

Piqqusilirivvik: Constructing Community Concepts

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There is a new dynamic developing in Canada's North. Historically, when development was proposed, the building projects were designed by distant, hubristic companies influenced by distorted Southern beliefs about the North. This resulted in unsuccessful projects and disappointed communities. Canadian essayist John Raulston Saul referred to this when he wrote, "there are few signs, but very few, of any attempt to see the North from the North's point of view."¹ However, new projects have begun to emerge that challenge these historical practices. These conscientious and empathetic developments are built on a solid foundation of community consultation and direct dialogue with their end users that factor in local weather and geographic concerns, as well as social and cultural functions. While this is a simple, intuitive-sounding idea, it has been thoroughly neglected and even legally withheld from northern communities; yet, end user involvement is the clearest path to a project's success.

Building in the Arctic

Canada's North is a unique but often perilous environment offering immense challenges to those who live and work in its many remote communities. Clyde River, traditionally called *Kannigiqtugaapik* (nice little inlet), is situated along the east coast of Baffin Island in the high arctic region of Canada. The community is secluded and accessible only by flights out of Pond Inlet to the North, or from Iqaluit more than 700km to the south². The village has a small population of just under 1000 people that consist primarily of Inuit residents maintaining their way of life within the mixed and social economies that make up contemporary Inuit subsistence living.³ Employment

is limited, with the local government and wellness centres providing the largest number of both full-time and part-time positions, while the resource sector is still dominated by the hunting of seal, polar bear, arctic char, caribou and narwhal.⁴

Construction in the arctic requires a number of considerations relating to technology and culture.⁵ This includes how building materials withstand, fail against, or interact with the North's intense cold and relentless wind, and the fact that Northern architecture is often developed drawing on southern assumptions about Northern cultures.⁶ This leads to unsuccessful structures, often unloved and under-utilized, that fail to form relationships with the other buildings in the area and with the community that would patronize them.⁷

Assumptions also often fail to acknowledge the North's geographic and climatic conditions. This results in concerns surrounding schedules and timing, as many of the villages in/around Clyde River are fly-in communities and always at the mercy of seasonal weather that leaves material shipments prone to delays and cost overages. Dangerous goods or exceptionally heavy construction equipment often must be delivered by boats which have a very narrow window of delivery opportunity during limited periods of ice-free water.⁸ Precise planning and carefully constructed schedules take on an integral role in Northern projects, even more so than in large southern ones, as carelessness can destroy a project long before the environment has a chance.⁹ It is in these dense conditions among the fjords of Baffin Island, along the outskirts of Clyde River in the Inuit led territory of Nunavut, that the Piqqusilirivvik Inuit Cultural Learning Cen-

tre was constructed to facilitate an emerging, community-directed system of Inuit education.¹⁰

Piqqusilirivvik

With \$24 million in federal funding and a \$10 million investment from the government of Nunavut, Piqqusilirivvik's development began in 2006.¹¹ Approximately \$710 000 was allocated for design, allowing for a structure that would be as innovative and exceptional as the program it would help facilitate.¹² As of its opening in 2011, Piqqusilirivvik has occupied several important roles.¹³ It became one of the largest employers in Clyde River when it opened with a staff of 14, and houses a large, state of the art facility with over 2000 square meters dedicated to the maintaining, developing and sharing of Inuit culture.¹⁴ It also became an icon for the successful use of community involvement and contributions to planning and construction—especially in the far North of Canada.

After overcoming the logistics of getting materials and equipment to the far North, there is also a need for expediency in the building process. After Piqqusilirivvik's wooden framework was erected, it was promptly covered in a layer of wood sheathing to defend against the frequently harsh weather.¹⁵ The final façade is predominantly covered in a rich wood finish that is framed and accentuated by corrugated steel that gives the appearance of snowdrifts up against the building.¹⁶

There is no doubt that the exterior of Piqqusilirivvik stands apart from the snowy landscape it punctuates, but there are definitive formal elements that inextricably link it to many arctic building conventions. The structure is supported on a

platform elevated from the frozen ground to allow the passing of blowing snow and the minimizing of snow buildup at entrances. This open space also seeks to minimize the direct impact of snow to the façade—as snow is surprisingly abrasive and damaging during constant contact.¹⁷ Working in concert with the raised structure, much of the building’s mechanical equipment was relocated from a more standard roof mounting to an exterior wall where it could be protected from the elements with a metal louvre. This system bolsters the work of the curved roof in minimizing snow build up, and associated concerns about weight on the roof.¹⁸ The destructive nature of snow and high winds also shapes restrictions on building heights in addition to informing the shape of this specific roof’s curve.¹⁹

The unmistakable silhouette provided by the unique roofline is readily identifiable in the extended periods of darkness that the community experiences. The façade allows for the placement of many windows which illustrates the indigenous building ideal of valuing large amounts of natural light. The numerous rectilinear windows follow the curve of the roofline, and smaller circular windows punctuate the clerestory level. Illumination fulfils an important safety role on the grounds as well: the campus perimeter is fitted with electric lights that can be controlled from the interior to allow users to safely check for polar bears.²⁰ This particular use of light also serves to safely guide community members to the building during the long arctic winter.

