state of these particular statistics.

Troublingly, suicide is only one of the many maladies that disproportionally effect those in the north. On average, the self reported body mass index in Nunavut is five percent higher than the national average for the years 2007-2011 (Statistics Canada 2012). Bearing in mind that these statistics are self-reported, and vary considerably from year to year, it is entirely plausible that this difference is significantly higher than the reported five percent. Perhaps even more troubling are infant mortality rates for Nunavut: from 2005 to 2009, Nunavut’s rate was 9% higher than the national average—a considerable variation that is unmatched by any other province in the country (Statistics Canada 2012).

While these statistics are startling and illustrative in their own way of the issues at hand in Canada’s north, it is difficult to discern the root of these issues without a broader, more holistic study of the culture that precipitated them. To understand the true nature of these problems, it is necessary to develop a comprehension of the system in its totality, a complex network of history, politics, geography and economics.

3.0. IQALUIT, NUNAVUT: AN ETHNOGRAPHY

3.1. Introduction
The following section of the paper will be presented as a series of three vignettes. Rather than isolating specific variables within a system that is vast in scope and interconnected in nature, three broad themes—space, time, and place—are focused on with the intent of embracing the richness of the north and elucidating some of the larger themes at play in such a unique environment. The present research was executed in partial fulfillment of the degree Master of Architecture by the first author. The research efforts and subsequent scholarly explorations were a collaborative venture between the first author and his graduate supervisor Dr. Brian R. Sinclair.

3.2. Space
Peering out the window as the aircraft descends from a calm three-hour flight north from the Ottawa, it is difficult to distinguish what is cloud, land or sea. In the middle of February at latitudes north of sixty degrees, both Baffin Island and Davis Strait are an endless expanse of ice, rock, and windswept snow: an immeasurable field of white. It is the Meta Incognita Peninsula we are flying over—the unknown limits (McDermott 2001). The landscape seems indifferent to the scale of man; glaciation and plate tectonics seem more appropriate at first glance. And yet, a look around the truncated cabin of the airplane depicts another side of one of the many dualities of life in the north: a mixed group of Inuit and Caucasians, we are all heading north, albeit for vastly different reasons.

Save for the distant whine of snowmobiles and sled dogs chained to the ice, Frobisher Bay was dead silent upon landing. Marked by snowmobile freeways created by the constant flow of seal and caribou hunters, the sea ice covering the bay appeared endless, unsympathetic to the scale of man. The experience of space in the north is a humbling one: it is a land that cultivates a “certainty of [one’s] own cosmic insignificance” (Wheeler 2013, 135). Standing on
the edge of the tidal zone, demarcated by a field of boulder-sized chunks of ice, one feels as if they are on a spatial precipice: on the one side of the tidal divide is a small, provincial capital in charge of governing a vast territory; on the other, a sweeping expanse of coastline and sea, of rolling hills and blowing snow.

From a corporeal perspective, the concept of space is equally extreme, particularly when one contrasts interior and exterior space. Borne out of the necessities to conserve heat and maximize the utility of extremely scarce building materials, dwelling sizes were traditionally very small. Both igloos and bone-and-hide tents were indeed tiny relative to the number of people that inhabited them, thus maximizing the capability for shelter from a finite amount of building materials. For similar, albeit modernized reasons, dwellings in modern-day Iqaluit have remained relatively modest. Due to Iqaluit’s isolated geographical location and lack of harvestable local building materials, all materials must be shipped in during the sea lift in the summer, an exercise that considerably increases the cost of such materials. The resulting condition is a dwelling type that is spatially constrained, creating a striking contrast between the expanses of the exterior and the spatially constricted characteristics of the interior.

![Figure 2: Traditional igloo dwelling. Source: (Author 2013)](image)

The third perspective on space centres on the ostensible lack of constraints in planning amongst a place characterized by an abundance of space. In conversation with Arif Sayani, Director of Planning for the City of Iqaluit, it became evident that like many of the smaller hamlets of Nunavut, Iqaluit was developed into its present state with a lack of any kind of discernible urban plan; rather, developers embraced more of a build first, plan later approach, creating a city that is facing a series of infrastructural and urban planning issues as they try to retroactively plan an expanding city. Furthermore, the city is constricted by the airport, parkland, watershed and the sea, which allows expansion and further development to occur only to the southeast (towards the suburb of Apex). In essence, all of this amounts to the fact that space, in terms of development and planning, is never endless, regardless of its apparent endlessness.
3.3. Time
The nine days spent in Iqaluit were characterized by a perceived absence of time: much like the apparent endlessness of the landscape, the fundamental notion of time seemed distorted, hazy and indiscrete. Circadian rhythms in a constant state of disruption, one’s perception of time in these lands is a deeply personal reflection of geography, climate and culture. These three factors are inextricably interdependent: climate is dependent on geography, culture influenced by climate, and so forth. However, it is the confluence of these factors that contribute to the unique sense of time that one experiences in the north. Time is stretched to the extremes, becoming at once a suffocating force of isolation and a psychologically liberating sensation.

Of the three factors put forth, geographic location is the most immediately experienced: regardless of time of year, when an outsider is placed at these coordinates, the arc of the sun and the length of the day are a shock to the system, a yearlong oscillation between the midnight sun and months of only nighttime and dusk. Even on the days when sunlight shines for eight hours, the arc of the sun merely hovers above the horizon, creating extended periods of twilight.

The environmental qualities of the north affect one’s perception of time in a very different way: the extreme climate of the north—the debilitating cold, the biting wind and lack of windbreak all contribute to a compressed experience of time in the winter. What seems like hours of leaning against the wind in actuality is minutes. Hours spent inside, protected from the elements are not immune from this distorted notion of time: the shifting periods of daylight and indeterminate weather patterns skew one’s perception of time in a similar way.