The building’s layout consists of a versatile central core used as a gathering space for social and cultural activities and is essential to the mixed-use nature of the facility’s programs.²¹ This social space was influenced by the form of a traditional, large communal igloo or *qaqqic* to help encourage spontaneous, casual interactions and conversations.²² It also creates a common area surrounded with large windows that look out over the landscape.²³ Lining the perimeter of this meeting space are smaller, specialized auxiliary teaching areas referred to as learning studios²⁴ for smaller, more intimate group activities as well as a library, sewing workshop, wood

shop, large kitchen and spaces for preparing and storing animal skins and proceeds from the hunt.²⁵ Overall, the space was designed and interconnected to embody ideas of openness and to foster community. There was also a desire to create a communal workshop through the layout allowing for peripheral learning through observation and the oral transmission of knowledge much like that which developed with traditional apprenticeship.²⁶

Sprouting from the circular heart of the building are two rectilinear residential wings consisting of dorm style rooms for the student body.²⁷ There was a desire to develop the overall building into something more similar to a home than the standard southern institution.²⁸ This was achieved through the development of residences for the students, teachers and elders.²⁹ Interior light, both natural and electrical, plays an integral role inside the building much like it did on the outside. The building’s round clerestory windows were designed to increase the building’s overall energy efficiency, positioned to catch and direct natural light throughout the building’s interior in conjunction with the multi-planed interior ceiling panels.³⁰ Each circular window was then bordered with air jets to keep moisture from forming, freezing and obscuring the panes of glass. In “Learning from the Land” published in *The Canadian Architect* magazine, architect Michèle Aubé noted that there was an interest in tying the project into to the Northern landscape by creating a more widely dispersed village-like layout, but the trade-offs required in cost and accessibility would have been too great, thus the more closely interconnected layout developed in the end.³¹ Still, the considerations surrounding community, conversation and learning were integrated inextricably into the fabric of the building directly, creating a balance.³²

Program

There is an Inuktitut phrase that succinctly sums up the educational imperatives touted by Piqqusilirivvik: *Inuit Qaujimajatuqangit*, often referred to as “Inuit traditional knowledge,” or by its abbreviation, IQ.³³ Discarding much of

the southern idea of schools — including any academic requirements for enrolment,³⁴ as well as the baggage-laden term “school” itself — Piqqusilirivvik’s goal is to not only preserve Inuit culture and values but also to serve as a point of transmission for sharing traditional knowledge principles. These include history, language, hunting, and other subsistence practices, as well as teachings of Inuit culture and heritage.³⁵ As Elder Igah Pullaq explained early in the building project, “The Inuit language is still strong here. Even though people today don’t need to do things in the same way that we did, we need to teach them about our history and language.”³⁶

Much like the Cree concept of *Witaskewin* (living together in the land), and the Nuuchah-nulth ideal of *Tsawalk* (everything is one), *Inuit Qaujimajatuqangit* is a philosophy of balance.³⁷ It is through the integration of indigenous philosophies like these that allows for an innovative approach to learning in a contemporary environment while maintaining a connection to the culture and identity of the Arctic.³⁸ In his essay “Listen to the North,” John Raulston Saul described his thoughts on the motivation behind Piqqusilirivvik, “The school will promote the reality of a fundamentally Northern and non-western philosophy. And Nunavut is working hard to get itself out from under the Alberta school curriculum, which shapes Arctic schools in a way that undermines Inuktitut and an integrated Northern life.”³⁹

According to the Government of Nunavut, from its inception Piqqusilirivvik aimed to stand as a place that enriches Inuit culture by instilling respect and prestige in the acquisition of such knowledge. It would serve as a place to learn about language, culture and heritage while being able to share those ideas and ideals with all communities. It was a place that would eschew academics and academic pressures instead focusing on life skills, personal fulfillments and staying in touch with the land.⁴⁰

To reach these educational goals, the staff was developed to consist of a combination of community Elders, teachers and a variety of skilled guests. Much like the students considered for enrolment, instructors were enlisted for qualities other

than standard academics. Nunavut premier at the time Eva Aariak explained: “Instructors won’t be selected on formal education qualifications, but instead on their possession of strong traditional skills.”⁴¹ Semesters are generally three to four months long with the goal of coordinating them with the shifting seasons. Opening with twenty-six students, the term consists of teaching many traditional skills including igloo building, creating and using both traditional and more modern hunting equipment, and meteorology using clouds, stars, the moon and the sun.⁴² Specialized spaces and custom equipment are found throughout the facility. The skin room is maintained at 10°C to help facilitate the practices; it also houses treatment tubs for the collected furs and skins.⁴³ The large kitchen is complete with specially-designed containers for foods from the land,⁴⁴ and all spaces feature custom-designed seal-skin-adorned ergonomic benches.⁴⁵

As a project, Piqqusilirivvik is culturally, not simply geographically, situated in the North. This centring of Indigenous knowledge and experience serves to reshape southern school standards and was considered at every level of development.

Community Involvement

Piqqusilirivvik is unique. It is architecturally innovative, spatially empathetic, and educationally holistic as well as refined. A large portion of its success can be attributed to the extensive, layered community involvement process extending from proposal, to planning, to building, and operating. At the opening ceremony Premier Aariak noted, “It’s not only the first for Nunavut, it’s the first in our country.”⁴⁶ As a first, the success of the building and its program can be credited to the completely collaborative approach that was taken by the people involved in developing a unique design process meant to explore unique needs.⁴⁷

Initially, Nunavut wanted a way to balance a transition into the future while continuing to preserve the Inuit past. When the plan was in its infancy, research was done into cultural schools abroad. Facilities and programs in Spain and Nor-

way were examined, but close attention was paid to a cultural school in Greenland.⁴⁸ Feasibility studies were undertaken on several possible facility locations and multi-day workshops were conducted. These workshops brought together Elders, governmental representatives from the Department of Culture and Language, the Department of Community and Government Services, and the Government of Nunavut itself.⁴⁹ More importantly, community members including educators and even local youth from across Nunavut were also included in the process to help enrich the emerging plan. Harriet Burdett-Moulton, an architect with the international design consulting firm Stantec, explained that after Clyde River had been chosen as the final location for the facility, another three-day workshop (complete with visioning sessions and a design charrette) was held to bring the community and project consultants together.⁵⁰ To create a truly and fully developed project, invitees included: Clyde River town representatives, international education consultant Fielding Nair, stakeholders from the federal and territorial governments, representatives of the client (including local Elders), the local fire marshal, mechanical engineers, electrical engineers, structural engineers, wind and snowdrift consultants, and, lastly, a hydrologist teleconferenced from British Columbia.⁵¹ On the extensive scope of those consulted, Moulton wrote, “All the groups listed above were necessary to have an integrated project, so that everyone knew the issues and conflicts between traditional knowledge and scientific reality. I was amazed as how well those two views melded together.”⁵²

Harriet Burdett-Moulton was an apt choice for the position of design architect in realizing Piqqusilirivvik. Moulton, often described as a “leader in sustainable design,” had already witnessed the success of the collaborative community process through her planning work in Natuashish, Labrador.⁵³ Natuashish was developed for the relocation of the Davis Inlet Innu community. Moulton worked closely with end users in each stage of her planning process. Community members physically tramped the ground to indicate where various aspects of the development should be, as Moulton reflected, “I participated in all of their decisions and directed

some of the discussions, but the people made their choices, and they were good choices.”⁵⁴ The process utilized in Piqqusilirivvik was very similar, with Moulton herself attributing both projects being made possible by the willingness of the federal government (in the case of Natuashish), and the Nunavut government (in the case of Piqqusilirivvik), being willing to work hand-in-hand with the large number of consultants and the end users themselves.⁵⁵ Métis herself, and having become an expert in First Nations projects after 13 years working with the Inuit in Iqaluit,⁵⁶ Moulton sought to specifically give users “ownership of the place.”⁵⁷ Over many projects, Moulton had learned, “[...] in the Far North that if people are involved in planning, building or a community, they are much less likely to vandalize it. It has to be their plan, their idea. Then they will respect it.”⁵⁸