Perhaps the most striking notion of time that I came upon was not explicitly regarding time at all; rather, it was the cultural significance of time in the Inuit language, Inuktitut. Having been invited to attend a concert held in the local Inuksuk High School, I listened as two young women provided introductions for each performer, first in Canada’s two national languages—English and French—and then in Inuktitut. Prior to the final act, the two girls told the audience in English that we would be taking a twenty minute break before the final act. In French, we were told the show would resume in *vingt minutes*. When it came time for the Inuktitut translation, an English phrase caught my attention about halfway through: “twenty minutes.”

And yet, as much as the perception of time becomes distorted in the short term, extended by geography and climate, the notion of time on a cultural scale has had the effect of being
compressed. In sixty short years, the cultural transformations that the Inuit people have undergone is immense—it is an utterly incomprehensible experience to see someone walking down the street in Iqaluit, wearing their fur-lined down coat and mittens, and reflect upon the fact that in the early 1950s, they were still living a nomadic lifestyle, moving bone-and-hide tents from hunting ground to hunting ground, migrating with the seasons. In relative terms, the broader scale of time has been shortened, forcing a rapid transition from a pseudo-hunter-gatherer society to an Arctic version of the post-industrial society.

3.4. Place

In a way, if space and time are considered thematic vignettes, place must be considered more broadly, as a form of meta-theme. Certainly, one cannot ignore space when considering time, nor time when considering space, but the notion of place is so intrinsically dependent on the former themes discussed that it only makes sense to discuss it last. In this sense, space and time are only two of the many aspects that contribute to place in the broader sense of the word. Place is, in its very essence, an amorphous concept that is dependent as much on one’s own personal experiences as it is upon the morphology of a particular environment. What follows is a series of three experiences that provide an introspection into the notion of place in the north.

As I sat in the back of a cab as it snaked through the hills between Iqaluit and Apex, the cab driver told me the story of how he came to live there. This was not uncommon in my experience; it was as if this explanation was a prerequisite for any kind of introductory conversation, as if there must be an extraordinary story behind one’s decision to inhabit such an extreme environment. In this instance, the cab driver was a recovered addict from Montreal who had moved here to work as a counsellor. Another duality of the north, the story of this man proved that the isolation that he desired is a double-edged sword: having counselled many troubled souls in the north, he had sent handfuls to rehabilitation centres in the south, only to have them relapse once returning to the isolation of the north, unable to cope with the suffocating emptiness, hearing only their own thoughts and the blowing wind.

Similar stories were relayed by other individuals: as we drove through the outskirts of town en route to a territorial park, another taxi driver reflected on his twenty-seven years spent in the north. This individual was also a recovered addict, drawn to the north by the idea of a new beginning. Having married an Inuit woman when he initially migrated here, Iqaluit was now his home, his sense of place bolstered by the family surrounding him. He spoke of his time here with a kind of cold indifference that seemed a necessary character trait to be able to endure decades of harsh cold and desolation. Speaking of his family, and some of the troubles they have undergone in their life here, he offhandedly commented that the bridge that we had just drove over was where his nephew had hung himself. As I sat there, speechless, the driver kept up the pace of his story, as if these kinds of events were merely facts of life in the north.

In a land of such extremes, the notion of place becomes at once magnified and diminished—the endless expanses create a kind of placeless geography, only to be supplanted by the placemaking capacity of community. An Inuk hunter once told Jean Malaurie, “The more I think as an individual, the less I feel I exist” (Malaurie 1982, 151). As the last story alluded to, the relationship between the individual and the group is largely unpolluted by geography; if anything, the merciless isolation of the north necessitates a different sense of place, one that is more psychological than physical, where community reigns supreme over morphology. Looking over old black and white photos in the Nunatta Sunakkutaangit Museum, it is evident that this is how it always was: dwelling was temporary, but community was constant.

3.5. Reflections

On the day of my departure from Iqaluit, I went for a long walk, climbing several of the hills on the outskirts, reflecting upon my time spent and, in a way, viewing my surroundings through different eyes. As I stood upon one of the taller hills above the newly developed and predominantly Southerner-inhabited Plateau neighbourhood, a badly weathered Canadian flag rippled in the relentlessly cold February wind. Perched there, one can’t help but wonder...
whether this image, an icon of nationalism in a tattered state of disrepair, isn’t symbolic for our imposed presence in the north. Does this land, geographically part of Canada, truly belong to us? As southerners, we often feel a sense of guilt for our despicable assimilationist policies towards indigenous peoples of the past, resulting in the current system of land claims and tax breaks. We feel, or feel as if we ought to feel, that we have stolen their land. Standing there, looking out over a small city of winding streets and diesel fumes amidst a sea of white, I am certain that this land does not belong to anyone—we belong to it.

4.0. Conclusion

It is tempting to become depressed, despondent and discouraged by these experiences, falling into a rhythm of complacency. The question, however, is more urgent than ever: how can architecture play a meaningful role in the inevitable development of the north? As the past several decades have shown, development in northern Canada is accelerating rapidly as the geopolitical and environmental climates evolve. Designers, in turn, are expected to do more with less, pressured into performing a kind of triage. Unsurprisingly, these situations give preference to the quantifiable: how many can we house at what cost, and when? Ultimately, this type of design process neglects vital factors that are critical both to the health of the design and to the environment to which it contributes. As the world looks north, it is evident that we must begin to think in a manner that enables a deeper, more nuanced comprehension of these issues in order to produce an architecture that better advocates for users, better resonates with needs, and, in the end, proves more successful, sustainable, and meaningful.

Figure 4: View east from recently developed Plateau neighbourhood. Source: (Author 2013)

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