The direct contribution of indigenous perspectives and people to the projects carried through from conception, to planning, and to building. Kudlik Construction was awarded the contract for Piqqusilirivvik from the Government of Nunavut.⁵⁹ Incorporated in 1982, Kudlik Construction Ltd. is an Inuit firm with their head office located in Iqaluit a city where they also provide much of the paving and other civil work for the city. Kudlik also provided a huge boost in local employment during the building of Piqqusilirivvik. The company hired a between thirty to fifty workers, composed largely of Inuit residents. Like the directives that would eventually drive Piqqusilirivvik’s education, Kudlik sought to pair established journeymen with Inuit apprentices in the hopes of enriching their skill sets going forward.⁶⁰

Community Impact

Michèle Aubé wrote on the indisputable positive impact Piqqusilirivvik has as a contemporary building interpreting traditional architectural archetypes; it also provides a solid example for many other Northern communities.⁶¹ Though it was a one-off development at the time, it immediately established satellite campuses in both Baker Lake and Igloodik, which illustrates the scope of a good idea and the spread of self-con-

ceived Northern ideas.⁶² The impact and success of Piqqusilirivvik also inspired the Inuit in Ulukhaktok. With the goal of combatting a decline in time spent on the land, the loss of traditional skills and the resulting health concerns the *Nunamin Illihakvia* (learning from the land) program was launched in 2013.⁶³

There are of course practical benefits that come from the infrastructure investments and the employment opportunities they bring to small communities, but they also serve a vital role in the preservation of Inuit and indigenous culture.⁶⁴ As Eva Aariak explained, “Preservation of Inuit culture and language is of utmost importance and is vital to the long-term success of our territory. Building Piqqusilirivvik will do that and encourage the documentation of our history, the participation of Elders in classrooms and give merit to our traditional economy.”⁶⁵ Through projects like the campus of Piqqusilirivvik, indigenous communities are setting the stage for a growing and progressing, living architectural tradition and through that the enabling of Inuit and indigenous communities to take back control of their developmental, financial and educational futures.

The number of cultural schools is growing across Canada. Archaic laws are being dismantled or discarded allowing for more self-governance in communities of Canada’s indigenous people. Emerging from that environment are ideas that are not only effective and beneficial for First Nations communities, but all communities. Collaboration instills in people a sense of ownership, a sense of stewardship that all Canadians must recognize. Community involvement and a richer discourse makes for better, more effective projects. Piqqusilirivvik has proved that there is immense value in the knowledge and the ideas Inuit and indigenous community members have. It is of utmost importance that end users are given ample opportunity to share these ideas and actively participate in the creation of projects that will help define their communities. Collaboration ensures a rich discourse comprising a wealth of often neglected knowledge. Each successful project also serves as inspiration, influencing other Northern communities’ development thinking. Piqqusilirivvik illuminated a path to follow moving forward; now

Notes

1. John Raulston Saul, “Listen to the North: Cramming Northerners’ Needs into a Southern Model Just Isn’t Working,” *Literary Review of Canada* 17, no.8 (2009): 3.
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3. Harder and Wenzel, “Inuit Subsistence,” 305.
4. Ibid., 307.; Ibid.
5. Michèle Aubé and Arnaud Paquin., “Learning from the Land,” *The Canadian Architect* 59, no. 4 (2014): 15.
6. Jean Grierson, ed., *The First Women in Canadian Architecture* (Toronto: Dundurn Press, 2008), 103.
7. Saul, “Listen to the North,” 5.
8. Aubé, “Learning from the Land,” 16.
9. Grierson, ed., *The First Women*, 103.
10. Hard and Wenzel, “Inuit Subsistence,” 307.; “FSC and FNI develop new cultural learning model for the Inuit of Canada,” last modified March 1, 2010, <http://www.worldarchitecturenews.com/project/2010/13555/fsc-architects-and-engineers/piqqusilirivvik-inuit-cultural-learning-facility-in-clyde-river.html>.
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16. Guy Quenneville, “Project Now Commencing Electrical/Mechanical Work,” *News/North*, May, 2010, accessed November 14, 2016, <http://www.nnsi.com/business/pdfs/construction/construction-pg8.pdf>.
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19. “Project from Start to Finish: Preserving Inuit culture in Nunavut,” August, 17, 2012. <http://www.infrastructure.gc.ca/regions/process-processus/clyderiver-piq-eng.html>
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22. Aubé, “Learning from the Land,” 15.
23. “Inuit of Canada.”
24. O’Neill, “Nunavut’s New ‘Cultural School’.”
25. Aubé, “Learning from the Land,” 15.
26. Ibid.; Ibid., 16.
27. Ibid.
28. “Inuit of Canada.”

29. The time to respect and follow it.
30. FSC Architects & Engineers Design Tender, February 2009.
31. Aubé, “Learning from the Land,” 16.
32. Ibid.
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45. Ibid.
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